



United Nations Interregional
Crime and Justice
Research Institute



AUSTRALIAN
INSTITUTE OF
CRIMINOLOGY

ENVIRONMENTAL CRIME, SANCTIONING STRATEGIES AND SUSTAINABLE DEVELOPMENT

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Crime and Justice Research Institute**

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Edited by

Anna Alvazzi del Frate and Jennifer Norberry

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This publication is the result of a collaboration between UNICRI and AIC. At both ends our colleagues were helpful and patient with us during its preparation. We thank Oksanna Hatalak, Diana Nelson and Lavinia Hill for typing the manuscript; Isabelle Le Toullec for translating the Tunisian national report into English; and Roberto Gaudenzi for designing the book. Chris Pirie worked tirelessly on revision of the text.

We are grateful to Dr Ugljesa Zvekic for his advice and suggestions, particularly on the "Rounding Up" chapter.

Between the completion of the authors manuscripts, and editing and publication of the work, there has necessarily been some lapse of time. A footnote at the beginning of each chapter indicates the date of its preparation by the author. A major political change which has occurred since this study was commissioned is the division of Czechoslovakia into independent states - the Czech Republic and Slovakia - on 1 January 1993. However, the date of preparation of the reports is mentioned in a footnote at the beginning of each chapter.

The reports appear in the book according to regional groupings: i.e. Australia; Latin America (Argentina, Brazil); Eastern-Central Europe (Czechoslovakia); Asia (China, India); Sub-Saharan Africa (Nigeria); the Maghreb Region (Tunisia).

PREFACE

The involvement of the United Nations in environmental issues has a long history. The 1992 Conference on Environment and Development held in Rio de Janeiro is perhaps the most recent manifestation. However, since the United Nations Conference on the Human Environment in Stockholm in 1972, which expressed the commitment of the international community to protect and improve the quality of the environment, a number of UN agencies have been active in the field.

It was in this context that the United Nations Interregional Crime and Justice Research Institute (UNICRI), in co-operation with the Australian Institute of Criminology (AIC) and the European Institute for Crime Prevention and Control, affiliated with the United Nations (HEUNI), initiated in 1991 a study on "Environmental Crime, Sanctioning Strategies and Sustainable Development". This volume contains the project results.

The monograph examines environmental crime and the legal frameworks for environmental protection in eight developing and industrialized countries, with civil law and common law traditions from diverse geographical regions. The authors also discuss sanctioning strategies and enforcement, elaborate proposals for reform and consider the need for legal and policy changes in order to better protect the environment.

The focus of the project was on the needs and concerns of participating countries to protect the environment with particular reference to environmental crime and sanctioning strategies, and within the perspective of sustainable development. We believe this study is of special importance to developing nations in which environmental protection is often hampered by a lack of resources, the pressures of poverty and unemployment and the need for socio-economic growth.

The work is the result of collaboration at two levels - institutional and professional. The research field guide was designed by UNICRI and AIC with assistance from the Max-Planck-Institute for Foreign and International Criminal Law. Eight experts carried out field research in their respective nations on behalf of UNICRI, AIC and HEUNI. Finally, the editing and publication was a joint venture involving UNICRI and AIC.

Further work in this area is now being sponsored by UNICRI. It will examine the potential and limits of criminal justice in the protection of the

environment and culminate in a research workshop on this topic at the Ninth UN Congress on the Prevention of Crime and Treatment of Offenders in 1995. We hope that the present volume and current work will stimulate debate and contribute to new understanding about environmental protection - a subject of vital importance for our common future.

Rome, Canberra
October 1993

Ugo Leone
Duncan Chappell

ROUNDING UP: THEMES AND ISSUES

Anna Alvazzi del Frate*

Jennifer Norberry **

INTRODUCTION

In June 1992 the United Nations Conference on Environment and Development was held in Rio de Janeiro. Over 150 nations were represented. More than 100 heads of government or state were present, as were 8000 journalists and the representatives of 1400 non-government organisations.¹ Among other things, the Conference called for the enactment of enforceable and effective environmental laws, including the provision of sanctions designed to punish offenders, obtain redress, and deter future violations.²

In the past, some polluting behaviours were seen as normal and inevitable consequences of industrialisation and national progress. In many countries environmental protection was based on reliance on a non-punitive, conciliatory style of securing compliance with environmental laws and regulations. Increasing damage to the environment has, however, changed perceptions of acts of pollution, particularly in developed countries. In many countries some polluting behaviours are now seen as real crimes.

Significant research on the use of criminal law in environmental protection has already been carried out and a very extensive literature exists, especially from developed countries.³ For example, the Max Planck Institute for Foreign and International Criminal Law (in Freiburg-im-Breisgau, Germany) has undertaken a broad comparative study entitled *Environmental Protection by Means of Criminal Law? National and Transnational*; the study dealt with 28 countries, most of them industrialised. Less attention has been devoted to developing nations.

In 1991, after consultations with the Max Planck Institute, UNICRI initiated a three-year study involving the gathering, analysis and presentation of data on environmental crime. The study has been carried out in collaboration with two United Nations affiliates, the Australian Institute of Criminology and the Helsinki Institute for Crime Prevention and Control (HEUNI).⁴ The first phase of the study is now complete, having involved the

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gathering of information at a national level using a field guide designed by UNICRI.⁵ The field guide relies in part on the methodology adopted by the Max Planck Institute for its comparative study. It was desirable, therefore, to include in the UNICRI study some of the countries that were not participants in the Max Planck study. Particular attention was given to developing countries, and regional representation was considered in order to reflect different political, cultural, social and economic backgrounds. The regions included in the UNICRI study are Africa (Nigeria and Tunisia), Asia (China and India), the Pacific region (Australia), Eastern Europe (the former Czechoslovakia) and South America (Argentina and Brazil). An expert from each country was asked to collect information⁶, in accordance with the field guide. Interim reports were delivered in October 1991. In December 1991 an international seminar entitled 'Protection of the Environment and Penal Law' was held by the International Centre of Sociological, Penal and Penitentiary Research and Studies in Messina, Italy, to discuss the preliminary results.⁷ Final reports from each nation were submitted by the end of 1992.⁸ These final reports are collected in this monograph.

Based on the final reports, this overview chapter describes the main issues identified in the field guide. When available, for some topics reference is made to national reports prepared for the 1992 United Nations Conference on Environment and Development.⁹

This overview is not an attempt at comparison: there are many difficulties inherent in comparing nations as diverse as those participating in this study. First, environmental protection operates at quite different levels—national, state or provincial, and local—or combinations of levels, in many of the participating countries. Second, it was not possible to compare enforcement data between nations: in some cases environmental protection systems are so recent in origin that little information is available about their operations; in other cases access to data appeared to be a problem; in yet other cases few laws directly aimed at protecting the environment exist.

The approach therefore is to identify and briefly discuss some issues, providing examples from the national reports, in which the issues are more fully described and developed. In particular, this overview deals with environmental problems and community involvement, aspects of the historical development of environmental protection laws, the constitutional framework in which those laws exist, the administrative structures provided to implement environmental regulations, the legal framework of environmental regulation,

legal sanctions and the use of the criminal law, the enforcement of environmental protection laws, and international treaties.

ENVIRONMENTAL PROBLEMS AND COMMUNITY INVOLVEMENT

Some of the world's most significant ecological disasters—such as Bhopal (India, in 1984) and the process of deforestation in Amazonia (Brazil)—have received widespread attention from the general public and generated greater local awareness of environmental protection issues.¹⁰ It appears that most developing countries face problems of environmental damage as a direct consequence of human behaviour. National reports confirm that the countries involved in this study are affected by serious environmental problems. Most of them report air, water and marine pollution, deforestation, desertification and devastation of territories, problems associated with hazardous waste disposal, and noise pollution.

Air pollution, which is one of the most serious problems reported, may be the result of industrialisation, coal combustion or traffic, and it particularly affects large cities.¹¹ It is a major problem in many countries and, as the former Czechoslovakia reports, can be attributed to concentrations of thermal power plants, industries and brown coal mines. As well as continuing air pollution problems, environmental accidents such as the toxic gas leak at Bhopal need particular attention.

Water pollution is one of the oldest environmental problems. All participants in this study cite it as a major concern. Among others, Brazil reports chemical pollution of drinking water in cities and marine pollution threatening the tourist industry; Australia reports beach, marine and waterway pollution from sewage, water pollution caused by pesticides, sediments and nutrients, and water salinity. Water pollution may be the result of industrialisation, urbanisation and waste disposal.

Many project participants express concern about problems of deforestation, desertification and devastation of territories. For example, in the former Czechoslovakia the construction of large nuclear power plants has led to the devastation of vast tracts of land. Australia reports problems with contaminated land sites and urban stormwater run-off. In Tunisia, state investments for reforestation and soil conservation are considerable.

The problem of waste disposal can be a consequence of urbanisation (garbage disposal in cities) or a product of industrial, medical or other processes (toxic or hazardous waste). The problem is considered very serious

by all participating countries. For example, Nigeria reports that waste disposal and industrial pollution are the most important environmental problems in the country, although the popular perception is that other problems such as refuse disposal and environmental sanitation are more serious; China highlights problems of toxic waste disposal and garbage disposal in big cities; Australia raises the issue of hazardous waste disposal.

Finally, noise pollution is a common problem in Asian countries¹², and is reported by Australia as a consequence of traffic in cities.

Environmental concerns for the future were expressed by many participating countries—the enhanced greenhouse effect, global warming, erosion, and the use and release of genetically manipulated organisms. It appears that less-industrialised countries have reached a level of awareness of environmental problems related to industrialisation that will ensure that when new industrial complexes are built environmental precautions will be taken.

Level of attention in the media and among political and citizens' groups and associations

Most of the participating countries report that environmental issues are regularly dealt with in national newspapers. The mass media show a great, and increasing, interest in national and international environmental issues.¹³ Only one country, Argentina, reported little interest in domestic environmental problems and a tendency towards disaster-oriented coverage of foreign issues in the mass media.

Political parties in many countries are expressing a growing interest in environmental issues. Most participating countries report that the major political parties have included environmental issues in their programs. In India, at least three political parties include environmental issues in their agendas (the Congress Party, the Bharatiya Janata Party and Janata Dal). In Australia, the four major political parties at state and federal level devote attention to environmental issues in their policy platforms, to a greater or lesser extent. The same applies to Nigeria and Argentina. 'Green' parties exist in most countries, although they appear to be more successful at the local level. As the report from Argentina observes, it is interesting that environmental issues are often promoted by individuals rather than political parties.

All participating countries report a proliferation of environmental protection groups. Argentina, Brazil, the former Czechoslovakia, Nigeria and Tunisia comment on the growth and activity of ecological associations and

non-government organisations dealing with environmental problems. These groups often collaborate with government agencies responsible for environmental protection.¹⁴ In Australia there are about 350 organisations that are either 'green' or of interest to green associations. Some have thousands of members: in 1990 membership of Greenpeace, the Wilderness Society and the World Wild Fund for Nature was 47 000, 14 500 and 28 000 respectively. In India some 800 organisations are associated with environmental issues and some of them receive government assistance in their work.

It appears that in some countries the concept of pollution is closely associated with industry, and that major corporate bodies are therefore regarded as major polluters. Other participating countries do not clearly identify their major polluters.

Sometimes there are contradictions between community feelings and national policy: for example, the Nigerian report notes that an 'annual pollution discharge' tax is paid by industries to government and this hampers control of the industries' compliance with environmental protection norms.

HISTORICAL DEVELOPMENT OF ENVIRONMENTAL PROTECTION LAWS

The countries participating in this study include developing and developed nations. Concepts of environmental protection may be grounded in antiquity in some of these countries. In India, for example, the *Rig-Veda*, *Yazur-Veda* and *Atharva-Veda* all identify water as a sacred substance and water pollution as an offence. In China, many thousands of years ago laws were made for the purpose of protecting living resources and preventing soil and water losses. It is, however, with more recent legal approaches that this study is concerned. These approaches can be typified in two ways—according to their subject matter and according to their locus. In most of the participating nations early concerns focussed particularly on public health and on water as a medium because of its known potential for disease transmission. The prime focus of these laws was human well-being rather than protection of the environment. Another area of concern was the development and exploitation of natural resources. Many of the nations participating in this study were subject to colonial rule by Western European powers and, while colonialists may have believed that the resources in their new domains were almost inexhaustible, they did wish to regulate their exploitation. Thus, in Brazil penalties for felling trees were calculated in accordance with the trees' economic value.

Heine¹⁵ has described the development of statutory environmental protection in a number of developed countries as a process marked by an increasing use of criminal law. The criminal law has long been used to protect the environment, albeit indirectly, in many of the countries participating in this study. The ways in which early legislators sought to deal with environmental matters were through public health¹⁶ or resource¹⁷ statutes, in some cases through civil codes¹⁸ and in other cases through the criminal law. The last typically sanctioned pollution of environmental media in the context of endangerment of public health or nuisance.¹⁹

Of the study participants, the former Czechoslovakia appears to provide an exception to this schema. It reports that early environmental protection laws were concerned with the protection of nature and the establishment of nature reserves. Public health legislation containing environmental provisions was not enacted until the 1950s and 1960s, and it was not until the 1970s that legal rules relating to particular environmental sectors such as waters and forests were made.

Use of public health, resource and criminal laws typically dates from the nineteenth and early twentieth centuries. In most cases special environmental protection and anti-pollution laws began to emerge in the mid-twentieth century. A number of factors were at work here. First, the discovery of natural resources in commercial quantities: as this occurred it became apparent that exploitation of those resources could damage the environment. Second, the onset of industrialisation: in many developing countries industrialisation was achieved with the use of outdated technologies, and it resulted in rapid and unplanned urbanisation to provide labour for new industries, visible and widespread pollution, and serious pollution incidents. Last, the 1972 United Nations Conference on the Human Environment is cited by the national experts involved in this study as giving rise to an enhanced awareness of the environment and the need to provide for environmental regulation.

CONSTITUTIONAL FRAMEWORKS

Constitutional matters are of importance to this study in two ways. First, a nation's Constitution may itself contain guarantees of environmental protection. Second, constitutional divisions of power in federations may affect the efficient allocation of responsibility for environmental matters and may be an impediment to coordinated and cooperative approaches to environmental protection between tiers of government.

The introduction of constitutional guarantees of environmental protection is a recent response to increasing interest in environmental issues in nations such as Brazil²⁰, China²¹ and India.²² Significantly, the Constitution of each of these nations seeks to foster environmental protection by placing an obligation not only on the state but also on its citizens to enhance and protect the environment. The Constitutions of Brazil and China recognise that consequent upon the imposition of citizen obligations should be the creation of citizen rights. Both nations endow citizens with the constitutional right to take legal action to remedy environmental degradation. In the former Czechoslovakia, the Charter of Basic Human Rights and Freedoms provided that citizens had rights relating to environmental quality.

As Heine has remarked, though, the mere existence of constitutional guarantees does not of itself enhance environmental protection.²³ A theme running throughout this UNICRI study is the existence of implementation gaps. They emerge at a constitutional level as well as at legislative and enforcement levels. In Brazil, for example, the Constitution (Article 225, paragraph 4) extends penal liability for environmental degradation to legal persons. But Brazilian constitutional provisions are not self-executing. Article 225, paragraph 4, has not been given effect in ordinary law and the Brazilian judiciary has been unwilling to recognise the liability of legal persons before this occurs. Similarly, in the former Czechoslovakia, rights contained in the Charter of Basic Human Rights and Freedoms need to be legislatively activated.

National Constitutions typically predate the development of widespread interest in the environment as a discrete subject. In countries such as Argentina, Australia and Nigeria the provinces or States enjoy residual power over matters not specifically enshrined in the federal Constitution. In none of these countries does the national Constitution specifically mention the environment. National governments have, however, typically enacted environmental laws incidental to other heads of constitutional power such as commerce, territorial seas and foreign affairs. These laws exist together with State or provincial legislation on the environment. A number of difficulties may result. Confusion and uncertainty may exist concerning the division of responsibility for environmental protection at national and provincial level (Argentina). Conflict may result from the national government attempting to take the lead in environmental protection matters traditionally regarded as the realm of State governments (Nigeria). An absence of cooperation and coordination may mean that environmental standards, offences and penalties

differ markedly between States in a federation, with consequent potential for the creation of 'pollution havens' (Australia).

ADMINISTRATIVE FRAMEWORKS

Typical of the nations under review is a multi-tiered environmental protection structure that may involve national, State or provincial, and local governments. Within this structure a number of models of environmental protection can be identified. Agencies may be specialised; that is, environmental protection may be the core function of an organisation. Agencies may be non-specialised; that is, environmental protection is merely an incidental responsibility for them. In the case of jurisdictions with specialised agencies, environmental protection may be centralised, with one agency having responsibility for almost all aspects of environmental protection²⁴, or it may be segmented, typified by the existence of a number of environment protection bodies each endowed with one or more of the functions of policy formulation, standard setting, administration and enforcement.²⁵ Even in 'specialist' systems, many other government departments and agencies may have functions that impinge on environmental protection; for example, mines and forestry.

Administrative arrangements for environmental protection are no less important than constitutional allocations of power. Sources of concern stated in most of the reports prepared for this study were lack of coordination between agencies, inadequate definition and delineation of responsibilities, and the potential for conflict between agencies operating at national, State and provincial, and local levels. Although the reports were required to focus on national laws, the existence and interplay of different agencies operating at different levels of government are also very important when considering the development and implementation of coherent environmental laws.

Efforts to coordinate the activities of the many agencies with environmental protection responsibilities have been made in Nigeria with the establishment of interdepartmental committees and the Federal Environmental Protection Agency, on which government departments with environment-related functions are represented. In the former Czechoslovakia the Federal, Czech and Slovak Governments formulated a State Program for Care of the Environment to coordinate environmental activities.

LEGAL FRAMEWORKS

Heine identified two models of legal protection for the environment. The first involved a central environmental code; the second involved separate laws

for different environmental media.²⁶ These models are not mutually exclusive. Among the jurisdictions whose legal framework generally corresponds to the former model are the Australian States of Victoria²⁷, Western Australia²⁸ and Tasmania.²⁹ In nations such as China³⁰ and India³¹, and in the Australian States of New South Wales³², Queensland³³ and South Australia³⁴, the second model is more in evidence. To these could be added a third model of nations such as Argentina, Brazil and Tunisia, whose coverage of environmental protection is primarily indirect—through laws governing natural resources such as fisheries, forests, minerals and waters.

In this study the descriptions of legislative frameworks overwhelmingly refer to fragmentation, inconsistencies, duplication and gaps. In some cases these problems are magnified by continuing and piece-meal amendments to environment-related legislation that dates back to the early part of this century. In other cases statutory coverage of particular pollution problems is either absent or dealt with incidentally in other legislation. For example, environmental protection in China is marked by an absence of laws regulating solid waste, and in India the very significant problem of noise pollution is dealt with in a number of statutes, including the *Factories Act 1948*, the *Aircraft Act 1935* and the *Railways Act 1890*.

Any description of the legal framework of environmental protection would be incomplete without mention of substantive criminal law. The criminal law provided one of the first mechanisms through which the environment could be indirectly protected. It continues to play a role, which varies in importance according to the jurisdiction under consideration. In India, for example, individual citizens and voluntary organisations have used and continue to litigate using the Indian Penal Code, which contains public health and safety provisions, and the Code of Criminal Procedure, which enables magistrates to order the removal of a nuisance (including pollution) and to penalise those who ignore such an order.³⁵ In some cases there has also been a move to introduce substantive criminal offences against the environment. Consideration is currently being given to the inclusion of a crime against the environment in the Criminal Code Act of Nigeria; in China, it is reported that the Legislation Committee of the National People's Congress is considering adding an article on environmental crime to the Criminal Law; and in the Australian State of South Australia the usefulness of creating a crime against the environment has been reviewed by the Government.³⁶

SANCTIONING STRATEGIES

Legal sanctions

In the jurisdictions under review three basic types of legal sanction are in use. The first involves criminal law, including quasi-criminal (regulatory) offences. The second involves administrative sanctions. The third involves civil sanctions. Although many of the nations participating in this study have attempted to protect the environment predominantly by civil or administrative sanctions, there is evidence of an increasing resort to criminal penalties.³⁷ Criminal sanctions may be contained in criminal codes or crimes statutes or appear in administrative environmental protection statutes. When examining criminal sanctions, important issues include the nature of the sanctions and their appropriateness in achieving environmental protection.

Typically, the penalty for an environmental offence is a fine or imprisonment, or both. Fines are a traditional approach to penalising environmental offenders. In recent times, in some of the participating nations, concern has been expressed about the inadequacy of maximum fines provided for in statutes and imposed by the judiciary. Where reform of environmental law has occurred, the fine continues to be at the centre of sanctioning frameworks. Attempts have, however, been made to strengthen its impact by such means as increasing maximum fines, legislating for minimum fines, subjecting repeat offenders to higher fines, making corporations liable to much higher fines than individuals, and providing for daily fines for continuing offences. The rationale for such amendments is to deter potential offenders by threatening them with a significant economic penalty and to combat the view that fines are merely a cost of doing business—a cost that is cheaper than the cost of installing and maintaining effective anti-pollution technology.

Imprisonment is another sanctioning tool for environmental offenders. Present in public health offence and nuisance provisions in criminal codes, it has also emerged in the administrative environmental statutes of some nations. In China, for example, environmental protection laws provide that certain behaviour—such as marine pollution resulting in substantial property loss, injury or death—may be dealt with under the criminal law.³⁸ In Nigeria³⁹ and Argentina⁴⁰ breaches of hazardous waste laws may result in incarceration, the maximum penalty for a breach in Nigeria being life imprisonment. In some Australian jurisdictions those found guilty of aggravated pollution may be imprisoned for up to seven years.⁴¹

Apart from the question of what criminal sanctions exist for environmental offences there is also the question of who is liable to be criminally sanctioned. Natural persons may, of course, be subject to criminal sanctions. In some jurisdictions, officials from environmental protection agencies may be criminally (as well as civilly) liable for environmental degradation that results from a breach of statutory duty. However, with the exception of Australia and Nigeria, and with limited exception in China⁴², it appears that criminal liability cannot be assigned to legal persons. Attempts to target corporations indirectly by penalising responsible corporate employees were made in the former Czechoslovakia. These different ways of dealing with harm done by corporations reflect the historical division between societies in which corporations have been liable to criminal sanctions and those in which a presumption of *societas delinquere non potest* exists.

Debate about the appropriateness of the criminal law as a sanctioning tool for environmental transgressions has occupied commentators in both civil law and common law countries. Some commentators have expressed disquiet about the use of criminal sanctions on the basis that they are a clumsy and inappropriate instrument for achieving protection of the environment.

Heine, in particular, outlined a number of problems associated with the use of criminal law in the protection of the environment.⁴³ The first derives from the relationship between criminal and administrative law. He identified three models.⁴⁴ Difficulties that Heine sees as arising from the existence of *mala administratio* include the possibility that criminal law will be inflated and its value correspondingly diminished—that the 'public perception of what is truly blameworthy criminal conduct can diminish, when both murder and mere disobedience of administrative orders are defined as criminal'.⁴⁵ Heine has also charted the conflict that may occur between administrative environmental protection agencies and prosecutorial agencies in the enforcement of environmental laws.⁴⁶ Some of these difficulties are seen in some of the nations participating in this study. In particular, the potential for derogation of the criminal law by selective prosecution and the imposition of relatively low penalties is dealt with in the following section.

Problems of proof also present difficulties in applying criminal law to environmental pollution. These difficulties include establishing *mens rea*, proving pollution or deleterious effects, and linking the pollution, the substance and the polluter. Because of these obstacles, in some industrialised nations there has been a trend towards introducing devices that facilitate the attribution of criminal responsibility.

In some nations strict liability has been used as a means of overcoming some of the difficulties associated with the use of criminal law. Strict liability operates irrespective of fault, although a defence of honest and reasonable mistake is available. It is little seen in the countries participating in this study, although in Australian jurisdictions it is generally found in administrative environmental protection laws.⁴⁷ It is apparently under consideration in China. In Nigeria, strict liability is a matter of debate because the Criminal Code Act imports *mens rea* into offence provisions. There is some argument, however, about whether recent legislation on hazardous wastes contains strict liability offences.

Even in those jurisdictions where strict liability is employed, it has been criticised as making unjustifiable inroads into the framework of the criminal law. Its detractors have a variety of 'in principle' concerns:

The doctrine of strict responsibility has never been placed on a secure theoretical foundation ... It is not clear how far the exclusion of principles normally applicable in criminal cases is to be carried. For example, since strict responsibility operates to exclude evidence of intention or due care the question may arise whether it also excludes evidence of compulsion or automatism. As so often in confused parts of the law the answer is to some extent bound up with terminology, in this instance the anachronistic common law analysis of crime into *actus reus* and *mens rea*. The theoretical basis of responsibility seems to be that it excludes evidence of the absence of *mens rea* and negligence but not of the absence of *actus reus*. Since *actus reus* includes part of the mental element in crime, it follows that evidence of absence of part of the mental element may be given on a strict responsibility charge if the part in question is properly referable to *actus reus* but not if properly referable to *mens rea*.

This is a manifestly unsatisfactory basis for criminal responsibility.⁴⁸

Defenders of strict liability take a more pragmatic approach. They argue that strict liability offences are usually confined to petty offences and are designed to protect public welfare, typically being employed in pollution, motor traffic, employment, licensed premises and public health statutes. Furthermore, without strict liability, it is argued that problems of proof would render public welfare legislation largely nugatory.⁴⁹

Encompassing corporate activities within a criminal law framework also has its difficulties. In particular, these relate to the appropriateness of criminal sanctions for bodies corporate and problems of attributing responsibility to the corporation itself. Obstacles to establishing corporate liability in cases of aggravated pollution requiring proof of intent have led to

reforms in some jurisdictions. These include statutory provisions that evidence that an officer, agent or employee had a particular intention is evidence that the corporation also had that intention.⁵⁰

The need to establish that a particular corporate official had the necessary intention to commit an offence may also be problematic. Once again, in some jurisdictions attempts have been made to overcome these difficulties by reversing the onus of proof. For example, there may be provision that where a corporation is in breach of environmental regulations it is assumed that the directors and managers of the corporation are also guilty unless they can establish one of a specified number of defences, including due diligence and lack of knowledge of the contravention.⁵¹ While the imposition of criminal penalties on legal persons may bring with it its own difficulties, these are not necessarily removed by confining criminal sanctions to natural persons. It is interesting to note that in the former Czechoslovakia a significant number of prosecutions brought under environmental offences legislation were discontinued because the responsible person could not be located. This may mean that it has been extremely difficult to identify the appropriate worker in a corporation.

Apart from private citizens, and corporations and their officials, government agencies may be directly responsible for environmental degradation. They may also be indirectly responsible for environmental degradation through failure to comply with their statutory duty. In many nations tradition has decreed that criminal liability should not attach to government agencies. Thus, in Australia the doctrine of sovereign immunity, based on the view that the monarch could do no wrong, precluded the Crown being held criminally liable. It was thought absurd for the executive government to penalise itself and it was considered that controls on the activities of government agencies could be more effectively imposed through political or bureaucratic means.⁵² Such views sharply contrasted with reality: 'governmental instrumentalities have ... [an unenviable record] ... for occasioning severe forms of unjustifiable harm'.⁵³ In socialist nations, state ownership of the means of production and distribution created similar dilemmas.

Reluctance to pursue government agencies for environmental degradation they cause is being overcome in some jurisdictions. Under Brazil's Penal Code, a public authority that fails to prevent an activity endangering public safety may be guilty of a crime. And in the Australian State of New South Wales the policy that government agencies would not be prosecuted was

reversed in 1990. Prosecutions of government agencies for environmental offences have occurred in both Nigeria and Australia. In India the heads of government agencies may be liable for offences committed by their agencies under section 17 of the *Environment (Protection) Act 1986*.

In the majority of nations participating in this study greater legislative emphasis is given to administrative sanctions than to criminal penalties. The former are commonly seen as more appropriate (both philosophically and practically), more effective, and speedier than the use of the criminal law. Administrative sanctions include fines, confiscation of materials and equipment used in polluting or waste transportation activities, suspension or cancellation of permits or licences, alterations to licence conditions, warnings, awarding of compensation, and clean-up orders.

Civil remedies may also be available. They include ordering a stop to polluting activities, shutting down an industry, compensation and restoration. The advantages of civil sanctions as opposed to criminal penalties include a lower burden of proof, an emphasis on prevention of pollution rather than punishment after the event, and more rapid judicial response.

Enforcement

Knowledge about enforcement is incomplete for most of the countries participating in this study. There are several reasons for this. First, environmental protection laws may be so recent that it is impossible to draw conclusions about their implementation. Second, enforcement data may not be collected or published. Third, lack of public disclosure laws may make it difficult to obtain information if it does exist.

With these caveats in mind, some impressions can be gleaned from the national reports. We can examine what sanctions are most commonly applied, who is sanctioned, and why enforcement is generally regarded as inadequate.

In the case of the sanctions applied, the majority of the reports state that monetary penalties, whether administratively, criminally or civilly based, are the most common. Imprisonment is little used, although there are several reports of it.⁵⁴ It must be emphasised that, apart from its traditional use as a sanction in criminal codes, imprisonment has only recently been incorporated in the environmental protection legislation of some nations.

According to the reports, there is considerable variation in the type of polluter sanctioned. In some nations—for example, Argentina and Nigeria—it appears that small corporations and individuals are more likely to be

sanctioned than large companies or government agencies. In others, such as India, corporations are more likely to be prosecuted than individuals.

The authors of the various reports have differing views about whether prosecution profiles are representative of polluters. Some support such a view; others consider that transnational corporations and government agencies are simply treated more favourably than less powerful actors such as members of the public or small business.

As Webb points out, there is a common misconception that failure to apply pollution laws suggests that either the legislation or its administrators are deficient.⁵⁵ The reports prepared for this study, however, generally take the view that statutes are being inadequately and sometimes inconsistently enforced, as evidenced by continuing (and on occasion alarming) pollution problems.

There are many reasons for this. The first, and most obvious, relates to the desire to enhance industrial development—a desire common to both developing and developed nations. In developing nations, a desire for the economic, social and political benefits of industrialisation, coupled with inequalities of bargaining power and fear that foreign or transnational corporations may locate elsewhere if environmental protection requirements are too rigorous, may all play a part.

Government, official and public attitudes to pollution are also important in determining what statutory protection is given the environment and how that protection is implemented. Political orientations may also affect attitudes to pollution. In some socialist countries, the belief that pollution was a capitalist phenomenon meant that it could not, by definition, occur in a socialist state.

The way business enterprise is characterised may also influence attitudes to enforcement, especially when criminal sanctions are mooted. Three decades ago Kadish remarked on the tensions involved in sanctioning business activities.⁵⁶ These tensions arose because business activities were identified as a social 'good' and because, before an activity could be regarded as a crime, moral opprobrium needed to be attached to it. Although opinion polls in some developed nations show that the public believes pollution is a serious act deserving severe penalties, the reports from developing countries suggest that pollution is seen as a much less important issue. Some authors report that the public does not view corporations as 'criminal entities'. In addition, the public is concerned with more immediate priorities, such as food, housing and employment. Finally, the widespread presence of domestic pollution brought

about by lack of infrastructure (sewerage systems, for example) may normalise industrial pollution. Such attitudes may be less pervasive in industrialised nations but they do continue to exist. In the former Czechoslovakia, for example, the authors report that little public or police reporting of environmental incidents occurs because there is a lack of general concern about environmental issues.

Compliance with legislative requirements may be sought through means other than enforcement; conciliation is another strategy. Traditional dispute resolution might be conciliation based. The Chinese report remarks that throughout Chinese history conciliation has been used and continues to be used today because it is believed to enhance public involvement in and awareness of environmental issues.

A preference for alternative means of preventing or controlling pollution may also stem from other sources. In China continuing reliance on conciliation is also said to result from deficiencies in environmental laws, the complexity of environmental issues, and the rigidity in procedures and remedies that characterises criminal law.

Education is another compliance strategy; it is often used in conjunction with conciliation. This is the case in Australia, where environmental protection agencies administer licensing and permit schemes, often give advice to industry, and also enforce environmental protection laws. Many of these agencies regard industry as their clients or customers and see enforcement as non-productive. Prosecution is viewed as a final resort and a sign of failure.

Other dealings with industry may discline agencies towards prosecution. For example, requirements that industry pay substantial discharge fees (with obvious revenue advantages to government) may make government unwilling to commence, or less interested in commencing, enforcement actions against those industries. It appears that this has occurred in Nigeria.

Inadequate resources may affect the enforcement of environmental protection laws in developing countries. Lack of infrastructure has been cited as a cause of pollution incidents. Where it is perceived to be the responsibility of government alone to provide infrastructure and where the absence of infrastructure has contributed to the existence of pollution, government agencies may hesitate to sanction polluters, as appears to be the case in Nigeria.

Resource constraints may affect the enforcement of environmental protection statutes because of the costs of detection, sampling and monitoring

equipment, of setting up or contracting out work to laboratories, and of training inspectorial staff. Where criminal sanctions are available, adequate training in criminal investigation techniques will also be necessary. In addition, formal sanctioning strategies of whatever type involve intensive use of staff time and financial resources. Environmental protection officials in industrialised nations such as Australia have referred to the resource-intensiveness of criminal sanctions as one reason that other avenues are often tried first; they have also noted the need to provide training in criminal investigation for enforcement officers in their agencies.

Environmental protection agencies may be disinclined to pursue enforcement because of judicial processes or attitudes. Some authors report substantial delays in the hearing of court cases, the expense of litigation, the imposition of minimal sanctions, and bias.

Enforcement may be patchy because the approaches of different agencies or different levels of government vary. For historical or other reasons, particular agencies may be inclined more towards conciliation than prosecution. For example, in Tunisia it appears that the Ministry of Agriculture is more inclined to refer a case to the Public Prosecutor's Office than to the National Agency for the Protection of the Environment, which tends to opt for conciliation. In Nigeria it is reported that local government generally takes the view that punishment is more effective than conciliation, whereas the Federal Environmental Protection Agency and some State government agencies (for example, Lagos State Ministry of Environment) favour conciliation. In Australia there are marked historical differences in attitudes to prosecution between the States. Victoria and New South Wales have been more inclined to prosecute polluters, whereas Queensland, Tasmania, South Australia and Western Australia have preferred conciliation and education.

This section has concentrated on the enforcement of environmental protection laws by means of criminal sanctions. There are undeniable impediments associated with the application of the criminal law to environmental problems. These must be confronted. To focus on these difficulties should not, however, detract attention from the fact that, at least in many of the nations participating in this study, environmental laws have been largely unenforced—irrespective of whether administrative, civil or criminal sanctions are available. The authors of the Czechoslovakian report, for example, comment that until 1989–90 administrative sanctions were the

primary legal tool available but they were not often used and when they were the fines imposed were minimal.

INTERNATIONAL TREATIES

Environmental issues of international concern are increasing in number and seriousness. The number of existing international conventions and agreements dealing with environmental issues is impressive and the nations involved in this study tend to sign most of them.⁵⁷ All countries are part of the Treaty Banning Nuclear Tests in the Atmosphere, in Outer Space and Under Water (Moscow 1963), the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxic Weapons and on their Destruction (London, Moscow, Washington 1972) and the Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal (Basel 1989). Other international treaties that have been signed by most of the countries involved in this study are the International Convention on Civil Liability for Oil Pollution Damage (Brussels 1969, as amended London 1976), the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London, Mexico City, Moscow, Washington 1972), the United Nations Convention on the Law of the Sea (Montego Bay 1982), the International Convention on the Regulation of Whaling (Washington 1946, as amended 1956), the International Convention for the Prevention of Marine Pollution from Ships (MARPOL) (London 1973, as modified by the Protocol of 1978) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington 1973). In addition, the Organization of African Unity promoted the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (Bamako, 1991) which demonstrates the need for developing countries to enter into multilateral agreements to protect themselves from hazardous waste pollution.

Nevertheless, in many countries the process of transformation of international prescriptions into national laws is very slow.⁵⁸ It appears that some broader political approaches to advance international cooperation, technical assistance and solidarity to the developing world are needed in order to achieve the goals of the United Nations charter and the proper implementation of international conventions concerning the protection of the environment. Related activities have been undertaken in some countries, such as the conference of Ministers of the Environment from French-speaking countries held in Tunisia in April 1991. The conference adopted the Tunis

Declaration on Environment and Sustainable Development, in view of the 1992 United Nations Conference on Environment and Development.

In addition to multilateral conventions and protocols, many countries have signed bilateral agreements. For example, China reports having signed two bilateral agreements on environmental matters, with Japan and the United States, and Nigeria has several such agreements with neighbouring countries.

CONCLUSIONS

The question of how to respond effectively to environmental pollution continues to engage academics, regulators, industry, and environmental groups in developed nations. Environmental pollution poses even more dilemmas for developing nations. Experts from developing countries participating in this study pose a number of important questions. One is 'How clean can we afford to be?' Another relates to how to tackle pollution and the enforcement of environmental laws when many polluters may be private citizens who pollute because there is a lack of infrastructure such as sewerage systems or who cause environmental degradation and pollution through activities such as deforestation in order to obtain wood for domestic heating and cooking.

Other problems for developing nations include: 'debt service obligations, declining terms of trade, high costs of capital, structural adjustment, and reduced development assistance'.⁵⁹ These problems may be exacerbated by lack of environmentally sustainable development aid and, in some cases, by multinational corporations operating without adequate pollution control equipment or maintenance of that equipment.

The themes that emerge from this study are not confined to the role of the criminal law in sanctioning environmental crime and they relate to both developed and developing countries. They can be summarised under the following headings: legislation; implementation; access to information; education and training; research; and assistance for developing nations.

Legislation

- Comprehensive rather than piece-meal reform is needed, not only of environmental protection legislation but also of development laws, so that environmental considerations are integrated into the development process.
- A clear idea of the goals and guiding philosophies of environmental protection legislation is needed.

- Sanctioning mechanisms appropriate for the particular nation, given its cultural and legal history, should be adopted.
- Careful consideration must be given to the introduction of criminal sanctions in nations where pollution is not identified as a 'crime' in the public mind and where corporations are not identified as 'criminal actors'. Failure to do so will lead to implementation gaps.

Implementation

- Legislation must not be seen as the end of the process of environmental protection. The importance of implementation must also be acknowledged. This includes ensuring that administrative mechanisms are available to enhance coordination and cooperation between agencies and between different levels of government.
- Administrative agencies or other bodies responsible for the implementation of environmental protection laws should be given real autonomy, resources and power, and hence the ability to implement laws and influence decision making.
- Addressing the problem of implementation gaps means taking account of all legal sanctions available—administrative and civil as well as criminal.

Access to information

- An important theme that emerges from this study is the need for the public to have access to information about the enforcement of environmental protection legislation, as part of the process of evaluating the effectiveness of environmental protection regimes.

Education and training

- If criminal law is to be used to sanction environmental offences, appropriate, continuing training in criminal investigation techniques is essential for regulatory agency personnel. If the police or public prosecution agencies are to be involved, appropriate training in environmental law and the importance of that law must be provided for them.
- Education for judicial personnel is also an issue, especially when courts or tribunals hearing environmental matters are non-specialist or rank low in the court hierarchy.

Research

- More research is needed to identify who pollutes, whether sanctioning strategies should be appropriate for different sorts of polluters, and what those strategies might be. A number of questions should be asked and answered: what are the most appropriate strategies to combat pollution caused by private citizens? domestic small, medium or large businesses? transnational corporations? government instrumentalities? and so on.⁶⁰
- Research is important not only to identify appropriate sanctioning mechanisms but also to establish appropriate sanctioning mixes. There is a need for further research into ways of providing for the effective implementation of all types of sanctions, not just criminal sanctions.⁶¹

Assistance for developing nations

- Much has been written about the global nature of pollution and the need for global action to combat it. If developed nations wish developing countries to pursue the goal of a cleaner environment, assistance must be provided—including financial aid, access to information and appropriate technologies, and access to advice. In this way development of a sustainable kind will be achieved, taking account of the political, social, cultural and economic milieu of the developing nation. In its report, Tunisia cites the 'Swap for Nature' program, in which foreign debt is reduced in exchange for establishing environmental projects.
- Funding for the research needs identified should also be available.
- Consideration must be given to the specific needs of developing countries in the fight to combat pollution. For example, the dumping practices of developed countries mean that external as well as internal controls must be developed and implemented.
- Aid must be provided for the alleviation of poverty and the provision of housing and infrastructure. When these essential needs have been satisfied it may be easier to convince developing countries and their citizens of the need to prevent and control pollution.

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2. United Nations Conference on Environment and Development, *Report of the United Nations Conference on Environment and Development*, Rio de Janeiro, 3-14 June 1992, vol. I, A/CONF.151/26.
3. D Chappell & R Moore, *The Use of Criminal Penalties for Pollution of the Environment: a selective and annotated bibliography of the literature*, Department of Justice, Canada, Ottawa, 1989.
4. HEUNI has recently conducted a study entitled 'The Policy of Criminal Law in the Protection of Nature and the Environment in a European Perspective'. The project started in 1991, covered 13 European countries and consisted of a questionnaire sent to national experts to obtain information about the existence and activity of enforcement agencies. In April 1992 a seminar was held in Lauchhammer, Germany, to present the project results. See *Criminal Law and the Environment*, edited by HJ Albrecht and S Leppä, HEUNI Publ. no. 22, Helsinki, 1992.
5. See Annex A at the end of this volume.
6. Argentina—Lic. Maria Onestini and Dr Claudio Abelardo Palos, Department of Environmental Evaluation, Committee on Ecology and Environment, Buenos Aires City Council; Australia—Ms Jennifer Norberry, Australian Institute of Criminology, Canberra; Brazil—Prof. Jose Arthur Rios, Rio de Janeiro; China—Ms Zou Jing, National Environmental Protection Agency, Beijing; Czechoslovakia—Dr Jaroslava Novotna, General Prosecutor's Office of the Czech and Slovak Federal Republic, and Dr Milan Kindl, Institute of Law, Czechoslovak Academy of Sciences, Prague; India—Dr DR Singh, Head, Department of Criminology and Correctional Administration, Tata Institute of Social Sciences, Bombay; Nigeria—Mrs Omobolaji O Adewale, Senior Research Fellow, Nigerian Institute of Advanced Legal Studies, University of Lagos; Tunisia—Prof. Ridha Mezghani, Law and Political Sciences Faculty, University of Tunis.
7. The seminar proceedings are now published in *Protection of the Environment and Penal Law*, edited by C Zanghi, Cacucci, Bari, 1993.
8. The information contained in this overview and in the national reports must be read in light of this time frame. Legislative as well as political changes have occurred in the intervening months. The most significant of these has been the dissolution of the Czechoslovakian federation. Two new states, the Czech Republic and Slovakia, came into being on 1 January 1993.
9. For example, see *Achieving Sustainable Development in Nigeria*, Federal Environmental Protection Agency, Lagos, 1991; *Informe Nacional a la Conferencia Sobre Medio Ambiente y Desarrollo de las Naciones Unidas*, Secretaria General Comision Nacional de Politica Ambiental, Republica Argentina, 1991; *Australian National Report to the United Nations Conference on Environment and Development*, Department of the Arts, Sport, the Environment and Territories, 1991.
10. Brazil reports that government investments have been aimed at financing programs for Amazonia as a priority. However, in the past many of the programs did not protect the environment and created further damage to the forests.
11. It is well known that Beijing (China), Rio de Janeiro (Brazil) and Bombay (India) are among the cities with the highest sulphur dioxide levels in the world.
12. China reports that 40 per cent of people in urban areas live in noisy environments. In India noise pollution is a consequence of traffic, industry and religious festivals.

13. Nigeria, Brazil and Tunisia report a growing interest in, and debate about, environmental matters, which is reflected in media coverage of the environment. India and Australia report increased attention devoted to environmental stories in recent years. Most newspapers carry stories on the environment and some have regular features on environmental issues.
14. For example, in Nigeria a number of non-government organisations collaborate with the Federal Environmental Protection Agency.
15. G Heine, 'Criminal law and environmental protection: an international comparison', interim report on *Environmental Protection by Means of Criminal Law? National and Transnational?* 1990, unpublished. The work of Dr Günter Heine is cited extensively in this overview since he played a key role in the Max Planck study referred to previously.
16. For example, Nigeria—*Public Health Act 1917*.
17. For example, Brazil—forests, mining, waters, hunting and fishing codes; Tunisia—Forestry Code, fishing laws, Water Code.
18. Argentina—Civil Code.
19. Argentina—Criminal Code 1921; Nigeria—*Criminal Code Act 1916*; Brazil—Penal Code 1940; India—Penal Code 1860; Australia—New South Wales, *Crimes Act 1900*.
20. Federal Constitution of 1988: Article 225, related Articles include Article 5, LXXIII; Article 200; Article 216, V, 1; Article 186, I & II.
21. Constitution of the People's Republic of China, Articles 6, 26.
22. Indian Constitution, Articles 21, 47, 48A, 51A(g).
23. G Heine, 'Elaboration of norms and the protection of the environment', in *Protection of the Environment and Penal Law*, *op. cit.*, pp. 57–79.
24. For example, Australia—Victorian and New South Wales Environment Protection Authorities.
25. For example, Brazil—National System for the Protection of the Environment (SISNAMA) includes a Federal Council of Environment Protection (CSMA), which assists in the drafting of national environmental policy, a National Board on Environment (CONNAMA), which makes decisions about norms and standards, and the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA), which coordinates and implements national environmental policy. China—the National Environmental Protection Agency formulates laws and standards, promotes research and supervises pollution prevention and control; the Commission of Environmental Protection formulates guiding principles and policy.
26. G Heine, 'Criminal law and environmental protection: an international comparison', *op. cit.*
27. *Environment Protection Act 1970*.
28. *Environmental Protection Act 1986*.
29. *Environment Protection Act 1973*.
30. For example, Environmental Protection Law of the People's Republic of China, Law on Prevention and Control of Air Pollution, Law on Prevention and Control of Water Pollution, Marine Environmental Protection Law.
31. For example, *Environment (Protection) Act 1986*, *Water (Prevention and Control of Pollution) Act 1974*, *Air (Prevention and Control of Pollution) Act 1981*.
32. For example, *Clean Air Act 1961*, *Clean Waters Act 1970*, *Noise Control Act 1975*.
33. For example, *Clean Air Act 1963*, *Clean Waters Act 1971*, *Noise Abatement Act 1978*.

34. For example, *Clean Air Act 1984*, *Marine Environment Protection Act 1990*, *Noise Control Act 1976*.
35. S Shastri, *Pollution and Environmental Law*, Printwell Publishers, Jaipur, 1990.
36. M Goode, 'Criminal law, the environment, fault and corporate criminal liability', unpublished, 1992.
37. Czechoslovakia—Act of the Federal Assembly No. 159 of 1989 Sb. (on Offences and the Penal Proceedings Code) created criminal offences of endangering the environment and penalties including imprisonment, fine and shut-down. Argentina—National Law 24 051 on Hazardous Waste creates offences of endangerment. China—Law of the People's Republic of China on the Prevention and Control of Water Pollution, Law of the People's Republic of China on the Prevention and Control of Air Pollution, Law of the People's Republic of China on the Protection of Marine Environment; these laws render those who cause substantial pollution and damage to persons or property liable to penalties under the criminal law.
38. Law of the People's Republic of China on the Protection of Marine Environment, Article 44.
39. Harmful Waste (Special Criminal Provision) Act, section 6.
40. Law 24 051 on Hazardous Waste, Articles 55, 56, 57, 58.
41. New South Wales—*Environmental Offences and Penalties Act 1989*, section 8; Victoria—*Environment Protection Act 1970*, section 59E.
42. Law on the Protection of Wild Animals.
43. G Heine, 'Elaboration of norms and the protection of the environment', *op. cit.*
44. What Heine calls 'absolute dependency' of the criminal law on administrative decision making requires breach of an administrative requirement—for example, discharge without a licence or discharge in excess of emission standards—to attract a penal sanction. 'Relative dependency' occurs when pollution or environmental damage without a permit or licence is penalised. In this model the protection of environmental media rather than protection of administrative instruments is paramount. 'Absolute independence' of the criminal law on administrative law is seen when concrete endangerment to life is penalised irrespective of the existence of an administrative permit. Examples of the first model are found in the Nigerian Oil in Navigable Waters Act, which sanctions the discharge of oil into prohibited areas; and in the Indian Air (Prevention and Control of Pollution) Act, which penalises discharges in excess of standards. Examples of the second model are found in the New South Wales Clean Waters Act, which penalises water pollution unless in accordance with licence conditions and in Victoria under the Environment Protection Act, which penalises the pollution of water, air or land unless the discharge is within licence limits. The third model is seen in the Law of the People's Republic of China on the Prevention and Control of Water Pollution, which penalises pollution that results in substantial property loss, injury or death.
45. G Heine, 'Elaboration of norms and protection of the environment', *op. cit.*, pp. 78–79.
46. *ibid.*
47. For example, New South Wales—*Clean Waters Act 1970*, section 16. A further development has occurred in the state of Victoria, where offences of absolute liability are present in environmental protection legislation—*Environment Protection Act 1970*, section 39.
48. B Fisse, *Howard's Criminal Law*, 5th edn, Law Book Company, Sydney, 1990, p. 536.
49. P Gillies, *Criminal Law*, Law Book Company, Sydney, 1985.

50. Australia—New South Wales *Environmental Offences and Penalties Act 1989*, section 10(4); Victoria *Environment Protection Act 1970*, section 66B(2). Nigeria—Federal Environmental Protection Agency Act.
51. Australia—New South Wales *Environmental Offences and Penalties Act 1989*, section 10(1); Victoria *Environment Protection Act 1970*, section 66B(1A)). Nigeria—Federal Environmental Protection Agency Act.
52. B Fisse, 'Controlling governmental crime: issues of individual and collective liability', in P Grabosky (ed.), *Government Illegality*, Australian Institute of Criminology, Canberra, 1987, pp. 121–43.
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54. Examples of the use of imprisonment are provided in the Nigerian report. In Argentina preventive imprisonment is reported and in China there is evidence of suspended prison sentences being employed.
55. K Webb, *Pollution Control in Canada: the regulatory approach of the 1980s*, Law Reform Commission of Canada, Ottawa, 1988.
56. SH Kadish, 'Some observations on the use of criminal sanctions in enforcing economic regulations', *University of Chicago Law Review*, 1963, vol. 30, pp. 423–49.
57. According to the *Register of International Treaties and other Agreements in the Field of Environment* (UNEP, Nairobi, 1989), Argentina signed 21 agreements, Australia 37, Brazil 22, China 16, Czechoslovakia 24, India 24, Nigeria 21, and Tunisia 31. In many cases differences are due to the fact that some treaties and agreements deal with a specific geographic region.
58. For example, in Nigeria, out of some 30 international conventions signed, only five have been transformed into national laws (see Nigerian report). Argentina reports on the conversion into national laws of many international agreements. In Australia, most of these conventions are reflected in a number of Commonwealth and State statutes.
59. HJ Leonard, *Environment and the Poor: development strategies for a common agenda*, Transaction Books, New Brunswick, 1989, p. 3.
60. Some suggestions on 'setting an agenda for research' can be found in D Chappell, *From Sawdust to Toxic Blobs: a consideration of sanctioning strategies to combat pollution in Canada*, Department of Justice, Ottawa, 1989.
61. At present, UNICRI, the Australian Institute of Criminology, HEUNI and the Max Planck Institute for Foreign and International Criminal Law are developing a project to deal with analysis of different policy options and their implementation, including the promotion of research as an instrument for evaluation.

AUSTRALIA

Jennifer Norberry*

INTRODUCTION

Australia is a federation consisting of a Commonwealth, or federal, government, six State governments (those of New South Wales, Victoria, Queensland, Tasmania, South Australia and Western Australia) and two Territory governments (those of the Northern Territory and the Australian Capital Territory).

Australia's resident population for the year ended 30 June 1989 was 16.8 million. The population is concentrated in coastal areas and, within those areas, in the capital cities. At the time of the 1986 census some 85.4 per cent of the population lived in urban areas. At 30 June 1989 some 3.6 million people lived in Sydney (the capital of New South Wales) and some 3.0 million lived in Melbourne (the capital of Victoria). New South Wales and Victoria also have the largest number of manufacturing establishments. At 30 June 1989 there were 10 469 such establishments in New South Wales and 9771 in Victoria. The next highest number of manufacturing establishments was 4841, in Queensland.¹

The *Australian National Report to the United Nations Conference on Environment and Development*² contains a description of the country, including its geography, environment and economy. In brief, the nation's interior is arid, the climate of northern Australia is tropical, and climates in southern Australia are Mediterranean and temperate. The flora and fauna are extremely diverse. The economy is resource based.

1 FRAMEWORK AND REVIEW OF LEGAL HISTORY

1.1 Social framework

Historically, environmental protection has been regarded as the realm of the States, although local governments have also played an important role. The States have established regulatory agencies and planning authorities and have enacted legislation dealing with pollution, planning, waste disposal, conservation, heritage, resources and many other matters. The relative

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involvement of the Commonwealth and the States in environmental matters may be assessed to some extent by an examination of the number of pieces of environmental legislation they have enacted. In 1986 the Australian Environment Council commissioned a survey of Australian environmental legislation; the survey found that there were 38 Commonwealth environmental statutes in force and 299 State and Territory Acts and Ordinances.³

The Commonwealth's involvement in environmental matters is recent in origin, dating from the mid-1970s, and fairly limited in nature. Fowler⁴ has identified a number of Commonwealth approaches to environmental legislation. While some involve direct operation within the States—for example, the *Ozone Protection Act 1989* (Cwlth)—others are based on a cooperative approach whereby, for instance, Commonwealth legislation ceases to have effect in a particular jurisdiction when that jurisdiction enacts appropriate legislation. The *Environment Protection (Sea Dumping) Act 1981* (Cwlth) is an example of such an approach. Yet other Commonwealth statutes operate in the States with State consent—for example, the *Environment Protection (Nuclear Codes) Act 1978* (Cwlth). In addition to the enactment and administration of environment protection statutes, the Commonwealth also consults about and negotiates with the States on environmental matters through ministerial bodies such as the Australian and New Zealand Environment and Conservation Council.

The Commonwealth Government takes a restrictive view of its own powers vis-a-vis the environment. According to a previous Prime Minister, 'Under the Australian Constitution, the States and Territories have primary responsibility for protecting and regulating the environment.'⁵ There is, however, a body of opinion that suggests that the Commonwealth has the power to substantially cover the field in environmental matters.⁶

While it is true that there is no specific environmental power contained in the Australian Constitution, there are many heads of power that could support an expanded Commonwealth role in environmental matters. A number of recent landmark cases decided by the High Court of Australia, the court at the apex of the Australian judicial system, are important in this regard. In particular, the Commonwealth can legislate using its external affairs power (section 51(xxix)) to implement international treaty obligations and is no longer constrained by the additional principle that the subject matter of the treaty must be one of 'international concern' (*Commonwealth v. Tasmania*⁷—the *Tasmanian Dams Case*).

Furthermore, there are dicta in the *Tasmanian Dams Case* (per Mason, Murphy and Deane JJ) that the Commonwealth could, by virtue of its corporations power (section 51(xx)), regulate all the activities of trading corporations. These activities would, of course, include manufacturing, mining and agricultural activities. Most such activities, especially those of significant size, are carried out by trading corporations rather than individuals.

Legal thinking about section 92 of the Constitution, which guarantees the freedom of interstate trade, has been transformed by the decisions in *Cole v. Whitfield*⁸ and *Castlemaine Tooheys Ltd v. South Australia*.⁹ It now seems clear that Commonwealth laws regulating interstate trade will offend section 92 only if they are discriminatory or protectionist. It may thus be possible for the Commonwealth Government to use 'the trade and commerce power to control the interstate export of products on environmental grounds, either absolutely or conditionally ... [or] to regulate the production of goods intended for interstate (or overseas) export'.¹⁰

Apart from the trade and commerce, corporations and external affairs powers, other constitutional powers available to the Commonwealth include the taxation power (section 51(ii)) and the Commonwealth grants power (section 96).

'Green' politics

Australia is credited with having the world's first 'greens' party—the United Tasmania Group. It was formed in 1972 in an attempt to prevent the flooding of Lake Pedder in Tasmania; candidates contested the 1972 State elections and won 3.9 per cent of the vote.

Green politics continues to be important in Tasmania. In the 1989 Tasmanian State election, Green Independent candidates contested each electorate. Two sitting members, Dr Bob Brown and Dr Gerry Bates, were returned to Parliament; three additional candidates were elected and the Green Independents secured 17 per cent of the vote. In the aftermath of the election, the Australian Labor Party and the Greens concluded a Labor–Green Accord in which 'the Greens promised support for the minority Labor government and agreed to conditions under which potential no-confidence motions were avoided'.¹¹ However, a break between Labor and the Greens over resource security legislation precipitated an election, which was held in February 1992.

In that election the Labor Government lost power, although the Greens maintained their parliamentary numbers. High unemployment and the perception that the Labor-Green Accord endangered jobs, especially in forest industries, appear to have been factors in the election result. The defeated Tasmanian Premier is reported to have said, 'Voters in the north-west [of the State], where Labor was thrashed convincingly, perceived the Greens had threatened their job prospects.'¹²

Elsewhere in Australia many green groups are now registered as political parties and have contested seats at local, State and federal government elections. In New South Wales, for example, the Hunter Greens and the South Sydney Greens have successfully fielded candidates in local council elections.¹³

Although green parties exist in Australia they are primarily embryonic in form and have secured few parliamentary seats (as against local government representation). Apart from the five Tasmanian Green Independents, the only other Green to hold a parliamentary seat is Senator Christabel Chamerette, a representative of The Greens (WA) who sits in the Australian Senate.

Political party platforms

Insofar as they focus on the environment, the policy platforms of the major political parties are concerned more with the natural rather than the built environment, with conservation rather than pollution. For the purposes of this study, federal and State branches of the Australian Labor Party, the Liberal Party, the National Party, the Australian Democrats and green organisations were asked to provide copies of their environmental policies.

The governing party at federal level, and in Victoria, South Australia, Queensland, Western Australia and the Australian Capital Territory, is the Australian Labor Party (ALP). The ALP's 1991 Environment Platform emphasises the National Conservation Strategy, soil and water conservation, forests, national parks, wildlife and wilderness, and climate change. The Platform undertakes to further develop and maintain an environmental contaminants function within the Commonwealth Department of the Arts, Sport, the Environment and Territories; the functions of this unit include the promotion of the polluter-pays principle. The Platform also undertakes to develop and implement a national strategy for hazardous waste management.

Although pollution has been traditionally viewed as a State responsibility, the emphasis on conservation, climate change, forests and parklands (rather than on pollution) is also common in the platforms of State branches of the

ALP. Examples of pollution policies are found in the platforms of the New South Wales and Western Australian branches of the Party. The 1991 platform of the New South Wales Branch of the ALP undertakes to 'improve legislation and [the] capacity of government agencies to secure high quality of air and water and low levels of ambient noise', to review standards and control measures, and to eliminate coastal pollution caused by sewage effluent. The Conservation and Environment Policy of the Western Australian Branch of the ALP pledges to establish and enforce strict limits for the emission of effluents, substantially increase penalties for pollution, and review enforcement procedures.

The Liberal Party is the major conservative party in Australia and is the ruling party in New South Wales and Tasmania. The Liberal Party's Environment Policy (February 1990), which is also endorsed by the National Party, once again highlights soil conservation, land degradation, forests, parks and climate. In a section entitled 'Pollution and Waste Disposal', however, it endorses the polluter-pays principle and acknowledges a coordinating role for the Commonwealth in 'the development of uniform standards to control pollution ... to prevent polluters from "shopping around" for jurisdictions having lower pollution controls' (p. 10). This view is echoed in a discussion paper released by the South Australian Branch of the Liberal Party in June 1991, which suggests that 'if South Australia does not soon set its own enforceable standards, they should be set for us by the Federal Government'.¹⁴

The major focus of the National Party (a rurally based conservative party that is the coalition partner of the Liberal Party) is on conservation programs, veterinary and agricultural chemicals, and protection for certain endangered species. In a specific reference to pollution, however, the policy adopted at the Party's Federal Conference in September 1991 endorses 'coordination with the States of notification and control procedures covering hazardous chemical, toxic waste and other pollution problems ... [and] ... development with the States and Territories of a strategic plan on the siting of important and environmentally sensitive facilities such as a toxic waste disposal plant'.

The Australian Democrats have traditionally portrayed themselves as a party with green concerns. They hold the balance of power in the Australian Senate. The Australian Democrats' Policy Index (January 1991) has two policy streams relating to the environment: 'Conservation and the Environment' and 'Urban Planning and Infrastructure'. The former encompasses such issues as conservation, forests, water resources, wildlife

and atmospheric change. The latter includes pollution, toxic wastes and recycling. It pledges more stringent air pollution standards for industry (with 'financial incentives such as rate reductions and tax rebates ... for short-term encouragement'), standards for sewage effluent to make it suitable for irrigation and industrial cooling, and reduction in visual pollution through the banning of billboards and the use of underground wiring.

In general, the national policies of the Australian Democrats apply in each jurisdiction. Sometimes adaptations are published by State branches of the party. The Australian Democrats' Queensland Policy Statement on Nature and Natural Resources (1989) has a section on pollution control, which endorses the polluter-pays principle and the use of stringent penalties for non-compliance with pollution legislation.

It was not possible to obtain policy documents from the Tasmanian Green Independents. Policy documents were, however, obtained from the Green Alliance in New South Wales and the Green Alliance Queensland. The policy of the New South Wales Green Alliance includes the minimisation of pollution and wastes, the implementation of a pollution tax and the introduction of more stringent pollution control standards. The document from the Green Alliance Queensland was issued for the 1991 Brisbane City Council elections; it targets waste reduction and recycling, and advocates a more rigorous approach to water pollution and sewage.

Although Australians have not witnessed the emergence of strong green parties, environmental issues have assumed importance in past federal elections—the 1990 election being of note. At that time the Australian Labor Party was returned to government but it was forced to rely heavily on preferences from the Australian Democrats, the Greens and other small parties.¹⁵ Data from the Australian Electoral Study suggest a growing importance of environmental issues among voters in the late 1980s. Data from the 1987 federal election survey show that 31 per cent of respondents saw the environment as a very important issue. This percentage had risen to 52 per cent for the 1990 federal election survey.¹⁶ McAllister and Bean conclude that, 'for the growing number of voters concerned about the environment, Labor, the Democrats or a Green candidate were the only alternatives; the Coalition was simply not a viable option'.¹⁷ As is suggested in Section 1.3, however, current economic conditions in Australia may have caused community concern about the environment to take second place.

Parliamentary committees

Interest in environmental issues has led to the establishment of a number of parliamentary committees to investigate environmental matters. Among the first were two federal committees, the Senate Select Committee on Water Pollution and the Senate Select Committee on Air Pollution, the reports of which were tabled in 1969; their work was extremely influential in the development of Australian pollution legislation.

In most jurisdictions parliamentary committees have now been established to investigate and report on environmental matters. Among such committees are the following:

- the Senate Standing Committee on Environment, Recreation and the Arts (Commonwealth);
- the House of Representatives Standing Committee on the Environment, Recreation and the Arts (Commonwealth);
- the Joint Legislative Council and Legislative Assembly Committee on Natural Resources and Environment (Victoria);
- the Legislative Assembly Sessional Committee on Environment (Northern Territory);
- the Legislative Assembly Committee on Conservation, Heritage and Environment (Australian Capital Territory).

1.2 Legal framework

Criminal law

Although traditional criminal law may have some relevance to environmental pollution, environmental offences in Australia are primarily statutory creations. In the main, offences and penalties are established in statutes that set up administrative structures for the control and prevention of pollution. New South Wales is currently an exception to this general rule: offences under pollution statutes, such as the *Clean Air Act 1961*, are deemed to be offences under the *Environmental Offences and Penalties Act 1989*. Penalties for those offences are found in the Act, as are offences and penalties relating to new offences of aggravated pollution. Details of Australian pollution offences and penalties are provided in Section 2.2.

Both code and common law jurisdictions exist in Australia. Code jurisdictions—Western Australia, Tasmania, Queensland and the Northern Territory—have a single criminal code. Other jurisdictions, such as New South Wales, rely both on statutes such as the *Crimes Act 1900* and the

Summary Offences Act 1970, and the common (judge-made) law to govern criminal behaviour. (The other common law jurisdictions are Victoria, South Australia, the Australian Capital Territory and the Commonwealth.)

Depending on the jurisdiction, the criminal code, common law or statute may create offences relevant to cases of environmental pollution. Public nuisance is a common law crime. In addition, criminal codes such as those in force in Queensland, Western Australia and Tasmania contain nuisance offences. Examples of other criminal offences that may be relevant to polluting behaviours are found in statutes such as the New South Wales *Crimes Act 1900*. The Act contains an offence of introducing any poison or other destructive or noxious thing into the water supply with intent to injure (section 41A). The penalty is five years' penal servitude. Other potentially relevant provisions in the New South Wales Crimes Act include malicious destruction or damage of property (sections 195, 196 and 198), unlawful or negligent acts causing grievous bodily harm (section 54), and manslaughter (section 18). Penalties range from imprisonment for two years (section 54) to penal servitude for 25 years for manslaughter (section 24).

Trends in approaches to secure compliance

There are a number of commonalities in the development of Australian pollution legislation in recent years. There has been recognition that attempts to secure compliance will be assisted through the adoption of uniform standards and penalties throughout Australia. In addition to this recognition that pollution is not confined by political boundaries and that the creation of pollution havens is not desirable, it is also recognised that for larger corporations, which may operate in a number of jurisdictions, compliance with the law will be facilitated if there are uniform standards and penalties.

Second, it has been recognised that penalties are generally too lenient and offence structures too simplistic. There has been a move towards a general increase in penalties, the provision of severe penalties (including in some cases imprisonment for those whose intentional or negligent conduct harms the environment) and the creation of on-the-spot infringement notices for minor polluters. In Victoria the *Environment Protection Act 1970* extends liability for aggravated pollution to reckless conduct. Although New South Wales and Victoria are as yet the only jurisdictions that have amended their legislation in this way, other jurisdictions—Queensland, South Australia and Tasmania—are considering such options. These options have been discussed at a national level by the Australian and New Zealand Environment and

Conservation Council and will be examined under the terms of the Intergovernmental Agreement on the Environment.

Third, in Victoria and New South Wales attention has been given to increasing the exposure of directors and corporations to liability under pollution statutes. Australian pollution legislation has traditionally been based on the 'command and control' model, and so punishment features prominently. As mentioned, new legislation and legislative reviews provide for or endorse severe penalties but there are also some signs that Australian policy makers and legislators are examining other ways of securing compliance. Alternative approaches include the provision for civil enforcement, the introduction of environmental auditing and environmental improvement plans, the implementation of the polluter-pays principle for licence fees, and the provision of tax incentives.

Administration of environmental protection

Environmental protection is administered in different ways in different parts of Australia. In the early 1970s Victoria and Western Australia established statutory environmental protection authorities, which centralised much of the administration and regulation of environmental protection into one organisation. Some environmental protection functions continued to be administered outside these organisations; for example, in Western Australia the Environmental Protection Authority has delegated the administration of water pollution matters to the Water Authority of Western Australia. Centralisation has also been the model in Tasmania, where statutory responsibility is vested in a Director of Environmental Control and administrative backing is provided by the Department of Environment and Planning.

The other model in Australia has involved decentralisation of responsibility for pollution and waste between a number of government departments or statutory authorities, or both. Concern about the effectiveness of this model has led to reviews in New South Wales, South Australia and Queensland aimed at reforming environmental protection legislation and administration. For example, before 1992 responsibility for air, water and noise pollution in New South Wales rested primarily with the State Pollution Control Commission and responsibility for discharges to land with the Waste Management Authority. These matters are now the concern of the Environment Protection Authority.

Details of the major agencies with responsibility for the regulation of pollution in Australia follow.

The Commonwealth

As noted, the vast majority of environmental regulatory agencies and statutes are the province of the State and Territory governments. Federal government involvement is more recent. At national level a Department of the Environment was first established in 1971. The first federal environmental statute enacted was the *Environment Protection (Impact of Proposals) Act 1974*. It provides for assessment procedures in relation to development proposals involving the Commonwealth Government.

Although a number of Commonwealth departments and agencies have responsibilities relating to environmental protection, the focal point of Commonwealth involvement is the Department of the Arts, Sport, the Environment and Territories. This Department liaises with State and Territory governments in the development of national environmental policy objectives.¹⁸ It also provides the secretariat for the Australian and New Zealand Environment and Conservation Council and administers a number of the major Commonwealth environmental statutes, including the *Environment Protection (Impact of Proposals) Act 1974*, the *Environment Protection (Sea Dumping) Act 1981*, the *Ozone Protection Act 1989* and the *Hazardous Waste (Regulation of Exports and Imports) Act 1989*.

The Department of Transport and Communications administers marine pollution statutes, such as the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983*, and legislation affecting air pollution, such as the *Motor Vehicles Standards Act 1989*. The Department of Primary Industries and Energy also has statutory environmental protection responsibilities.

In August 1991 the Commonwealth Environment Protection Agency was established. It is a non-statutory body that is part of the Department of the Arts, Sport, the Environment and Territories. It will work in partnership with the National Environment Protection Authority (a proposed ministerial council), the States and Territories and interest groups on national environmental measures, protocols for monitoring compliance, and the establishment of effective consultative arrangements. It will provide education and information on environmental matters, as well as legal and economic resources to assist the Commonwealth in the international environmental arena.¹⁹

Fowler²⁰ lists the major Commonwealth statutes dealing with environmental protection, as follows:

Environmental Planning

- Environment Protection (Impact of Proposals Act) 1974
- Environment (Financial Assistance) Act 1977
- Resource Assessment Commission Act 1989

Air Pollution

- States Grants (Air Quality Monitoring) Act 1976
- Ozone Protection Act 1989
- Motor Vehicle Standards Act 1989

Water Pollution

- Murray-Darling Basin Act 1983

Marine Pollution

- Protection of the Sea (Discharge of Oil from Ships) Act 1981
- Protection of the Sea (Prevention of Pollution from Ships) Act 1983
- Protection of the Sea (Powers of Intervention) Act 1981
- Protection of the Sea (Civil Liability) Act 1981
- Navigation (Protection of the Sea) Amendment Act 1983
- Environment Protection (Sea Dumping) Act 1981
- Great Barrier Reef Marine Park Act 1975

Waste

- Hazardous Waste (Regulation of Exports and Imports) Act 1989

Toxic or Hazardous Substances

- Biological Control Act 1984
- National Occupational Health and Safety Commission Act 1985
- Agricultural and Veterinary Chemicals Act 1988
- Industrial Chemicals (Notification and Assessment) Act 1989

Nuclear

- Environment Protection (Nuclear Codes) Act 1978
- South Pacific Nuclear Free Zone Treaty Act 1986
- Nuclear Non-Proliferation (Safeguards) Act 1987
- Environment Protection (Alligator River Region) Act 1987

Commonwealth-State-Territory cooperation

Recognition of the need for consultation between the States and Territories and the Commonwealth on environmental matters came in the early 1970s with the establishment of what was then called the Australian Environment Council. Now called the Australian and New Zealand Environment and Conservation Council, this body consists of Commonwealth, State and Territory Ministers with responsibility for the environment. New Zealand has been a member of the Council since 1989. The Council is supported by a Standing Committee of Officials and a number of advisory committees. Among the matters to which the Council has turned its attention are air quality, chemicals, hazardous industrial waste, motor vehicle emissions and noise, the enhanced greenhouse effect and the ozone layer. It has recently examined environmental guidelines and national strategies.

Despite the existence of the Australian and New Zealand Environment and Conservation Council, there has been a growing push for greater national coordination and policy development on environmental matters in Australia. In November 1991 a Special Premiers Conference was held to discuss a number of issues, including the environment. The communique issued after the Conference foreshadowed an 'intergovernmental agreement on the environment'. The Conference had decided that such an agreement was a necessity because 'environmental concerns and impacts are not confined by physical or political boundaries and are increasingly taking on interjurisdictional and global significance in a way that was not contemplated by those who framed the Australian Constitution'.²¹

An Intergovernmental Agreement on the Environment was made on 25 February 1992 between all jurisdictions (except Tasmania) and the Australian Local Government Association. The Agreement sets out the various responsibilities of the Commonwealth, States, Territories and local government; it commenced on 1 May 1992, the day it was signed by Tasmania.

The Intergovernmental Agreement on the Environment sets out principles that should inform the making of policy and the implementation of programs. These include the precautionary principle, intergenerational equity, conservation of biological diversity and ecological integrity, and improved valuation, pricing and incentive mechanisms. Schedule 4 of the Agreement provides for the establishment of a statutory National Environment Protection Authority, which will consist of a Minister nominated from each State and Territory and the Commonwealth. Decisions about environmental matters will

be made by a ministerial council chaired by the Commonwealth and will require a two-thirds majority. The Authority will be assisted and supported by a standing committee of officials and it will have access to scientific and technical advice. It will 'establish measures for the protection of the environment for the benefit of the people of Australia'²² in relation to ambient air and water quality, noise where variations in measures would have 'an adverse effect on national markets for goods and services'²³, guidelines for contaminated site assessment, hazardous wastes, motor vehicle emissions, and reuse and recycling.

In particular, the Agreement provides for agreements to be reached on national standards, goals and protocols, and for agreement on the establishment of a uniform hierarchy of offences and penalties. The States and Territories will be required to meet environmental standards and report on their performance annually. These agreements will not prevent the Commonwealth or a State or Territory from 'introducing more stringent measures to reflect specific circumstances or to protect special environments or environmental values located within its jurisdiction provided there has been consultation with the Authority'.²⁴

It has been agreed that, within 12 months, draft legislation will be prepared and this will be submitted to the Parliament of each jurisdiction.

New South Wales

New South Wales is undergoing significant changes in the field of environmental protection. Until 1 March 1992, the Minister for Environment had responsibility for, among other things, the Sydney Water Board, the Waste Management Commission, the State Pollution Control Commission, the National Parks and Wildlife Service, the Hunter District Water Board, the Centennial Park Trust, and the Royal Botanic Gardens.²⁵ The State Pollution Control Commission was the major body with responsibility for the administration and regulation of environmental pollution; it administered the following Acts:

Clean Air Act 1961

State Pollution Control Commission Act 1970

Clean Waters Act 1970

Noise Control Act 1975

Recreation Vehicles Act 1983

Environmentally Hazardous Chemicals Act 1985

Environmental Offences and Penalties Act 1989
Ozone Protection Act 1989.

Following a decision of the New South Wales Government in 1989, and the release of discussion and information papers²⁶, the Environment Protection Authority was established to administer the following Acts:

Protection of the Environment Administration Act 1991
Clean Waters Act 1970
Clean Air Act 1961
Noise Control Act 1975
Pollution Control Act 1970
Waste Disposal Act 1970
Environmentally Hazardous Chemicals Act 1985
Environmental Education Trust Act 1990
Environmental Offences and Penalties Act 1989
Environmental Research Trust Act 1990
Environmental Restoration and Rehabilitation Trust Act 1990
Recreation Vehicles Act 1983
Dangerous Goods Act 1975
Radiation Control Act 1990
Ozone Protection Act 1989
Unhealthy Building Lands Act 1990.

Other relevant authorities with responsibilities for pollution control in New South Wales are the Sydney Water Board, which administers the *Water Board Act 1987*, and the Waste Management Authority, which operates under the *Waste Disposal Act 1970* (although from March 1992 it has functioned only as a waste disposal operator and not as a regulator as well). Other agencies fulfilling functions relating to the management and protection of environmental resources are the Department of Planning, the Department of Water Resources, the Department of Public Works, the Soil Conservation Service, the Forestry Commission, the Roads and Traffic Authority, the Maritime Services Board and local government councils.

During its last year of operation (1990-91) there were 313.4 staff positions in the State Pollution Control Commission. Among these were 3 legal officer positions, 47.6 engineer positions, 4 education/public relations positions, 15 technical officer positions, and 68.9 environmental control officer positions. Moneys from consolidated revenue totalled \$19 049 000 for that year.

Victoria

In Victoria a statutory authority, the Environment Protection Authority, is established under the *Environment Protection Act 1970*. The Authority is responsible for waste management and waste reduction, noise control, and pollution prevention and control. Outside those areas, other agencies have responsibilities for environmental matters. The Office of the Environment is involved with climate change, coastal management and the coordination of the State Conservation Strategy. The Department of Planning and Housing is responsible for land development and land use. The *Local Government Act 1989* and the *Health Act 1958* invest local authorities with some noise, water and air pollution responsibilities within by-law and public health frameworks. The Department of Transport administers the *Marine Act 1988*, which prohibits the pollution of ports, harbours and coastal waters, and the *Pollution of Waters by Oil and Noxious Substances Act 1986*.

The Environment Protection Authority was established in order to integrate environmental controls in one agency. It has four divisions: Operations, Policy, Scientific and Engineering Services, and Corporate Services. In 1990-91 its total budget was \$16 680 169. In addition, revenue from licences, permits, works approvals, the Environment Protection Trust Fund and other sources amounted to \$6 871 858.18. At 30 June 1991 the Authority employed a total of 303 staff, including 3 legal staff and 133 Operations Division staff. It is estimated that about 40 per cent of staff are involved in law enforcement.

Queensland

In Queensland the Department of Environment and Heritage was established by administrative arrangement in 1987. It has three Divisions: the Conservation Division, responsible for the Queensland National Parks and Wildlife Service, heritage matters and coastal protection; the Division of Environment, responsible for environmental management and impact assessment; and the Division of Corporate Services, responsible for financial, personnel and other matters.

The Division of Environment administered the following statutes (as at 30 June 1991):

Noise Abatement Act 1978

Clean Air Act 1963

Clean Waters Act 1971

Litter Act 1971

State Environment Act 1988.

The Division's operational budget for 1991-91 was \$7.874 million, compared with the previous year's allocation of \$5.1 million. The Division has 88 professional and technical staff and 20 support staff. During 1990-91, financial resources were spent in the following way:

- \$4.1 million in salaries;
- \$1.75 million as new initiative funding for pollution control policies and environmental education;
- \$2.024 million to meet statutory requirements and client needs.

The Department of Environment and Heritage is not alone in having responsibilities for environmental protection and environmental pollution in Queensland. The Chemical Hazards and Emergency Unit within the Department of Police and Emergency Services has responsibility for contaminated land. The Department of Resource Industries administers the *Mineral Resources Act 1989*, which encompasses environmental activities on mine sites, including pollution. The Department of Health administers the *Health Act 1937*, which, among other things, provides for the management and disposal of domestic, commercial and industrial waste. The Department of Transport administers the *Harbours Act 1955*, the *Queensland Marine Act 1976*, the *Traffic Act 1949* and the *Pollution of Waters by Oil Act 1973*. The Department of Local Government and Housing, together with local government authorities, has prime responsibility for sewerage.

Fragmentation of responsibilities in Queensland is one of the factors that has led to a review of environmental protection legislation in that State. The Queensland Government recently issued discussion papers on environmental protection legislation, contaminated land legislation, and waste minimisation (see Section 5.1).

South Australia

In South Australia, as in Queensland, responsibility for environmental matters is shared by a number of government agencies. The Department for Environment and Planning has responsibility for 'conservation and land management, national parks, planning, and environmental management'.²⁷ The Department administers the following pollution-related statutes:

Beverage Container Act 1975

Clean Air Act 1984

Coast Protection Act 1972
Environmental Protection Council Act 1972
Marine Environment Protection Act 1990
Noise Control Act 1976
Planning Act 1982
Unleaded Petrol Act 1985.

Other agencies with statutory responsibilities for environment-related matters include the Department of Marine and Harbours, which administers the *Environment Protection (Sea Dumping) Act 1984*, the *Harbours Act 1936* and the *Pollution of Waters by Oil and Noxious Substances Act 1987*, and the Engineering and Water Supply Department, which administers the *Sewerage Act 1929*, the *Water Conservation Act 1936*, the *Water Resources Act 1990* and the *Waterworks Act 1932*. The South Australian Waste Management Commission administers the *Waste Management Act 1987*.

The proliferation of environmental legislation and administrative agencies in South Australia has resulted in the South Australian Government issuing a discussion paper entitled *Proposal for a South Australian Environmental Protection Authority and a Charter on Environmental Quality*.²⁸ Reform proposals are described in Section 5.1.

Western Australia

In Western Australia the Environmental Protection Authority is a statutory authority that advises the Western Australian Government on environmental protection and pollution control, including air, noise and water pollution. It also conducts environmental impact assessments. The Authority operates under the *Environmental Protection Act 1986*. In 1988–89 its total budget was \$7 139 462; in 1989–90 it was \$7 967 909. The Authority's annual report for 1989–90 commented that its total staffing had increased by only 16 since 1986 and that its proportion of the State budget had declined from 0.20 per cent in 1987–88 to 0.18 per cent in 1989–90.

The Environmental Protection Authority has delegated responsibility for water pollution matters to the Water Authority of Western Australia. The Water Authority also administers the *Metropolitan Water Supply, Sewerage and Drainage Act 1909*. Local authorities have some responsibility for sewage disposal and domestic and trade wastes under the *Local Government Act 1960*. Dumping from boats and marine oil pollution are the province of the Department of Marine and Harbours, under the *Marine and Harbours Act 1981* and the *Prevention of Pollution of Waters by Oil Act 1961* respectively.

Some general powers relating to water pollution, sewerage and waste disposal are also granted to the Health Department under the *Health Act 1911*.

Tasmania

Like Victoria and Western Australia, Tasmania has a fairly centralised system of environmental protection administration. The Department of Environment and Planning has responsibility for planning (except as it is related to local government), pollution control, litter, sea dumping, environmental impact assessment and waste disposal. Legislation administered by the Department includes the following:

Environment Protection Act 1973

Pollution of Waters by Oil and Noxious Substances Act 1987

Environmental Protection (Sea Dumping) Act 1987

Chlorofluorocarbons and other Ozone Depleting Substances Control Act 1988

Local Government Act 1962

Oil Pollution Act 1961.

As at 30 June 1990 there were approximately 465 staff (full-time equivalents) in the Department. Approximately 36 staff were employed in the Environmental Management Division of the Department, which deals with environmental impact assessment, environmental planning, water, noise and air monitoring, and pollution incidents.

Northern Territory

By Cabinet direction, the Conservation Commission of the Northern Territory coordinates waste management and pollution control matters in the Territory. At present a large number of statutes have some bearing on waste management and pollution control, but there is little on the statute books specifically designed to deal with pollution and waste management. The following are the relevant statutes, as listed by the Conservation Commission of the Northern Territory:

Waste management

Dangerous Goods Act 1981

Darwin Port Authority Act 1983

Abattoirs and Slaughtering Act 1973

Control of Roads Act 1953

Control of Waters Act 1938

Public Health Act 1952

Mines Safety Control Act 1977

Caravan Parks Act 1975

Noise pollution

Summary Offences Act 1923

Construction Safety Act 1975

Darwin Port Authority Act 1983

Dog Act 1980

Tenancy Act 1979

Territory Parks and Wildlife Act 1977

Traffic Act 1949

Air pollution

Construction Safety Act 1975

Dangerous Goods Act 1981

Darwin Port Authority Act 1983

Ozone Protection Act 1990

Public Health Act 1952

Motor Vehicles Act 1949

Water pollution

Construction Safety Act 1975

Public Health Act 1952

Fisheries Act 1988

Litter Act 1972

Summary Offences Act 1923

Mining Act 1982

Water Supply and Sewerage Act 1983

Control of Waters Act 1938

Dangerous Goods Act 1981

Darwin Port Authority Act 1983

Prevention of Pollution by Oil Act 1962

Mines Safety Control Act 1977

Territory Parks and Wildlife Conservation Act 1977

Administering authorities include the Darwin Port Authority, the Power and Water Authority, the Work Health Authority, the Northern Territory Police Force, the Department of Health and Community Services, the Department of Transport and Works, and the Department of Mines and Energy.

The Northern Territory Government is at present conducting a review of legislative and administrative needs for the regulation of pollution and wastes. In the meantime, the Conservation Commission 'assumes responsibility for the overall co-ordination of waste management and pollution control requirements and for review of the existing arrangements with a view to formalising a strategy to address future management requirements'.²⁹ This role was given to the Environment Protection Unit in May 1990, with a staff of four. Other authorities with pollution prevention responsibilities have no staff dedicated to this purpose 'but provide staff resources from primary function areas on a needs basis'.³⁰

Australian Capital Territory

In the Australian Capital Territory the Environment Protection Section of the Department of Environment, Land and Planning has responsibility for policy and administration in relation to air, noise and water pollution, and chemicals and hazardous waste. According to the Section's latest annual report, 18 staff were employed in the Section, including two scientists, two chemists, a technical officer and five inspectors.³¹

Advice on pollution and waste management is provided by the Interdepartmental Committee on Environmental Quality, the Pollution Advisory Committee, and the Water Resources Committee.

The following are the major pieces of pollution-related legislation in the Australian Capital Territory:

Air Pollution Act 1984

Water Pollution Act 1984

Noise Control Act 1988.

1.3 Environmental problems

Among Australia's pollution problems are contaminated land sites, greenhouse gas emissions, air pollution in cities (including high levels of lead in some cities and photochemical smog), ozone depletion, traffic noise pollution, hazardous waste disposal, urban stormwater run-off, and other types of waterway pollution. Water pollution from point sources has been attributed to domestic wastes and nutrient input from sewage treatment plants. Diffuse-source pollution of water and marine environments—from pesticides, sediments and nutrients—is regarded by many as even more serious than point-source pollution.

Significant beach and ocean pollution in many locations around Australia is caused by ocean outfalls for

either primary or secondary treated sewage which often contains industrial and toxic wastes. Concern in the community over the use of such outfalls has arisen in Hobart, at Black Rock along the south western Victorian coast, at Ninety Mile Beach in East Gippsland [Victoria], at Coffs Harbour [and] Byron Bay [New South Wales] and significantly in Sydney.³²

It is difficult to single out particular actors—for example, public sector as against private sector; multinational, large or small corporations or small businesses; or individuals—as the prime source of pollution in Australia. All contribute to the problem.

Public opinion

Widespread environmental concern and consciousness of the seriousness of environmental issues was documented in Australia in the 1980s. According to Tighe and Taplin, the issues to the forefront of public and media attention have been 'land use preservation issues focusing on questions of wilderness and forestry usage. Such issues are reflected in the names of the nation's two largest environmental interest groups—the Australian Conservation Foundation and the Wilderness Society'.³³ Exceptions to this general rule include concern in New South Wales about pollution of Sydney's beaches and concern in Tasmania about dioxin emissions from the Wesley Vale Pulp Mill.

In 1986 the Australian Institute of Criminology commissioned a survey of attitudes to crime and sentencing in Australia.³⁴ Some 2500 Australians were questioned about their attitudes to 13 offences and asked to select appropriate sentences for each. The offences included murder, heroin trafficking, wife bashing, and income tax evasion. Respondents were also given the example of a factory knowingly discharging polluted wastes in a way that contaminated a city's water supply and led to the death of one person.

Significantly, the pollution offence was ranked the third most serious crime. When asked about appropriate punishments for the fictional polluter, the most commonly suggested penalty was a fine of at least \$50 000. One in three of those surveyed opted for a prison sentence where a death had occurred as a result of the pollution.

National opinion polls have identified concern about the environment in general and about pollution in particular. In a number of polls conducted in 1989 and 1990, those surveyed were asked about the environment. When

polled in January and February 1989 about water pollution, 71 per cent of the 1000 people interviewed said they believed that beach pollution had become worse in recent years and 67 per cent said they believed that rivers and lakes were more polluted.³⁵ Sixty-six per cent of those taking part in the poll were prepared to pay more tax to prevent pollution. Eighty-one per cent of respondents to another national Saulwick poll conducted in May 1990 viewed the threat to the environment as both real and serious.

A MORI (Market and Opinion Research International) poll, conducted in March and April 1990, asked nearly 1200 Australians to score a number of issues. Sixty-four per cent ranked the environment first.³⁶ Interviewees cited pollution as the major environmental issue. Four out of five respondents believed that penalties for causing pollution were too light and that corporations were not sufficiently environmentally aware.³⁷

Australia is currently in the grip of a recession that has been described as the worst in 60 years. Unemployment has risen to over 10 per cent. It appears that the level of concern about the environment may now be lower than in recent years. This is the conclusion of the marketing and research firm Frank Small & Associates, which conducted opinion polls about environmental issues in July 1989, November 1989, April 1990, September 1990, June 1991 and October 1991. The poll results record a decline in concern about the environment.

In July 1989, 66 percent of respondents stated that they were extremely concerned about water and beach pollution, 63 per cent expressed extreme concern about air pollution, 59 per cent expressed extreme concern about ozone depletion, 55 per cent expressed extreme concern about the enhanced greenhouse effect, and 46 per cent expressed extreme concern about fertiliser and chemical residues.³⁸ In the most recent poll, conducted in October 1991, 49 per cent of respondents expressed extreme concern about water and beach pollution, 51 per cent expressed extreme concern about air pollution, 48 per cent expressed extreme concern about ozone depletion, 42 per cent expressed extreme concern about the enhanced greenhouse effect, and 38 per cent expressed extreme concern about fertiliser and chemical residues.³⁹

Although the level of concern about the environment may be declining, the pollsters say that '[it] is still an issue for most people, with around three in four Australians saying that they are concerned despite not donating to or joining environmental movements'.⁴⁰

'Green' organisations

In recent years there has been a proliferation in the number of 'green' organisations in Australia. A recent edition of the *Green Guide*⁴¹—an information directory detailing environmental and conservation contacts in government, the media and voluntary organisations—lists over 60 magazines and newsletters published in Australia that are concerned with environmental issues or of interest to environmental groups. It also lists some 350 associations at national and State and Territory level associated with the environment or relevant to environmental organisations.

Membership of environmental groups has grown markedly in the last 25 years. The Australian Conservation Foundation boasted 1000 members in 1967 (two years after its inauguration), 13 400 members in 1985⁴² and 21 000 members in 1991.⁴³ Other recent estimates are 28 000 members for the World Wide Fund for Nature, 14 500 for the Wilderness Society and 47 000 for Greenpeace.⁴⁴

Citizen activism

Citizen activism in the environmental arena has made an appearance in Australia. For example, breaches of pollution licences and standards, and allegedly inadequate responses by regulatory agencies to those breaches, have been kept in the public view by organisations such as Greenpeace and activities such as its Clean Waters Campaign. Between November 1989 and June 1990 Greenpeace targeted the Apcel Paper Mill and Broken Hill Associated Smelters in South Australia, the Altona Petrochemical Plant and the Nufarm Chemical Company in Victoria, Caltex and Broken Hill Proprietary Company Ltd in New South Wales, and the Electrolytic Zinc Co. of Australasia in Tasmania. In most cases Greenpeace blocked discharge pipes to the accompaniment of considerable media publicity.

Local citizen groups have also been formed. In Victoria, for example, the Altona Environmental Action Group was established in 1989 as a result of concern about the safety record of local petrochemical plants and the effects of community exposure to emissions. The Group has lobbied against plans to expand the petrochemical industry in the Altona-Williamstown area.⁴⁵

Environmental Defenders Offices, which receive assistance and funding from law societies and, in the case of the New South Wales Office, from the New South Wales Legal Aid Commission, are now operating in New South Wales, Victoria and Queensland. They provide legal advice in public interest

litigation, including matters of heritage, forest protection and development applications.⁴⁶

1.4 Historical development of environmental protection laws

Pollution by white settlers in Australia dates from the establishment of the colony of New South Wales in 1788. Controls on pollution were slower to materialise. For example, pollution of the Tank Stream in Sydney Cove, which provided a water supply for early settlers, did not engender much official concern until the mid-1850s, when the Sydney Commission was formed to investigate the need for a sewerage system in the city.⁴⁷

The first environmental laws were passed in the nineteenth century. They were designed to facilitate development and exploitation of natural resources rather than to protect the environment.⁴⁸ Where pollution was the target, the context was firmly one of public health—particularly the transmission of water-borne diseases.

The scope and number of pollution-related statutes increased with population growth and industrialisation, but there were no significant anti-pollution laws until the 1950s, 1960s and 1970s. The effects of unregulated industrialisation in Sydney, for instance, where waterways were used to dispose of industrial waste, caused a public outcry in the 1960s and finally led to the enactment of the *Clean Waters Act 1970*.⁴⁹ The focus was then, and is to a large extent now, public health. Two examples suffice to illustrate this point:

- Clean air legislation was first introduced in Victoria (the *Clean Air Act 1958*). It was closely modelled on English legislation enacted in the aftermath of the disastrous English smogs of the early 1950s. Those smogs and their public health consequences heightened awareness of pollution problems in Australia (although it should be emphasised that legislators were slow to act—for example, New South Wales introduced its Clean Air Act in 1961, Queensland in 1963 and South Australia in 1984).
- In New South Wales the Clean Air Act and the Clean Waters Act were initially administered by the New South Wales Health Commission. It was not until 1974 that the Commission delegated administrative responsibility for those statutes to the State Pollution Control Commission.

Much of the pollution legislation currently in force in Australia dates back to the 1960s and 1970s. Apart from its public health focus, it is generally characterised by a compartmentalised approach whereby the environment is

divided into sectors: air, noise, water and land. Fowler describes the consequences of traditional pollution control legislation thus:

The traditional approaches to environmental protection have been segmented by focussing separately upon air, water, land, etc. This has meant that environmental problems frequently are transferred from one medium to another ... a simple example is the development of air pollution technologies to meet air quality standards; these technologies have resulted, in some cases, in the production of toxic sludge, thus giving rise to a land contamination problem at the point of their disposal.⁵⁰

The British model of the best achievable technology still underlies much Australian legislation, as does the setting of standards based on end-of-pipe discharges. The legislative model introduced during the 1960s and 1970s is very much a 'command and control' orientation (although actual prosecutions of transgressors have been conspicuous by their absence in most jurisdictions).

Environmental protection legislation is currently under review in a number of jurisdictions. Matters for discussion include the need to apply the polluter-pays principle (which is generally endorsed and is now being applied in some jurisdictions in the case of licence fees and increased penalties) and the benefits of clean technology and waste minimisation (that is, pollution prevention at source rather than attempts to control pollution at the end of the pipe).

Changes have already been made in some jurisdictions. There have been some moves away from the 'command and control' orientation. Victoria, for example, has moved towards a more cooperative approach with its Environment Improvement Plans and away from an end-of-pipe approach, with licence fees being tied to pollution load. Victorian legislation (section 20(11)(a) of the *Environment Protection Act 1970*) also allows for the amalgamation of all pollution licences held by a single premises.

2 SANCTIONING STRATEGIES

In Australia controls on pollution are generally achieved by the approval of scheduled works, the licensing of scheduled premises, the prescription of emission standards or environmental protection policies, or the use of the best practicable means.

If an operator wishes to construct, install or modify plant or equipment in a way that would cause or increase pollution, a works approval must usually be obtained from the relevant regulatory agency. Works approvals relate to

emission standards.⁵¹ Licences for scheduled premises must also be obtained, in addition to any works approval, to permit an operator to discharge. Licences are renewable and generally attract a fee.

In brief, the premises and equipment operated by an industry that has significant environmental pollution potential are scheduled. Examples of scheduled premises, taken from New South Wales legislation, are bulk cargo handling facilities, chemical, coal and coke industry works, oil refineries, petroleum product storage and processing facilities, toxic waste incinerators, and wood processing works.

Emission standards are generally based on end-of-pipe emissions. Victoria's approach, however, is rather different from that of other jurisdictions. As Feathers reports, the Victorian Environment Protection Authority 'adopts what can be called the ambient model for discharge regulation. One is free to discharge as much waste as one likes as long as the ambient standard is not breached. The ambient standard is set at what is a perceived acceptable level based on risk assessment'.⁵² Works approvals are considered in terms of the likely effects of a project on the objectives of State Environment Protection Policies and Industrial Waste Minimisation Policies. Licences for discharges are granted in accordance with the objectives of State Environment Protection Policies.⁵³ These Policies are mandated by sections 16 to 19 of the Environment Protection Act and set environmental objectives and indicators.

Despite the existence of traditional 'command and control' legislation throughout Australia, the nature and level of enforcement differ from jurisdiction to jurisdiction.

Pollution legislation is based on a 'command and control' model and is penalty based. While there is provision for administrative remedies and, to a limited extent in some jurisdictions, civil remedies, these provisions are backed up by penalties. Thus, offences and penalties are created for breaches of licence conditions and works approvals, and failure to comply with pollution abatement notices or clean-up notices. In New South Wales civil remedies such as restoration and compensation come into play only when a person has been convicted of a pollution offence.

In some Australian jurisdictions pollution legislation has lacked statutory objectives or guiding principles, and criteria for measuring environmental outcomes have been absent—features that make assessment of agency performance difficult. No objectives or principles are found, for example, in

noise control or air pollution legislation in South Australia and Queensland. Examples of legislation that specifies objectives are the *Protection of the Environment Administration Act 1990* (NSW), the *Marine Environment Protection Act 1990* (SA) and the *Environmental Protection Act 1986* (WA). There is now a requirement for 'state of the environment' reporting in the Protection of the Environment Administration Act. In Victoria, State Environment Protection Policies and Industrial Waste Minimisation Policies are mandated in sections 16(1) and 16(1A) of the Environment Protection Act. These Policies contain environmental objectives and attainment programs.

2.1 Enforcement activities

Australian regulatory agencies adopt a mixture of reactive and proactive approaches but, for the most part, the reactive approach dominates. All agencies interviewed during the course of this project acknowledged the role of public reporting of polluting activities. Limited staff resources, the large number of industries and, in some cases, vast expanses of territory often mean a reactive approach is required. Most of the agencies questioned have either introduced 24-hour pollution 'hot lines' or have officers on call via public emergency services telephone numbers. Some agencies also reported industry itself as a further source of information—competitors in the field, neighbouring plants, or employees.

Apart from information passed on from members of the public or by industry itself, regulatory officers carry out routine inspections of licensed premises, use self-monitoring data collected by industry, and carry out independent checks of self-monitoring equipment. The Victorian Environment Protection Agency (EPA) also reports engaging in crackdowns, both throughout the State and in particular regions. For example, during August and September 1989

the EPA carried out 'spot raids' on industrial premises throughout the state. During the inspections—many of which were at night—premises were combed for evidence of poor maintenance, lack of environmental safeguards and licence breaches. By the end of the two month campaign the EPA had issued almost 600 Infringement and Pollution Abatement Notices to offending companies.⁵⁴

In many jurisdictions, prosecution tends to be limited to cases of intentional pollution or pollution causing environmental damage. It is frequently viewed as a last resort and some agencies see it as an indicator of

failure on their part. Only two agencies favoured the use of prosecution to secure compliance and claimed to prosecute whenever breaches occurred.

Depending on the agency, there may be a tendency to deal with infringements informally—by negotiation, advice or a letter drawing attention to the breach and the potential statutory liability. The last is a device used routinely by some agencies. Even moderately adversarial agencies use a mixture of strategies, including negotiation and education, to secure compliance.

In general, regulatory agencies have tended to prosecute corporate bodies rather than individuals. Large and multinational corporations do not feature prominently or frequently in the lists of those prosecuted, although it seems unlikely that these organisations do not pollute.

There may be statutory or common law impediments to the prosecution of the Crown or its agencies in some jurisdictions (see Section 2.2), despite the fact that the Crown and its agencies do pollute the environment. In addition, in at least one jurisdiction it has been policy until very recently not to prosecute government agencies. In New South Wales this situation changed in July 1990, when a new policy was agreed to by the New South Wales Government, apparently because the State Pollution Control Commission wished to prosecute the Sydney Water Board.

Although there is no longer any impediment at a policy level to the prosecution of Crown agencies in New South Wales, it should be noted that potential Crown prosecutions are handled in a manner different from other prosecutions. In addition to inter-agency consultation at officer level, consultation at ministerial level must occur before a decision is made to prosecute. In the case of infringement notices, normally issued 'on the spot', the approval of an authorised officer's manager must be obtained before an infringement notice is issued against a Crown agency. There is no good reason for such distinctions. Further, it is important that the Crown be treated in the same way as its citizens.

Despite continuing restraints in the prosecution of public authorities in New South Wales, officers of the former State Pollution Control Commission said at interview that the threat of prosecution and even the ability to use on-the-spot infringement notices against government agencies had a salutary effect, the fear of bad publicity being of considerable concern to those agencies.

Local government agencies may also contribute to pollution and waste disposal problems. Once again, in New South Wales at least, few have been prosecuted for breaches of pollution laws.

It appears that no-one has been imprisoned in Australia for a pollution offence and little use has been made of such remedies as injunctions. It is of note, however, that sentencing options such as imprisonment have been available for only a very short time.

2.2 Relevant national (administrative, civil and criminal) sanctions

This report focusses on pollution legislation in the Australian States and Territories, rather than at Commonwealth level. As explained, although the Commonwealth has enacted laws dealing with pollution, the major legislative and regulatory activity has been at State and Territory level. Air, noise, water and land pollution can all be conveniently discussed together in this section. Separate and brief discussion of land pollution will follow for two jurisdictions with separate waste management legislation.

Section 1.2 lists relevant pollution statutes. As stated in that section, there are many variations in the statutory regimes dealing with environmental protection in Australia but two major models can be identified. The first uses statutes dealing with particular environmental sectors; for example, air, noise and water pollution and waste management (New South Wales, South Australia, Queensland and the Australian Capital Territory). The second uses consolidated legislation dealing with water, air, noise and land pollution (Victoria, Western Australia and Tasmania).

Despite many differences between jurisdictions, offence provisions contain a number of common features. Bates has identified these and described them thus:

- emitting pollutants without a licence when one would normally be required;
- emitting pollutants in breach of licence conditions;
- emitting pollutants in breach of emission standards prescribed by regulation or environmental protection policies;
- causing, permitting or allowing pollution as above or 'where no licence is required and no standards are prescribed, and the "best practicable means" either has not been employed to prevent pollution or is inapplicable in the circumstances'.⁵⁵

Variations on these general features occur between jurisdictions. Thus the Tasmanian *Environment Protection Act 1973* provides that if no standard is prescribed then no offence is committed if an occupier or person causing an emission has used the best practicable means in current use to prevent or minimise pollution or, if no such practicable means are in current use, the 'act is done reasonably in the normal course of living, gaining a living or enjoying the use of the land' (section 15(5)).

Pollution legislation also generally provides for offences against works approvals and for failure to comply with clean-up notices, pollution control orders, and so on. Details of these administrative remedies are provided later in this section.

Details about the offences and penalties in Australia's two largest jurisdictions—New South Wales and Victoria—are instructive, although it should be noted that they are not representative of Australian pollution legislation at this stage.

In 1989 the Environmental Offences and Penalties Act was enacted in New South Wales in response to public and media concern about pollution and in keeping with government policy (pressed forcefully by the Minister of Environment) of 'getting tough' with polluters. Judges of the New South Wales Land and Environment Court had also spoken out about the inadequacy of penalties and the difficulties this posed when sentencing offenders. In particular, offences of aggravated pollution were introduced, carrying a maximum penalty of \$1 000 000 for a corporation and a maximum penalty of \$150 000 or seven years' imprisonment, or both, for an individual.

Criticism was levelled against the legislation, resulting in its review and the introduction of new legislation, which took effect from 1 January 1991. Amid much embarrassment, a prosecution begun against the Caltex Oil Refining Company for breach of its licence conditions had been withdrawn because of difficulties in proving that the Company's excessive discharges of phenols harmed or were likely to harm the environment.⁵⁶ The statute contained no definition of 'environmental harm', nor did it define the environment.

The Act now contains a wide definition of harm to the environment, which is defined in section 4(1) as including any direct or indirect alteration of the environment that has the effect of degrading the environment and includes

(a) any act or omission that results in air pollution, within the meaning of the Clean Air Act 1961; and

(b) any act or omission that results in the pollution of any waters, within the meaning of the Clean Waters Act 1970.

The environment is defined in section 4(1) as including 'all aspects of the surroundings of human beings', including the physical, biological and aesthetic aspects of those surroundings. Together with these and other amendments, the maximum penalty for an offence of aggravated pollution committed by an individual was increased to \$250 000.

Aggravated pollution offences in New South Wales can be described as follows:

- Section 5 of the Act creates an offence of waste disposal if committed without lawful authority, wilfully or negligently in a manner that harms or is likely to harm the environment.
- Section 6 makes it an offence for a person without lawful authority wilfully or negligently to cause a substance to leak, spill or otherwise escape (whether or not from a container) in a manner that harms or is likely to harm the environment.
- Section 6A creates an offence in relation to the emission of certain ozone-depleting substances in contravention of regulations made under the Ozone Protection Act in a manner that harms or is likely to harm the environment.
- Ancillary offences are provided by section 6B in relation to sections 5, 6 and 6A.

There is now a tiered structure of offences and penalties in New South Wales, as established under the *Environmental Offences and Penalties Act 1989*. Offences of aggravated pollution—Tier 1 offences—attract substantial penalties (as described). Tier 2 offences (offences of strict liability) and Tier 3 offences (minor pollution penalised by infringement notices) are described below.

The Victorian *Environment Protection Act 1970* also contains offences of aggravated pollution. Section 59E provides that

a person who intentionally, recklessly or negligently pollutes the environment or intentionally, recklessly or negligently causes or permits an environmental hazard which results in

- (a) serious damage to the environment; or
- (b) a serious threat to public health; or
- (c) a substantial risk of serious damage to the environment; or
- (d) a substantial risk of a serious threat to public health

is guilty of an indictable offence.

The Act was amended to incorporate this provision in 1990. Penalties are expressed in penalty units but are of the same monetary value as penalties for aggravated pollution in New South Wales; that is, a maximum \$1 000 000 fine for a corporation and a maximum \$250 000 fine or seven years' imprisonment, or both, for an individual.

The more common offences of 'permitting' or 'allowing' unlawful emissions that are found in traditional pollution statutes generally also contain a mental element. In addition, Australian pollution statutes usually contain offences of 'causing' pollution. Depending on the jurisdiction, these offences may be offences of either strict or absolute liability.

In New South Wales, as noted, the *Environmental Offences and Penalties Act 1989* creates what are called Tier 2 offences. As Lipman has pointed out, there are two types of Tier 2 offence:

- substantive offences, such as breaches of pollution legislation, including breaches of licence and works approval conditions, littering offences, and failure to comply with clean-up orders;
- administrative offences (as specified in Schedule 1 of the Act), such as failure to furnish information, obstructing officers in the exercise of their powers, providing false and misleading information, and contravening notices, orders and directions.⁵⁷

These Tier 2 offences are offences of strict liability. In other words, it is not necessary for the prosecution to demonstrate intention, only that the pollution occurred as a natural result of the defendant's action. It is a defence to show that the pollution resulted from an honest and reasonable mistake (*Proudman v. Dayman* defence⁵⁸). Other defences may also be available, depending on the statutory provision. For example, section 16(6) of the *Clean Waters Act 1970* provides that it is a defence to a charge of water pollution to show that the pollution was licensed.

The situation is different in Victoria, where it appears that there are offences of absolute liability under the *Environment Protection Act 1970*. Thus, section 39 of the Act provides that the pollution of waters is prohibited. This provision has been judicially interpreted as an offence of absolute liability; that is, intention is not a requirement and the defence of honest and reasonable mistake is not available (*Allen v. United Carpet Mills Pty Ltd*⁵⁹). Where statutory provisions are worded similarly to section 39, absolute liability will apply:

It is unclear, however, which offences create offences of absolute liability like s.39; or which are offences of strict liability, admitting defences of honest and reasonable belief or, arguably, reasonable care and diligence. Those offences comprising a failure to reach prescribed standards, or to comply with requirements of notices or other provisions under the Act or regulations, are more likely to be characterised as strict liability than those 'straight out' pollution offences such as s.39.⁶⁰

There are enormous variations in the penalties applicable to offences of 'causing', 'permitting' or 'allowing' pollution in Australia. Under the New South Wales *Environmental Offences and Penalties Act 1989* substantive Tier 2 offences (relating to the Clean Air Act, the Clean Waters Act and the Pollution Control Act) attract the following penalties:

- in the case of a corporation, a maximum of \$125 000 and, for a continuing offence, an additional maximum penalty of \$60 000 for each day the offence continues;
- in the case of an individual, a maximum of \$60 000 and, for a continuing offence, an additional maximum penalty of \$30 000 for each day the offence continues.

Penalties are less severe for noise pollution. Offences against the Noise Control Act carry the following penalties:

- in the case of a corporation, a maximum of \$30 000 and, for a continuing offence, an additional maximum penalty of \$3000 for each day the offence continues;
- in the case of an individual, a maximum of \$15 000 and, for a continuing offence, an additional maximum penalty of \$300 for each day the offence continues.

Penalties for administrative offences under clean air, clean waters, noise control and pollution control legislation in New South Wales are detailed in Schedule 1 of the *Environmental Offences and Penalties Act*. Fines for these offences range from \$1500 to \$30 000. Examples of administrative offences include contravening a noise abatement order or direction (\$1500 penalty), obstruction of an authorised officer exercising powers under the Clean Air Act (\$5000), failure by a corporation to furnish information required under the Clean Air Act (\$10 000), failure to comply with a clean-up notice issued under the Clean Waters Act (\$15 000), and failure by a corporation to measure air pollution as required (\$30 000).

In Victoria, offences of water pollution (section 39 of the Environment Protection Act), atmospheric pollution (section 41) and land pollution (section 45) are subject to a maximum penalty of \$20 000 and a maximum daily penalty of \$8000 for a continuing offence. In addition, intentional offences of pollution of waters, air and land, together with intentional waste offences, attract higher penalties under section 67AA. The maximum penalties for intentional pollution offences in Victoria are \$40 000 and an additional daily penalty of \$16 000 for each day the offence continues.

Penalties found in the pollution legislation of other jurisdictions can generally only be regarded as small and the penalty structures as unrefined. In South Australia the maximum penalty under the Clean Air Act is \$15 000 for a corporation and \$8000 for an individual; under the Noise Control Act it is \$5000. (Recent legislation in South Australia reflects a national trend towards increasing penalties. For example, under the *Marine Environment Protection Act 1990* corporations are liable to \$1 000 000 fines and individuals may be subject to fines of up to \$150 000 and imprisonment.)

In Queensland the maximum penalty under the Noise Abatement Act is for a second offence and is \$5000, with a daily penalty of \$300 for each day the offence continues (section 55). Under the Clean Air Act the maximum penalties are \$20 000 and a daily penalty of \$2000 for each day the offence continues (section 46(3A)). Under the Clean Waters Act the maximum penalty for a first offence is \$10 000, with a penalty of \$1000 for each day the offence continues (section 48(b)). For a second or subsequent offence, the penalty is \$20 000, with a further penalty of \$2000 for each day the offence continues or 12 months' imprisonment, or both (section 48(b)).

In Tasmania the maximum penalty under the Environment Protection Act is \$50 000 for a corporation and \$25 000 for an individual (sections 49, 49A and 49B), except that pollution of the sea attracts a maximum penalty of \$100 000 for a corporation and \$50 000 for a natural person (section 50). In Western Australia the maximum penalty for a corporation is \$50 000 with a daily penalty of \$10 000, and for an individual \$25 000 and a daily penalty of \$5000. Individuals may face a gaol term under the *Environmental Protection Act 1986* for some pollution offences; the maximum penalty for causing pollution or allowing it to be caused is \$10 000 or six months' gaol, or both (section 49(1)).

Waste disposal

The statutory basis for waste disposal is described here for those jurisdictions that have separate waste disposal statutes: New South Wales and South Australia.

In New South Wales the major piece of legislation dealing with pollution of land is the *Waste Disposal Act 1970*. The Act establishes the Waste Recycling and Processing Service, which is empowered to operate waste depots and facilities (section 17).

Unlike other environmental pollution offences in New South Wales, offences under the Waste Disposal Act carry small penalties. Premises at which trade waste is created must be registered, as must waste depots. In addition, waste carriers, waste receivers and waste depots must be licensed. Failure to hold a certificate of registration or a licence carries a maximum penalty of \$5000 and a further penalty not exceeding \$2000 for each day the offence continues (section 22(8)). Non-compliance with the conditions of a certificate of registration or licence renders a person liable to a penalty of \$1000 and an additional penalty of \$500 for each day the offence continues.

In South Australia there is a statutory Waste Management Commission, which issues licences to waste producers, transporters and depot operators and sets general conditions for the licensing of solid waste landfill and transfer depots, liquid waste depots, producers of prescribed waste, waste transporters, and so on. The *Waste Management Act 1987* contains a maximum penalty of \$20 000 for contravening licence conditions (section 27) or depositing waste without lawful authority (section 31).

Exemptions from punishment

Exemptions from the provisions of environmental protection legislation may occur in a number of ways. First, statutes may exempt particular classes of industry or parts of the jurisdiction from their ambit. Second, environmental pollution statutes may enable the regulatory agency or its Minister to exempt particular operators from all or part of the legislation. There are good reasons for the provision of exemptions in pollution statutes, but there are few criteria for their use in those statutes and experience in some Australian jurisdictions indicates that they have been used to fulfil economic rather than environmental ends.

In Queensland the Noise Abatement Act provides that agricultural premises, premises used for animal husbandry, the operations of public

utilities, premises licensed under liquor legislation, religious activities and aircraft noise are generally exempt from the application of the Act (section 4(1)). In South Australia, the Clean Air Act provides that section 33 of the Act, which prohibits the emission of excessive odours from premises, does not apply to operations outside the metropolitan area or a township, or where such odours emanate from a winery or are related to animal husbandry or poultry farming. In Western Australia the Minister or the Environmental Protection Authority may declare that all or any of the Environmental Protection Act's provisions are inapplicable to an area of the State, to any premises, act or thing, or to premises, acts or things in a specified class or situated in a specified area (section 6).

In Queensland section 23 of the Noise Abatement Act enables the granting of exemptions from compliance with licence conditions. Exemption provisions are also contained in sections 26 and 31 of the Clean Air Act, which relate to compliance with prescribed standards for emissions. In South Australia the Minister may exempt a person from section 32 of the Clean Air Act, which relates to causing or permitting air pollution except in accordance with prescribed standards or, in the absence of standards, by reasonably practicable means.

In New South Wales section 18 of the Noise Control Act and section 36(1)(k) of the Clean Waters Act specifically provide for exemptions. In Victoria, exemptions from licensing and works approval requirements are provided for in sections 19A(5) and 19A(5A) of the Environment Protection Act.

Perhaps the greatest use of statutory exemption provisions, both at present and in the past, is found in the jurisdiction of Tasmania. Under that State's *Environment Protection Act 1973* exemptions may be provided for under sections 15, 16 or 17. These sections prohibit air, water or land pollution from fixed or moving sources, and pollution of territorial and inland waters. In its 1988-89 annual report the Department of Environment commented that since 1973 some 488 exemptions had been granted to 103 premises: 'While many of these are renewals, multiple discrete discharges were commonly granted in each Ministerial exemption so the number of actual examples is much larger'.⁶¹ Seventeen years after the introduction of the Act the major premises granted early exemptions continued to hold them. Rather candidly, the 1988-89 annual report stated,

In the granting of Ministerial exemptions social and economic reasons have outweighed environmental concerns, however, it is perhaps significant that

the subject of Ministerial exemptions often went unmentioned even in the Director of Environmental Control's Annual Report to Parliament and agreed improvement programs were not, in the past, enforced.⁶²

Although it is now Tasmanian government policy not to grant new exemptions and to terminate current exemptions from 1 July 1994, some 37 exemptions still existed at 30 June 1991. Importantly, they related to major industries such as Associated Pulp and Paper Mills, Cadbury-Schweppes, Comalco Aluminium, Mount Lyell Mining & Railway Co., Pasminco Metals-EZ, and a large number of municipal sewerage operators.

Indenture legislation has provided another avenue for exempting operators from pollution legislation. Examples of indenture legislation are found in South Australia and relate to Broken Hill Proprietary Company Ltd, Apcel Ltd and Roxby Downs (all major industries). For example, section 6 of *The Pulp and Paper Mill (Hundreds of Mayurra & Hindmarsh) Act 1964*, which relates to Apcel Ltd, provides that

The Company or any other person or authority shall not be liable in any way for discharging effluent from the mill into a drain in accordance with the Indenture or for the flow of such effluent from any one drain directly or indirectly into any other drain or into Lake Bonney or the sea or for any consequences of such discharge or flow or for discharging smoke, dust or gas from the mill into the atmosphere or for creating noise or odours or for any alleged consequences of such discharge flow or creation if such discharge flow or creation or such consequences is or are reasonably necessary for the efficient operation of the works of the Company and not due to negligence on the part of the Company, its servants or agents.

Indenture legislation such as this continues in force. In South Australia section 5(3) of the recently enacted Marine Environment Protection Act provides that 'this Act is subject to ... *The Pulp and Paper Mill (Hundreds of Mayurra and Hindmarsh) Act 1964*'.

Operators may also be granted relief from some of the provisions of environmental protection legislation through the licensing system. Licensing systems enable corporations and individuals to pollute lawfully. Failure to comply with licence conditions is an offence in each jurisdiction (for example, in New South Wales section 17D(9), *Environmental Offences and Penalties Act 1989*). It is also usually provided, however, that the regulatory authority has a discretion to decide what conditions will be contained in licences or whether a licence will be issued unconditionally. For example, legislation enabling the Minister to revoke or waive compliance with licence conditions is

found in section 29(a) of the South Australian Clean Air Act. In the past this may have meant that licences were granted without conditions. Thus, the Western Australian Environmental Protection Authority reports that it has begun taking a more stringent approach to licensing.⁶³ Before the introduction of the Act in 1986, licences were issued under the Clean Air Act and most were without conditions. New licences are no longer issued free of conditions. The following figures illustrate the change in approach: in 1986 there were 360 licences in existence, containing an estimated 100 licence conditions; in 1991 there were over 800 licences in operation, containing about 8500 licence conditions.

Administrative remedies

Administrative remedies are described in the following paragraphs. Few statistics on their use are published. However, the Victorian Environment Protection Authority records the following for the financial year 1990-91: 228 pollution abatement notices, 47 noise control notices, and 39 clean-up orders. Additionally, 1230 penalty notices were issued: 428 for motor vehicles, 61 for waste transport, 400 for littering, and 341 for industry.⁶⁴ These administrative remedies may be divided into the following categories, as generally identified and described by Brennan and Garrett⁶⁵: clean-up notices; notices to carry out work; notices to cease activity; revocation or suspension of licence or variation of licence conditions; financial assurances; environmental auditing and environment improvement plans; reporting of pollution incidents; infringement notices; and environmental trust funds.

Clean-up notices

Australian pollution statutes generally contain administrative remedies for clean-up. Clean-up provisions are obviously important as a remedial measure for pollution that has already occurred. Provisions for clean-up are generally of two types. First, occupiers of premises or polluters may be ordered to control, abate or clean up pollution (section 27A(1), *Clean Waters Act 1970* (NSW); sections 62A and 62B, *Environment Protection Act 1970* (Vic); section 69, *Environmental Protection Act 1986* (WA)). It is important to note that the current occupier of premises, who may not be the polluter, may be ordered to effect a clean-up. Attempts have been made to alleviate any hardship suffered by occupiers who were not responsible for the pollution. In Victoria, for example, under section 62A(2) of the *Environment Protection Act*, such an occupier can seek compensation from the polluter for costs incurred in satisfying a clean-up order.

Second, statutory or local authorities may themselves undertake a clean-up (section 25A, *Clean Air Act 1961* (NSW); section 27, *Clean Waters Act 1970* (NSW)). In some cases, those authorities may be directed by the regulatory agency to clean up pollution (section 27, *Clean Waters Act 1970* (NSW); section 66, *Environment Protection Act 1970* (Vic)). The regulatory agency itself may also be empowered to conduct a clean-up (section 62, *Environment Protection Act 1970* (Vic)).

Environmental clean-up may be a costly exercise. This consideration, together with adoption of the polluter-pays principle, has resulted in the enactment of provisions whereby authorities can recover the costs and expenses of clean-ups they have carried out (section 25A, *Clean Air Act 1961* (NSW); section 27, *Clean Waters Act 1970* (NSW); sections 62, 62B and 66, *Environment Protection Act 1970* (Vic); sections 69(3), 73(3) and 73(4), *Environmental Protection Act 1986* (WA)).

Victorian legislation recognises that it may not be possible to locate or recover costs from the original polluter. It therefore provides that if the polluter cannot be found 'the costs become a registrable charge on the property, which takes priority over all other charges, and if clean up costs are still outstanding after 12 months, the Authority may proceed to sell the property' and recover its charge with costs.⁶⁶

As mentioned, it is an offence to fail to comply with a clean-up notice. For example, it is an offence to fail to comply with a clean-up notice issued under section 27A(3) of the *Clean Waters Act* (NSW).

In Australian jurisdictions whose environmental protection legislation can best be described as 'unreformed', statutory provision for clean-up notices and the recovery of costs is usually absent (for example, no clean-up notice powers are found in the Tasmanian *Environment Protection Act 1973*, Queensland's *Clean Air Act 1963* and *Clean Waters Act 1971*, and the South Australian *Clean Air Act 1984*).

In these jurisdictions, the Minister or regulatory authority may be empowered to take action to abate or mitigate environmental pollution—but generally only in very limited circumstances. For example, there are extremely limited powers of clean-up in the Queensland *Clean Waters Act 1971*, whereby the Minister may take action to prevent, abate or mitigate water pollution where 'water pollution is being caused by wastes from a discontinued industry, trade or process' (section 35(2)). Before any action can be taken, though, the Minister must advertise that intention in a local

newspaper and consider any objections lodged (sections 35(3) and 35(4)). In emergencies the Minister can also take whatever action he deems necessary to prevent, abate or mitigate water pollution (section 35(4)). There are similar emergency powers in section 37(A) of Queensland's *Clean Air Act 1963*.

Notices to carry out work

Pollution control legislation in most jurisdictions enables notices to be served requiring occupiers of premises to undertake specified work in order to abate or prevent pollution.⁶⁷ Thus in New South Wales under the *Clean Air Act 1961* the Environment Protection Authority may, by notice, require the owner of scheduled premises to install and operate pollution control equipment, or repair, alter or replace any such equipment or carry out other specified work, where air impurities are being or are likely to be emitted from those premises (section 17). Notices may also be issued by local authorities, and in some circumstances by the regulatory agency, to non-scheduled premises (for example, section 20, *Clean Air Act*). Notice provisions are found in sections 28B, 31A, 47(3), 47A and 62B of the Victorian *Environment Protection Act 1970*.

Statutes may also empower authorised officers to require a wide range of actions to be carried out relating to motor vehicles causing air or noise pollution. The *Clean Air Act 1961* (NSW) provides that authorised officers may issue notices on the owners of motor vehicles requiring them to service or repair a vehicle that is emitting excessive air impurities (section 21EA(1)) or directing the owners to fit a prescribed anti-pollution device to a vehicle (section 21EA(2)).

In the case of noise pollution it is usual for regulatory authorities to be empowered to issue a noise control notice where excessive noise is being emitted from scheduled or non-scheduled premises. Such notices may require the occupier to take steps to control the noise (for example, sections 36(2), 26(3) and 40(2), *Noise Control Act 1975* (NSW)).

In Western Australia section 66 of the *Environmental Protection Act 1986* provides that pollution abatement notices must be registered; for example, with the State Planning Commission or the Registrar of Titles. Section 68 provides that, while a pollution abatement notice remains registered, no subdivision or amalgamation of the land to which it relates can occur without the consent of the Chief Executive Officer.

Notices to cease activity

Provisions enabling regulatory authorities to issue notices requiring an occupier of premises to cease an activity or process are another common feature of Australian pollution legislation.⁶⁸ Cessation of an activity is usually ordered on the following grounds:

- the occupier is not complying with a relevant standard or licence condition;
- the occupier has created or is likely to create pollution; or
- the occupier has created or is likely to create an environmental hazard.⁶⁹

Statutory provision for such notices is found in New South Wales, Victorian, Western Australian, Queensland and South Australian pollution legislation but appears to be absent from Tasmanian legislation.

A further refinement of the ability of a regulatory authority to issue an order requiring the cessation of an activity is that enabling emergency directions to be issued. For example, section 31B of the Victorian Environment Protection Act provides that minor works pollution abatement notices can be issued in respect of minor pollution requiring urgent activity where the Environment Protection Authority is satisfied that the cost of complying will not exceed \$10 000.

As in the case of notices to carry out specified activities, notices to cease an activity are generally supported with offence provisions in the event of failure to comply with the notice.

The Victorian Environment Protection Act also recognises that it may be difficult to identify the source of pollution where a number of licensed premises may be responsible for the discharge. Section 31 of the Act thus provides that where several licence holders are permitted to discharge into the same element or segment of the environment and it appears to the Environment Protection Authority that those licence holders are complying with the terms of their licences but that the collective effect of the discharges is causing or likely to cause a condition in the environment that if caused by one person would make him or her guilty of an offence against the Act, then the Authority may direct that action be taken to reduce or eliminate the pollution so caused.

Revocation or suspension of licence or variation of licence conditions

It is commonplace for Australian pollution statutes to confer on the regulatory authority or Minister power to revoke or suspend a licence or vary a licence condition.

In New South Wales power to revoke or suspend a licence is found in section 17D(3) of the *Pollution Control Act 1970*. Section 17D(3) also enables the Environment Protection Authority to revoke or vary any licence conditions or attach new conditions to the licence. Before revocation or suspension can occur the licensee must be given notice and reasons (section 17D(5)) and has the right to appeal to the Land and Environment Court. The Minister of Environment is also empowered to suspend or revoke a licence if the licensee is convicted of a pollution offence (section 26, *Environmental Offences and Penalties Act 1989*).

In Victoria revocation powers are found in section 20(9) of the Environment Protection Act and can be used if the licensee has contravened the conditions of a works approval or licence, if the licensee's current business address is unknown, or if the annual licence fee has not been paid.⁷⁰ Permits to transport prescribed waste may be revoked or varied on similar grounds (section 53C(1)). Licence revocation provisions are also found in section 59 of the *Environmental Protection Act 1986* (WA), section 32 of the *Environment Protection Act 1973* (Tas), section 28 of the *Clean Waters Act 1971* (Qld), section 20 of the *Noise Abatement Act 1978* (Qld), section 19 of the *Clean Air Act 1963* (Qld), section 23 of the *Clean Air Act 1984* (SA) and section 29 of the *Waste Management Act 1987* (SA).

Licence cancellation is perhaps the ultimate sanction that can be levied against a polluter because it involves a shut-down of premises. Instances of its use are very rare in Australia. The Victorian Environment Protection Authority cited one case in which a licence was suspended. The licensee successfully appealed against the decision but was required by the Administrative Appeals Tribunal to operate under more stringent licence conditions, including the presence on site of an Environment Protection Authority officer.

Financial assurances

In recent times some regulatory authorities have required licensees to provide them with financial assurances.⁷¹ Breach of licence conditions then results in forfeiture of the assurance. Requirements for financial assurances

may be statutorily based or a matter of arrangement between the pollution authority and the licensee.

Express provisions for financial assurances are found in the Victorian *Environment Protection Act 1970*. Financial assurances may be required under section 21 (special conditions for works approvals or licences), section 31A(2A) (pollution abatement notices) or section 53B(4) (applications for the issuing or transfer of a waste transportation permit). Section 67B of the Act provides that financial assurances may be in the form of bank letters of credit, certificates of title, personal and bank guarantees, bonds, insurance, and so on. Such assurances guarantee that projects representing considerable environmental risk provide financial security that can be drawn upon if the occupier leaves the site contaminated, incurs clean-up costs that it cannot meet, or becomes insolvent. These financial assurance provisions became operative in 1988.

In New South Wales the Environment Protection Authority has obtained voluntary financial assurances from the Broken Hill Proprietary Company Ltd (in relation to air and water discharges) and from ICI Australia Ltd (in relation to discharges into the sewerage system). There are, however, no provisions in the *Pollution Control Act 1970* for financial assurances.⁷² The only New South Wales statute that seems to contain such a power is the *Environmentally Hazardous Chemicals Act 1985*, which states that the Environment Protection Authority may require the applicant for a licence to lodge a security, where that licence is in respect of premises that may become contaminated (sections 34(3) and 34(4)).

At present the only other jurisdiction that appears to have statutory provision for financial assurances is South Australia. Section 32 of the *Marine Environment Protection Act 1990* enables the Minister to require a licensee to lodge a bond or sum of money to secure compliance with the Act. The discharge or repayment of the assurance is contingent upon the licensee complying with licence conditions. If a licensee fails to satisfy the conditions of discharge or repayment then all or part of the sum may be forfeited to the Marine Environment Protection Fund.

Environmental auditing and environment improvement plans

At present, Victoria is the only jurisdiction in which environmental protection legislation provides for environmental auditing. According to the Environment Protection Authority's Director of Operations, environmental audits are designed to assess the environmental effects of a firm's operations,

including 'compliance with statutory requirements; environmental contamination potential for off-site effects; plant operations and adequacy of contingency plans; staff supervision/training ... waste generation for the determination of potential problem areas and identification of waste minimisation opportunities'.⁷³

Statutorily based environmental auditing may occur in a number of situations, including under an 'environment improvement plan', as a requirement in a pollution abatement notice, as a prerequisite to land rezoning, as required in a clean-up notice relating to contaminated land, and as mandated in a discharge licence.⁷⁴ Only the provisions of section 31C of the *Environment Protection Act 1970*—which relate to environment improvement plans—are described in detail here.

Amendments made in 1989 to the Environment Protection Act introduced environment improvement plans (section 31C). The types of industries that may be required to participate in such plans may be declared by the Governor in Council. Once a declaration has been made, an industry or its members may undertake to develop and implement a plan. Should it or they decline to do so the remaining provisions of section 31C come into play. If the relevant premises are scheduled under the Act the operator's licence will be amended to require environmental auditing and the publication of audit results in the local press. If the premises are unscheduled, auditing and publication will be required under a pollution abatement notice. Auditing provisions also become applicable in the event of a breach of environment improvement plan conditions. In such a case an operator may be required to publish its audit and self-monitoring results.

Auditing requirements have the backing of offence and penalty provisions in the Victorian legislation. For example, it is an offence to make a false statement about the results of an environmental audit; the penalty is \$250 000 or two years' imprisonment, or both (section 31C(5)).

Priority industries for environment improvement plans in Victoria are those posing a significant environmental risk and with a poor performance history. Industries likely to be declared include the chemical industry, the petroleum refining industry, and the waste treatment industry.⁷⁵

It is intended that the development of environment improvement plans will be undertaken in consultation not only with the Environment Protection Authority but also with the local community. At the beginning of 1991 two such plans had been negotiated. The first relates to Petroleum Refineries of

Australia. It sets targets for the improvement of environmental performance and allows for regular input from the community in checking the company's performance. The second covers the agricultural chemical industry.

In other jurisdictions, environmental improvement plans may be negotiated extra-legislatively by the regulatory agency with industry. Officials from the Tasmanian Department of Environment and Planning report that major industrial and municipal facilities must prepare environment management plans. These contain 'details of the production process, plant emissions, pollution controls and ... self-monitoring programs'.⁷⁶ They become part of an operator's licence conditions. In addition, industries and local government enterprises not in compliance with the Environment Protection Act must develop and implement performance improvement programs to bring them into compliance. They are described by the Department as means by which some regulatory control can be exercised and exemptions under the Act phased out.

Reporting of pollution incidents

Brennan and Garrett remark on the absence of reporting requirements in Australian pollution legislation. As an example they cite the absence of express provisions in New South Wales legislation, while noting that the Environment Protection Authority may impose a condition on a licensee 'to report discharges or spills and also to undertake monitoring of plant or equipment or ambient conditions and to provide particulars of monitoring at nominated times'.⁷⁷

In Victoria section 54 of the Environment Protection Act provides that the Environment Protection Authority may require an occupier of premises to promptly furnish information about any manufacturing, industrial or trade processes being carried on, any waste discharges or emissions, or any waste storage. In certain circumstances this information will be inadmissible as evidence; for example, if the person providing the information objects at the time that it might incriminate him or her.

In Western Australia there are in section 72 of the Environmental Protection Act notification provisions that provide that the occupier of premises from which a waste discharge has occurred and has caused or is likely to cause pollution, must notify the Chief Executive Officer. Failure to do so is an offence.

Australian marine pollution law is discussed in Section 3. Unlike other pollution legislation in Australia, it generally contains reporting provisions that impose a duty on the master of a ship to notify the relevant authority when a prescribed incident occurs. Penalties are provided for failure to notify. Examples are sections 10 and 20 of the *Marine Pollution Act 1987* (NSW), section 41 of the *Marine Act 1988* (Vic), and section 10 of the *Pollution of Waters by Oil and Noxious Substances Act 1986* (Vic).

Infringement notices

Legislation in both Victoria and New South Wales empowers authorised officers to issue on-the-spot infringement notices for specified pollution offences. A person issued with such a notice can elect to dispute the notice, in which case the matter is taken to court.

In New South Wales these offences are designated Tier 3 offences. Penalty notices issued for Tier 3 offences are designed to identify, fine and deter minor offenders without the need for the authorities to resort to an already overburdened and expensive court system. Tier 3 offences include littering offences and other minor offences under the Clean Air Act, the Clean Waters Act, the Noise Control Act and the Pollution Control Act, such as failure to comply with a noise abatement direction, polluting waters, and failure to comply with a general fire ban order.

Officers authorised to issue on-the-spot penalty notices include local council employees, Environment Protection Authority employees, police officers, and Water Board and Maritime Services Board employees. Fines range from \$150 (for operating a motor vehicle with a defective exhaust system) to \$600 (for polluting waters or causing or permitting water pollution).

In Victoria section 63B of the Environment Protection Act provides that prosecution officers may issue infringement notices for a series of minor pollution offences, including waste disposal offences and air pollution offences involving motor vehicles. Penalties range from \$20 to \$800.

Environmental trust funds

The polluter-pays principle has also manifested itself in the enactment of environmental trust statutes. In New South Wales, for example, the *Environmental Restoration and Rehabilitation Trust Act 1990* provides that a proportion of Water Board fees on industrial discharges into sewers will be used to fund environmental restoration and rehabilitation schemes.

In Victoria the Environment Protection Authority is empowered by section 13(1)(nb) of the *Environment Protection Act 1970* to impose a levy on premises that use hazardous chemicals or produce industrial waste.⁷⁸ In South Australia section 34 of the *Marine Environment Protection Act 1990* establishes a fund that includes a prescribed percentage of licence fees and penalties, financial assurances, and so on, to be paid into the Marine Environment Protection Fund. The purposes of the Fund include research and public education.

Civil remedies

Australian legislators have been slow to recognise the need for civil enforcement mechanisms in pollution statutes. Civil enforcement provisions do, however, now exist in New South Wales and Victorian legislation.

In New South Wales section 25 of the *Environmental Offences and Penalties Act 1989* provides that proceedings may be brought in the Land and Environment Court to restrain a breach or threatened breach of the Act or any other Act if it is causing or is likely to cause harm to the environment.

In Victoria the relevant provision is section 64A of the *Environment Protection Act*; it provides that an application may be made to the Supreme Court for an injunction restraining a person from contravening the Act, a licence, works approval, permit or notice, or requiring them to comply with the Act, a licence, works approval, permit or notice.

In addition to civil enforcement under section 25, the New South Wales *Environmental Offences and Penalties Act* also provides for civil remedies. Part 4 of the Act provides for orders for restoration, compensation and damages. These remedies are firmly tied to the offence provisions of the Act: they can be imposed only in addition to any penalty that may be imposed for a Tier 1 or Tier 2 offence (sections 14 and 15). In South Australia, section 46 of the *Marine Environment Protection Act* enables the court, in addition to imposing a penalty for contravention or failure to comply with the Act, to order the offender to take ameliorative action or to pay compensation to a person 'who has suffered loss or damage to property as a result of the contravention or failure, incurred costs or expenses in preventing or mitigating, or attempting to prevent or mitigate, such loss or damage, compensation for the loss or damage or an amount for or towards those costs or expenses'.

Another provision found in the New South Wales Environmental Offences and Penalties Act enables the court to make a restraining order over the property of a defendant, in certain circumstances, to ensure that sufficient assets are available to enable a convicted defendant to pay for the costs of cleaning up environmental pollution (section 16). Property subject to a restraining order may then become subject to a charge (section 19). Section 16 remedies a deficiency highlighted in the case of *Farrell v. Dayban*⁷⁹, in which the court held that it had 'no jurisdiction to make an order in criminal proceedings freezing general assets so as provide a fund available for the payment of fines and costs'.

Particulars of the offender

The Crown

The position of the Crown and its agencies in relation to Australian pollution legislation is not entirely clear—although they may be substantial contributors to pollution. Historically, the presumption is that the Crown is not bound by statute unless expressly or by necessary implication 'in the limited and stringent sense that the purposes of the statute would be wholly frustrated unless the Crown were bound' (*Bropho v. Western Australia—Bropho's Case*).⁸⁰ In some jurisdictions this presumption has found statutory expression in interpretation legislation (for example, section 13 of the *Queensland Acts Interpretation Act 1954*).

Of course, a pollution statute may explicitly exempt the Crown from criminal liability (section 4(2), *Noise Abatement Act 1978* (Qld)) or provide explicitly that the Crown is bound (for example, section 2(2), *Clean Air Act 1961* (NSW); section 2(1), *Environment Protection Act 1970* (Vic)). In the latter case, however, questions about the criminal liability of the Crown may still arise. In *Cain v. Doyle*⁸¹ the High Court of Australia responded 'no' to the question of whether the Crown could be criminally liable. This response does not necessarily exempt Crown employees from criminal liability: some statutes, while specifically exempting the Crown from criminal liability, expressly impose such liability on Crown officers (for example, section 8 of the *Environment Protection (Sea Dumping) Act 1981* (Cwth)). A further question is whether any presumptions about Crown immunity from prosecution should extend to a Crown agency having a distinct legal personality.

Judicial opinion about the criminal liability of the Crown may be changing. In *Bropho's Case* the court was not called upon to decide the issue

of offence provisions in relation to the Crown, although a majority of judges seem to have assumed that 'if the issue had been the direct application of offence provisions to the Crown that would, for them, simply have been a factor going to whether or not the presumption about the legislature's intention had been rebutted'.⁸²

There is no good reason that the Crown and its agencies should not be criminally liable for pollution. And, indeed, section 13 of the New South Wales *Environmental Offences and Penalties Act 1989* makes such provision. Some sound reasons for an expansion of liability are found in the following extract from the joint majority judgment in *Bropho's Case*:

... the historical considerations which gave rise to a presumption that the legislature would not have intended that a statute bind the Crown are largely inapplicable to conditions in this country where the activities of the executive government reach into almost all aspects of commercial, industrial and developmental endeavour and where it is a commonplace for governmental commercial, industrial and developmental instrumentalities and their servants and agents, which are covered by the shield of the Crown either by reason of their character as such or by reason of specific statutory provision to that effect, to compete and have commercial dealings on the same basis as private enterprise.⁸³

Directors' and managers' liability

Section 10 of the New South Wales *Environmental Offences and Penalties Act 1989* provides that, where a provision of the Act is breached by a corporation, the director and managers of the corporation are also guilty unless they can satisfy the court that

- they had no actual, imputed or constructive knowledge of the contravention;
- they were not in a position to influence the corporation in relation to its contravention of the Act; or
- if in such a position they used due diligence to prevent the corporation's contravention.

Similar provisions exist in Victoria (section 66B(4B) of the *Environment Protection Act 1970*).

While some pollution legislation did in the past provide for directors' and managers' liability, as a general rule it pertained to persons who knowingly authorised or permitted a contravention of the statute (section 30B [now repealed], *Pollution Control Act 1970* (NSW); section 21, *Noise Control Act*

1976 (SA); section 47, *Clean Air Act 1963* (Qld); section 50, *Clean Waters Act 1971* (Qld); section 118, *Environmental Protection Act 1986* (WA)). The difficulty that flows from such provisions is that 'the burden of proof is placed firmly on the prosecution to prove actual, not imputed or constructive, knowledge, and actual involvement in the decision-making process which led to the contravention'.⁸⁴

As Bates has pointed out, not only is the onus of proof now reversed for these individuals in New South Wales and Victoria,

it extends criminal liability to persons who do not actually commit acts of pollution but who nevertheless are deemed responsible for it. The prosecution of course first has to prove that the corporation committed the offence, but this does not mean that it has to be proceeded against or convicted before individual liability can be pursued.⁸⁵

In two recent decisions the New South Wales Land and Environment Court has found both corporations and their directors guilty of aggravated pollution offences. In *SPCC v. RV Kelly and E Kelly Pty Limited* (heard together)⁸⁶, the corporation and a director were convicted of a Tier 1 offence and an offence against the Clean Waters Act. The corporation was fined \$33 000 and the director \$10 000. In the case of *SPCC v. TJ Bryant Pty Limited and TJ Bryant*⁸⁷, the corporation was fined \$75 000 and the director \$15 000.

Commentators⁸⁸ have remarked that the directors' liability provisions (in particular, the due diligence defence) should prompt corporations to implement environmental compliance programmes. Lipman suggests that such programs should include 'disaster plans and be reviewed by regular environmental audits to determine whether a proper system of internal control is in place, and whether the company is keeping up to date with developments in technology'.⁸⁹

Corporations

Bodies corporate are also liable under pollution legislation and in practice agencies such as the New South Wales State Pollution Control Commission have prosecuted corporations rather than their directors, managers or employees. The introduction of aggravated pollution offences in jurisdictions such as New South Wales has, however, necessitated reformulation of the common law principle of corporate criminal liability as enunciated in the case of *Tesco Supermarkets v. Nattrass*⁹⁰. In 1990 section 10(4) was added to the *Environmental Offences and Penalties Act 1989*, which provides that

'evidence that an officer, employee or agent of a corporation (while acting in his or her capacity as such) had, at any particular time, a particular intention, is evidence that the corporation had that intention at that time'.

There is a similar provision in the Victorian *Environment Protection Act 1970* (sections 66B(2) and 66B(3)). Such provisions are designed to overcome the difficulties of proving corporate criminal intent resulting from the *Tesco Case*. Farrier has described those difficulties thus:

In essence, the House of Lords held that where the issue of criminal liability turns on proof of fault or absence of fault, such as negligence/due diligence, a corporation is only liable if its top-level management has exhibited the requisite degree of fault ... the question will be whether those in these top-level managerial positions have set up a satisfactory system of pollution prevention and/or management ... If they have fulfilled their responsibility, the corporation will not be criminally liable where the system fails to operate because of the fault of lower levels of management.⁹¹

2.3 Organisation of public control and its significance in the field of environmental criminality

The ability to prosecute for environmental offences has traditionally been the province of regulatory agencies or their authorised officers. In New South Wales, however, recent statutory amendments have enabled private citizens to prosecute in specific circumstances.

A history of the relevant provision in that State's *Environmental Offences and Penalties Act 1989* is instructive. In its original form, the statute required the consent of the Minister, an appropriately authorised member of the State Pollution Control Commission, or the Commission itself before a prosecution could be launched (section 13(1)). Further restrictions were placed on the institution of proceedings against the Crown, a person acting on behalf of the Crown, or a public authority. Such proceedings could only be instituted with the consent of the Minister or a member of the State Pollution Control Commission authorised in writing by the Minister (section 13(2)).

The provisions were criticised in academic and environmental circles and in 1991 the Act was amended. As it now stands, the legislation enables any person to institute criminal proceedings in the New South Wales Land and Environment Court for an offence against the *Environmental Offences and Penalties Act*

if the EPA [Environment Protection Authority] has decided not to take any relevant action or has not made a decision whether to take any action within

90 days after being approached by the applicant; the proceedings are not an abuse of process; and the court finds that there is a prima facie case of the commission of the offence.⁹²

Although the amended section is a considerable advance, it does contain a least one significant restriction: the provision that a person cannot commence criminal proceedings if the Environment Protection Authority has decided to take 'relevant action' (defined in section 13(2B)). This phrase awaits judicial interpretation but could potentially cover a wide range of activities, including not only statutory actions such as the issuing of a notice but more informal procedures such as consultations with senior management in the company or the sending of warning letters.

The other form of public intervention that warrants mention is found in section 25 of the Act, which states that any person may bring an action in the Land and Environment Court to restrain a breach or a threatened or apprehended breach of the Environmental Offences and Penalties Act or any other Act, if the breach is likely to result in environmental harm (section 25(1)). The Land and Environment Court must grant leave to the applicant and be convinced that the proceedings are not an abuse of process, that there is a real or significant likelihood that the requirements for the making of an order will be met, and that it is in the public interest for the proceedings to be brought (section 25(3)).

It appears that these provisions have yet to be tested before the Land and Environment Court.

It is the view of some regulators interviewed during the preparation of this report that citizen litigation (involving prosecution or civil enforcement) is inappropriate. Some argue that citizens are not aware of an agency's priorities or its preferred strategies to achieve compliance. They argue that citizen suits might well disrupt carefully planned strategies for securing compliance from a particular offender. They add that citizens are not well resourced for undertaking legal action, that they are not technically knowledgeable, and that such provisions may 'open the floodgates' and encourage vexatious litigation. Finally, it is argued that citizen suits will increase the workload of regulatory agencies.

In this regard it is instructive to note that section 123 of the New South Wales *Environmental Planning and Assessment Act 1979* has long allowed for citizen litigation in the Land and Environment Court. Judges of the Court have not reported that the floodgates have opened or that vexatious litigation has resulted. In fact, some judges of the court have supported expanded

standing for pollution cases. It can also be argued that citizen suits may be a useful mechanism not only for keeping regulatory agencies active but also to act as a fall-back device if an agency has failed to curb pollution or to institute legal proceedings.

Courts and tribunals

In most Australian jurisdictions, environmental offences are heard before magistrates or local courts, which are courts of summary jurisdiction with a magistrate sitting alone. There is concern among some regulatory agencies that magistrates do not take a sufficiently serious view of environmental offences, that they are lenient when imposing sentences, and that they are not knowledgeable about environmental protection laws and issues.

In Victoria, dissatisfaction with the sentences brought down by magistrates resulted in an amendment to the Environment Protection Act in 1989. Section 67AB provides that if a person is found guilty of an offence that carries a penalty of more than 49 penalty units (the value of a penalty unit is currently \$100) and the court is satisfied that the person has been convicted of an offence against the Act within the previous five years, or if the offence is one of aggravated or intentional pollution, the minimum penalty that may be imposed is \$5000 in the case of a corporation and \$1000 in the case of an individual. Introducing this provision, the Minister for Planning and Environment said,

All too often, firms found guilty of offences under the Act are awarded bonds rather than fines by magistrates. One large company has received five bonds and one trivial fine since 1984, totally negating the deterrent effect Parliament had intended when setting the maximum penalties for offences.⁹³

New South Wales is unique in Australia in having a specialist Land and Environment Court to hear pollution cases. The Court is established under the *Land and Environment Court Act 1979*. It is a court of summary jurisdiction that hears appeals in planning, heritage, conservation and pollution matters and has both civil and criminal jurisdictions. The increasing use of the court to hear environmental matters in its criminal jurisdiction is shown in Table 2.

In New South Wales, local courts, constituted by a magistrate sitting alone, may also hear pollution matters. Their jurisdiction is, however, limited to imposing fines of up to \$10 000 (section 11A(2), Environmental Offences and Penalties Act) and they cannot hear Tier 1 offences (section 11(1), Environmental Offences and Penalties Act). There is also a limit on the

jurisdiction of the Land and Environment Court: it may hear Tier 1 matters but may only impose a term of up to two years' imprisonment (section 11(3), Environmental Offences and Penalties Act). The maximum term is seven years under the Act.

The need for specialist consideration of environmental appeal cases has been acknowledged in New South Wales with the requirement that all appeals from convictions and sentences imposed in magistrates' courts will be heard by the Land and Environment Court.

In Victoria the Administrative Appeals Tribunal is vested with jurisdiction to hear and determine appeals from a decision of the Environment Protection Authority or a delegated agency on works approvals, licences, fees, pollution abatement, noise control notices, and so on. With the exception of indictable offences heard in the Supreme Court, magistrates' courts decide pollution cases in the first instance.

In other jurisdictions magistrates' courts or local courts hear pollution offences. Specialist appeal tribunals may exist to hear appeals on matters such as licences. For example, in South Australia the Air Pollution Appeal Tribunal is constituted under the *Clean Air Act 1984* to hear appeals on ministerial decisions or notices and the Tribunal's decision is final.

Jurisdictions currently reviewing their environmental protection legislation are considering the need for specialist environmental courts or tribunals. In Queensland, for example, it is anticipated that a Planning and Environment Court will be established. South Australia has also mooted the establishment of a Planning and Environment Court.

Powers of authorised officers

Environmental protection statutes in Australia grant authorised officers extensive powers to enter premises and to obtain documentation and other information. For example, under the New South Wales *Clean Air Act 1961* authorised officers may enter premises and examine equipment or plant that is emitting or is likely to emit air impurities, take and remove samples, conduct tests, and take photographs (section 27(1)). In addition, authorised officers may, by written notice, require the occupier of premises, a statutory body or local authority to furnish reports, books, maps, plans or documents and they may make copies; they may also require a person suspected on reasonable grounds of offending against the Act to state their name and address (section 27(2)). Under section 27(4) authorised officers may, by notice in writing, require the occupier of premises to provide assistance and facilities to

enable the officers to exercise their statutory powers. It is an offence against the Environmental Offences and Penalties Act to wilfully obstruct or delay an authorised officer or to fail to comply with a requirement of that officer (section 27(5), Clean Air Act).

Similar provisions are contained in section 55 of the Victorian *Environment Protection Act 1970*. Section 55(3E) of this Act further provides that a person on whom a notice has been served requiring his or her name and address shall not object to furnishing the information on the grounds of self-incrimination. The Victorian Act also provides that a person found committing an offence against the Act must give his or her name and address to an authorised officer on demand. It is an offence to fail to do so or to give false particulars (section 56(2)).

Powers conferred on authorised officers may include extensive powers to enter premises. For example, section 29(1)(b) of the South Australian *Marine Environment Protection Act 1990* enables an authorised officer to break into anything on land or any premises, vessel or place for the purpose of determining compliance with a provision of the legislation. It is noteworthy that this power is exercisable only after a warrant is obtained from a justice of the peace 'unless the inspector believes, on reasonable grounds, that the circumstances require immediate action to be taken' (section 29(2)). It is also an offence under the Act to use abusive or threatening language to an inspector or person assisting an inspector (section 29(6)(b)). Section 29(7) of the Act provides that a person is not required to answer an inspector's question if the answer would tend to incriminate that person in the commission of an offence.

Evidentiary provisions

Environmental pollution legislation in Australia generally includes evidentiary provisions to assist in the proof of matters in court. Thus, under the South Australian *Marine Environment Protection Act 1990*, in legal proceedings a document apparently executed by the Minister certifying a licence, appointment, delegation, results of analysis, ministerial direction, or the quantity of a discharge or emission constitutes proof, in the absence of proof to the contrary, of the matters so certified (section 41(1)). Further, the Act also provides that an allegation in a complaint that, for example, a substance was a pollutant, is proof, in the absence of proof to the contrary, of the matters so alleged (section 41(3)).

Similarly, section 27(2) of the New South Wales *Environmental Offences and Penalties Act 1989* provides that a certificate of an appointed analyst is admissible as evidence and is evidence of the facts stated in the certificate and of the correctness of the analysis or examination. In Victoria section 59AB of the *Environment Protection Act 1970* deals with evidence. It provides, for example, that monitoring equipment used by an authorised officer or analyst is presumed accurate unless otherwise proved, that samples taken are presumed to be unaffected by storage unless otherwise proved, and that analysis results based on techniques that by their nature may infringe the hearsay rule are nevertheless admissible as evidence.

Other statutory deeming provisions exist. Thus,

the often heavy burden of proving a direct causal link between the consequences of a pollution emission and its source is generally assisted by 'deeming provisions'. This means that if certain facts are present, then an offence of pollution will be deemed to have occurred unless the accused can disprove liability; in other words the burden of proof shifts to the defence.⁹⁴

An example of such a deeming provision is section 39(2) of the Victorian *Environment Protection Act 1970*, which provides that

a person shall be deemed to have polluted waters ... if

- (a) that person causes or permits to be placed in waters in a place where it may gain access to any waters any matter whether solid, liquid or gaseous which
 - (i) is prohibited by or under this Act; or
 - (ii) does not comply with any standard prescribed for that matter; or
- (b) that person causes or permits the temperature of receiving waters to be raised or lowered by more than the prescribed limits.

Other deeming provisions are found in section 16(2) of the *Clean Waters Act 1970* (NSW), sections 41(2), 45(2) and 62C of the *Environment Protection Act 1970* (Vic), section 43 of the *Environment Protection Act 1973* (Tas), and section 58(2) of the *Environmental Protection Act 1986* (WA).

Cases of protection under civil law

The civil law has traditionally been the source of remedies whereby private proprietary rights or public nuisance can be claimed. Action may be taken in nuisance or trespass to protect private landowners from pollution 'so long as some "sensible" or "material" injury or threat of injury can be shown'.⁹⁵

An action in nuisance may be taken if, for example, pollution has interfered with a person's enjoyment of the land, and action in trespass will lie if there has been a direct injury to the land—for example, by the discharge of sewage.⁹⁶ Damage must be shown in either case.⁹⁷

Public nuisance actions have the advantage of not having to be linked to proprietary rights. However, a person wishing to sue for public nuisance must generally be able to establish special interest. He or she must also establish 'financial loss, damage, substantial inconvenience, discomfort or delay'.⁹⁸

Other possible causes of action enumerated by Bates⁹⁹ include the *Rylands v. Fletcher* tort of strict liability and negligence. The tort of strict liability is in decline.¹⁰⁰ It occurs where a person brings something dangerous onto land and damage is caused.¹⁰¹

The common law has not, however, provided a satisfactory basis for environmental protection in Australia. Two Australian commentators have concluded that the common law's 'emphasis on the protection of private interests has deflected the development of a cohesive body of environmental law'.¹⁰² In their view,

The common law actions were designed to remedy proprietary disputes between individuals and as such their focus has not been on the interests of the wider community. It may be that, in the course of asserting individual proprietary rights, the broader community concern in preventing pollution is also sometimes vindicated ... But any such protection is only incidental to the assertion of private rights. Even if the environment could be so protected indirectly, to make such protection dependent upon the assertion by an individual of his own rights is clearly unsatisfactory. What, for example, if the individual does not wish to assert his or her rights?¹⁰³

Perhaps not surprisingly then, in practice, statutory regulation rather than the law of nuisance is more important for controlling pollution in Australia.¹⁰⁴

3 INTERNATIONAL LAW

Under the Australian Constitution, a number of heads of power have been used to support Commonwealth pollution legislation. As noted, one of the most important is the external affairs power (section 51(xxix)). The external affairs power enables the Commonwealth to legislate on matters geographically external to Australia (*New South Wales v. Commonwealth*¹⁰⁵), to implement international obligations including conventions and customary international law (*Tasmania v.*

*Commonwealth*¹⁰⁶), and to legislate on some matters of international concern (*Polyukovich v. Commonwealth*).¹⁰⁷

In addition to reliance on its external affairs power, the Commonwealth exercises power over coastal waters and seas as a function of nationhood. The outer limit of the territorial sea is 12 international nautical miles, measured in accordance with the Convention on the Territorial Sea and Contiguous Zone (Geneva 1958). Particular reference is made in this section to marine pollution law in Australia—the area of greatest relevance to an island continent such as Australia. Some of the major Commonwealth statutes dealing with marine oil pollution are as follows¹⁰⁸: the *Environment Protection (Sea Dumping) Act 1981*, the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983*, the *Protection of the Sea (Powers of Intervention) Act 1981*, the *Protection of the Sea (Civil Liability) Act 1981*, the *Protection of the Sea (Shipping Levy) Act 1981*, the *Protection of the Sea (Shipping Levy Collection) Act 1981*, the *Navigation Act 1912*, the *Limitation of Liability for Maritime Claims Act 1989*, the *Australian Maritime Safety Authority Act 1990*, and the *Petroleum (Submerged Lands) Act 1967*.

Environment Protection (Sea Dumping) Act

The *Environment Protection (Sea Dumping) Act 1981* is designed to fulfil Australia's obligations under the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London, Mexico City, Moscow, Washington 1972). The Commonwealth and the States and Territories are all bound by this legislation, except that they are not liable to prosecution (section 8). In addition, vessels, aircraft or platforms belonging to the Australian defence forces or the naval, military or air forces of a foreign country are not bound by the Act (section 7). Dumping in Australian waters by any vessel and dumping into the sea by any Australian vessel, aircraft or platform are covered by the statute.

The Act prohibits the dumping of radioactive material (section 9A), the loading of radioactive material for sea dumping (section 9B), the incineration at sea of radioactive material (section 9C), the dumping of wastes other than radioactive material (section 10), the dumping of vessels (section 11), and the loading of wastes for sea dumping (section 12). Incineration of wastes at sea is also an offence (section 14). In the case of activities prohibited by sections 10, 11, 12 and 14 exceptions apply in relation to dumping, loading and incineration carried out in accordance with a permit granted by the Minister under section 19. In other words, permits will not be granted for the dumping, loading or incineration at sea of radioactive material. Maximum

penalties are fines of \$50 000 in the case of an individual and \$250 000 for a body corporate.

Section 16 of the Act provides that the Minister may repair or remedy any condition or mitigate any damage arising from dumping (in certain circumstances) and that in such circumstances and where a person has been convicted of an offence against sections 9A, 10 or 11, reimbursement, by the offender, of Commonwealth expenses may be ordered by a court (section 17).

Backing up these provisions is the power to detain a vessel, aircraft or platform where its owner has been convicted of one of the aforementioned offences and the Commonwealth has incurred clean-up costs but has not been reimbursed (section 17(3)).

Complementary legislation has been enacted in most jurisdictions (for example, the *Environment Protection (Sea Dumping) Act 1984* (SA) and the *Queensland Marine (Sea Dumping) Act 1985*).

Protection of the Sea (Prevention of Pollution from Ships) Act

The *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* is intended to comply with Australia's obligations under the International Convention for the Prevention of Pollution from Ships (MARPOL) (London 1973, as modified by the Protocol of 1978). 'It aims to protect the sea from pollution by oil and other harmful substances discharged from ships'.¹⁰⁹ In addition to oil, it covers ship-based pollution such as harmful substances, sewage and garbage. It applies to all ships within the territorial sea and to Australian ships outside the territorial sea, and it binds the Commonwealth and the States and Territories (although exempting them from prosecution).

The maximum penalty for an offence under the Act is \$200 000. Importantly, the owner and master of a ship are each liable to conviction for an offence against the Act. Allowable discharges are provided for under the Act and include discharges that occur in order to secure the safety of a ship or to save life, or if the discharge occurred as the result of certain damage to the ship and all reasonable precautions were taken to prevent or minimise the discharge—for example, sections 9(2) and 21(2).

The Act also contains reporting provisions (sections 11 and 22) where the discharge of oil, oily mixtures or harmful substances has occurred, and it fixes penalties for failure to report and requires ships of a certain type or more than a certain size to carry record books (sections 12 and 23).

Once again, complementary legislation has been enacted in other Australian jurisdictions: for example, the *Marine Pollution Act 1987* (NSW), the *Pollution of Waters by Oil and Noxious Substances Act 1987* (SA) and the *Pollution of Waters by Oil and Noxious Substances Act 1987* (Tas).

Protection of the Sea (Powers of Intervention) Act

The relevant international convention is the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (Brussels 1969). The *Protection of the Sea (Powers of Intervention) Act 1981* relates to discharges of noxious substances resulting from maritime accidents.

The Act empowers the Australian Maritime Safety Authority to take such measures as it considers necessary to prevent, mitigate or eliminate grave and imminent danger following a maritime accident. Among the measures that can be taken by the Authority are the issuing of directions to the owner or master of the ship, taking direct action to move the ship or its cargo, sinking or destroying the ship or its cargo, and taking control of the ship.

Protection of the Sea (Civil Liability) Act

Partial implementation of the International Convention on Civil Liability for Oil Pollution Damage (Brussels 1969, as amended London 1976) is achieved by the *Protection of the Sea (Civil Liability) Act 1981*, which requires all non-government ships carrying more than 2000 tons of bulk oil as cargo to take out insurance before entering or leaving Australian ports (section 14). It is an offence not to carry a valid insurance certificate (section 15). Maximum penalties for failure to do so are \$50 000 in the case of the ship's master, \$50 000 for the ship's owner (if a natural person), and \$100 000 if the owner is a corporation (section 15). If the Minister incurs expenses or liabilities in exercising his or her powers under sections 8, 9 or 10 of the Act, those expenses or liabilities become debts due to the Commonwealth and may be recovered in any court of competent jurisdiction (section 20). Such amounts due to the Commonwealth may become a charge on the ship (section 21) and the ship may be detained until the debt is paid (section 22).

Protection of the Sea (Shipping Levy) Act and the Protection of the Sea (Shipping Levy Collection) Act

The *Protection of the Sea (Shipping Levy) Act 1981* and the *Protection of the Sea (Shipping Levy Collection) Act 1981* provide for the imposition and collection of levies on ships in Australian ports. The purpose of the levies is

to provide a fund to be used in the event of 'ship-based oil pollution disasters'.¹¹⁰

The Navigation Act

Division II of Part IV of the *Navigation Act 1912* deals with collisions, loss and damage. It provides for the making of regulations to give effect to the Convention on the International Regulations for Preventing Collisions at Sea (London 1972) and for certain other matters relating to collisions, such as the obligation of masters to provide assistance and the apportionment of liability for personal injuries and loss of cargo or freight where damage or loss is caused by the fault of two or more ships.¹¹¹ The Convention and Regulations are set out in Schedule 3 of the Act. Liability is imposed on those responsible for the navigation of the ship or ships that are at fault.

Limitation of Liability for Maritime Claims Act

The Convention on Limitation of Liability for Maritime Claims (London 1976) is given force by the *Limitation of Liability for Maritime Claims Act 1989*. The Convention

provides for the limitation of the liability of owners ... of seagoing ships in respect of certain claims ... These include claims in respect of loss or damage to property (including damage to harbour works, basins and waterways and aids to navigation) occurring on board or in direct connection with the operation of the ship or with salvage operations, and consequential loss resulting therefrom.¹¹²

The Convention does not cover oil pollution damage within the meaning of the Civil Liability Convention but does cover other types of oil pollution.

Australian Maritime Safety Authority Act

The *Australian Maritime Safety Authority Act 1990* creates the Australian Maritime Safety Authority. One of the Authority's statutory functions is to combat marine pollution.

Petroleum (Submerged Lands) Act

The *Petroleum (Submerged Lands) Act 1967* incorporates the Convention on the Continental Shelf (Geneva 1958), which requires parties 'to protect the living resources of the sea from "unjustifiable interference" arising from exploitation of the continental shelf. The Act provides for general measures to protect the environment, control pollution, conserve natural resources and make good any damage to the sea bed'.¹¹³

4 ENFORCEMENT

The traditional approach of pollution control authorities in Australia to polluting behaviours has been one of conciliation and education rather than prosecution. This has been attributed to a number of causes, among them the inadequacy of legislation or penalties, the inadequate sentencing practices of the courts (especially magistrates' courts), government policy, regulatory capture, and the policy of the regulatory agency itself.

4.1 Prosecution statistics

Prosecution statistics for New South Wales are detailed in the State Pollution Control Commission's annual reports, which are tabled in State Parliament. These annual reports contain an appendix listing the name of the defendant, the offence, the penalty and the name of the court in which the offence was tried. Table 1 excludes prosecutions for motor vehicle noise and emissions. The figures relate to the number of charges laid, not the number of corporations or individuals prosecuted.

Not all prosecutions of pollution offences in New South Wales are initiated by the State Pollution Control Commission. An examination of cases heard before the New South Wales Land and Environment Court in its Class 5 (summary criminal) jurisdiction also shows an increase in prosecutions for environmental offences (including pollution offences) brought in recent years—see Table 2.

Table 1: Prosecutions: State Pollution Control Commission, 1984–85 to 1990–91

Year	Number	Year	Number
1984–85	15	1988–89	78
1985–86	22	1989–90	73
1986–87	68	1990–91	69
1987–88	36		

Note: Figures exclude prosecutions for motor vehicle noise and emissions and are for charges laid, rather than the numbers of individuals or corporations prosecuted.

Source: New South Wales State Pollution Control Commission annual reports.

As well as an increased number of prosecutions for pollution offences in New South Wales there has been an increase in the penalties imposed on polluters. For example, in 1990–91 the largest fine imposed by the Land and Environment Court in a pollution prosecution brought by the State Pollution Control Commission was \$75 000. This compares with \$35 000 in the

previous financial year. The level of fines in New South Wales is generally higher than in any other Australian jurisdiction. In addition, it appears that an increasing number of cases are being brought in the Land and Environment Court rather than in local courts. The Land and Environment Court can impose heavier fines and is empowered to imprison polluters.

Table 2: Class 5 prosecutions instituted in the Land and Environment Court, 1980-91

Year	Number	Year	Number
1980	1	1986	35
1981	12	1987	23
1982	11	1988	40
1984	17	1989	193
1985	15	1990	317
1986	19	1991	133

Note: Figure for 1991 is to 30 June only.

Source: New South Wales Land and Environment Court.

Table 3 shows the numbers of successful prosecutions brought by the Victorian Environment Protection Authority since 1982.

In 1990-91 fines imposed in cases brought under the Environment Protection Act in Victoria ranged from \$100 to \$6000; bonds were also imposed.

Prosecution is less favoured as an option in some other jurisdictions. In Queensland there have been 12 prosecutions under the Clean Air Act since its enactment in 1963, six prosecutions under the Noise Abatement Act since its enactment in 1978, and five prosecutions under the Clean Waters Act since its enactment in 1971. With few exceptions, the fines have been in the order of a few hundred dollars. The maximum fine imposed—\$10 000—was handed down by the Holland Park Magistrates Court in 1978. The matter was appealed and subsequently heard again: a fine of \$500 was imposed. More recently, the largest fines imposed have been \$3000 and \$2500 under the Clean Waters Act and the Noise Abatement Act respectively.

Prosecution of polluters has been a contentious matter in the past in Queensland and evidence can be found of political interference in the prosecutorial process. For example, of the twelve prosecutions entitled under the Clean Air Act, two were withdrawn either by the Minister or with his

approval after a recommendation of the relevant advisory council. Of the six prosecutions instituted under the Noise Abatement Act, two authorisations were subsequently refused by the responsible Minister (although reversed in both cases by the incoming government). Of five prosecutions commenced under the Clean Waters Act, one was withdrawn by ministerial order and approval for prosecution was refused in another case.

Table 3: Prosecutions: Victorian Environment Protection Authority, 1982-83 to 1990-91

Year	Number	Year	Number
1982-83	38	1987-88	39
1983-84	27	1988-89	31
1984-85	34	1989-90	50
1985-86	50	1990-91	32
1986-87	71		

Note: Figures exclude motor vehicle prosecutions and represent the number of corporations and individuals prosecuted, not the number of charges laid. In 1990-91 New South Wales and Victoria prosecuted similar numbers of corporations and individuals.

Source: Victorian Environment Protection Authority annual reports.

In the case of South Australia the Department of Environment and Planning's 1990-91 annual report lists three noise pollution prosecutions but no air pollution prosecutions. The report states that 'most complaints received by the [Noise Management] branch are resolved by negotiation and goodwill'.¹¹⁴ An official of the Department's Air Quality Branch estimates that there have been about six prosecutions for air pollution in the last five years, with fines in the range of \$500 to \$1000.

Table 4 shows prosecutions instituted in Tasmania under the Environment Protection Act.

Penalties imposed by magistrates in Tasmania have been insubstantial. The highest fine ever imposed for a single pollution incident appears to have been \$6200 with \$250 costs. No successful prosecutions were brought in the 1990-91 financial year. In the previous three financial years, fines were in the range of \$200 to \$2500.

Table 4: Prosecutions: Environment Protection Act 1973 (Tas), 1980-81 to 1990-91

Year	Number	Year	Number
1980-81	2	1986-87	5
1981-82	2	1987-88	3
1982-83	5	1988-89	5
1983-84	14	1989-90	2
1984-85	15	1990-91	4
1985-86	16		

Note: Figures are for prosecutions laid, rather than the numbers of individuals or corporations prosecuted.

Source: Tasmanian Department of the Environment and Department of Environment and Planning annual reports.

In Western Australia, during 1989-90 three businesses were successfully prosecuted under the Environmental Protection Act, and in 1990-91 there were four successful prosecutions. Fines were in the range of \$200 to \$37 500.

4.2 Perceived effectiveness of sanctions

Views of regulatory agencies

Officials from environmental protection agencies around Australia were asked their views on the use and effectiveness of compliance strategies based on conciliation as against those based on punishment. Not surprisingly, considerable differences of opinion were expressed, between jurisdictions and between agencies. And even within agencies there were differences between the perceptions of traditional enforcement officers and newer policy makers.

The approach of regulatory agencies in the early 1980s is well documented by Grabosky and Braithwaite.¹¹⁵ During 1984 Grabosky and Braithwaite interviewed key personnel in a number of Australian environmental protection agencies. They concluded that, '... despite the wide variations across Australia in policies relating to prosecution, environmental regulators invariably seek co-operative arrangements with industry'.¹¹⁶ The two most adversarial agencies identified by the researchers were the Victorian Environmental Protection Authority and the New South Wales State Pollution Control Commission, which they described as having 'regulatory strategies of moderately strict enforcement'.¹¹⁷

Commenting in 1984 on its own past practices, the New South Wales State Pollution Control Commission stated,

Ten years ago prosecution was viewed as a 'last resort'. Only the most recalcitrant offenders found themselves before the courts. The Commission's policy at that time was largely one of conciliation and education. The basis for this policy was the view that the issue of environmental protection need to be 'eased into the system'. The Commission sought to avoid provoking antagonism from industry and others and to disprove criticism that the new pollution-control laws would fetter progress. It thus opted for a softer, yet in retrospect no less impacting, role of education rather than open conflict ... The Commission's current policy on prosecutions is that where a corporation or other person is detected in breach of the pollution-control legislation they will be prosecuted unless there are quite exceptional circumstances.¹¹⁸

Despite this statement of intent, it has only been in the relatively recent past that prosecutions instituted by the Commission have increased substantially in number. In 1990 a senior official of the Commission had this to say:

The [State Pollution Control Commission] is adopting a stricter approach to compliance and legal accountability than it has in the past. It will examine each apparent infraction it detects, whether of an act, a regulation or a licence condition, with a view to the appropriate penalty. In this consideration it will tend to start at the highest end of the penalty scale and to work down, depending upon the circumstances of the case, in determining which legislative provision to use for the action. It has in the past, by contrast, tended to start at the bottom end of the scale and work up.¹¹⁹

In New South Wales it can be said that prosecution, conciliation and education are all regarded as part of the necessary mix of strategies for compliance. As stated, New South Wales has traditionally been considered and has considered itself as a prosecution-oriented jurisdiction. The number of prosecutions has increased markedly in recent years and the New South Wales Minister for Environment has taken a personal interest in prosecution as a means of achieving compliance. In practice, although there remains a reliance on mechanisms such as issuing of notices to do work and providing advice to and negotiating with industry, officers within the Environment Protection Authority now seem to see a need to move away from an approach that was described as 'owning the problem with industry'.

Environmental protection officers in New South Wales stated that, although conviction for a pollution offence resulted in adverse publicity for organisations, it was important that severe penalties were available. Prior to

the introduction of the Environmental Offences and Penalties Act penalties were described as 'petty cash offences'. This was borne out by the overwhelming numbers of guilty pleas until penalties were increased by the Act.

Until recently it was New South Wales government policy that public sector agencies should not be prosecuted. Environmental protection officials provided the example of a public sector agency that had proved unresponsive to approaches for some 20 years. Recently, the agency was fined \$10 000 and the effect was described as salutary.

At a perhaps more sophisticated level of analysis, another official acknowledged that, although at present in New South Wales there is considerable concern within industry about new penalties under the Environmental Offences and Penalties Act, the effectiveness of the legislation will depend to a large extent on consistency in enforcement, the development of enforcement guidelines, and the training of field staff in investigative techniques, and so on.

A particular point raised by New South Wales officials and echoed elsewhere in Australia was the need for adequate and continuing training in criminal investigation, courtroom procedure, and developments in environmental law. All New South Wales officials interviewed remarked on the lack of adequate training in the past and the absence of follow-up courses in criminal investigation. Possible exposure to very large fines and concern about environmental reputation have resulted in an increased number of not guilty pleas, testing of the new laws, and use of senior counsel by defendants. As environmental protection agencies operate with more complex legislation, carrying heavy penalties, it is imperative that enforcement officials receive adequate training in criminal investigation, legislative changes and courtroom procedures, and that detailed enforcement policies be developed.

The Chairman of the Victorian Environment Protection Authority stated that the Authority's position was that where there is evidence of a breach of the Environment Protection Act prosecution or the issue of an infringement notice will result. He described prosecution as 'a very important tool' and cited the example of a company that had been unresponsive to negotiation over a number of years and had failed to follow through on many undertakings for improvement. Cooperation from the company was the outcome of prosecution.

Infringement notices were said by the Authority to be particularly important: they allowed minor problems to be dealt with and so forestalled

major difficulties. Prosecution was also said to be efficacious when government agencies were involved because of 'fall-out' at Cabinet level. Adverse publicity was also thought to be of value to the Authority, which issues press releases when summons are issued or prosecutions instituted. Offenders were seen to be very worried about adverse publicity. A deterrent value was attached to the possibility of prison sentences for aggravated pollution offences. It was not expected that these would be used often; rather, that they would send a message to 'less respectable' industries and waste disposal operators.

Work done by Grabosky and Braithwaite¹²⁰ is also still relevant to Queensland. At the time of their discussions with regulatory officials from Queensland, prosecutions for environmental offences were almost unknown in that jurisdiction. Prosecution is still unusual; for example, the 1989-90 annual report of the Queensland Department of Environment and Heritage states, in relation to the Division of Environment, which administers much of the State's pollution legislation, 'The Division's policy is to attempt to resolve complaints by negotiation'.¹²¹

In interviews conducted for this report, departmental officials distinguished themselves from other Australian environmental agencies: 'We ... have not been a shoot first and ask questions later organisation like a number of sister organisations ... we have tended historically to attempt to negotiate improvements before taking any legal action'. Factors contributing to this view include a belief in the usefulness of negotiation and education, a belief that criminal investigation and prosecution are extremely time-consuming for the agency and of uncertain outcome and benefit, and some concern that environmental offences are not regarded seriously in magistrates' courts. The political environment in Queensland has also historically been unfavourable to the prosecution of polluters.

Queensland officials said that prosecution would only be used when it was obvious that a person had set about flouting the law and was causing a significant environmental problem. It was the view of departmental officials that negotiation and education were more effective than prosecution. The officials also distinguished between pollution offences of government agencies and pollution offences of private sector organisations and felt that the former would best be dealt with 'in house'.

In South Australia policy makers referred to a long-standing tradition that prosecution should be used as a last resort; the situation was said to be exacerbated by the fact that statutory penalties were inadequate and the

penalties imposed by the courts were too small, that courts viewed environmental offences as trivial, that agency resources were small, and that there was a lack of staff training. One officer remarked that environmental protection agencies in Australia had not taken their law enforcement roles seriously in the past and had not realised that specialist skills were needed to carry out an enforcement role effectively.

Other South Australian officers spoke of a need to have a wider range of penalties, including significant penalties, to send a signal to industry that government is serious about environmental offences. On the other hand, 'traditional' regulatory officers in South Australia took the view that reliance on negotiation and conciliation has worked satisfactorily.

In Western Australia prosecution is viewed as a last resort, too, and is used for irresponsible behaviours or repeat offenders. Prosecution will not be used if the desired environmental outcome can be achieved in other ways and it is regarded as a poor measure of performance because 'if [the Environmental Protection Authority] has to prosecute then [it] has failed to prevent pollution'. It was estimated that one prosecution requires 10 to 17 man-days of work by the Authority. The Authority stated that a 'them and us' approach did not exist in Western Australia as it did in New South Wales, where industry attempted to circumvent the law and the regulatory agency attempted to stop it.

Conciliation and education were seen as more important functions. In part, this attitude can be traced to the Authority's historical antecedents. In Western Australia, the Environmental Protection Authority was established in 1972 without any regulatory powers; it worked with industry to achieve pollution controls. The perceived success of this 'softly, softly' approach is another reason the Authority pursues a cooperative approach. Prosecution was said to engender antagonism. Negotiation was also seen to be important in the case of environmental problems or emissions that were not categorised as critical—with employment and the well-being of industry considered as well as environmental protection.

Other opinion

Debate about the advantages and disadvantages of civil remedies as against criminal sanctions for white-collar crime has a long and distinguished history. In the 1960s legal scholars such as Kadish¹²² argued that much of the economic conduct of United States business subject to anti-trust and other laws was morally neutral in character and was thus an inappropriate target

for criminal penalties. For other commentators 'the special institutional features of business corporations are such that civil rather than criminal sanctions represent the most effective way of achieving a deterrent impact'.¹²³

The use of the civil rather than the criminal law for white-collar offenders has also engaged the minds of Australian commentators and, more recently, been the object of judicial and academic attention, with particular reference to polluting behaviours. Franklin¹²⁴, Farrier¹²⁵ and Brunton¹²⁶ have called into question the efficacy of criminal sanctions for polluters. And the Chief Judge of the Land and Environment Court has remarked,

There are, in my opinion, good reasons why, where possible, civil enforcement mechanisms ought to be used to enforce obligations imposed under environmental laws. It is clear from recent events in this country and throughout the world that breaches of environmental laws can have catastrophic consequences. Regulatory agencies should not be forced to wait until environmental damage has been done before they can act.¹²⁷

Justice Stein from the Land and Environment Court believes that there is a place for the criminal law in pollution control and that its use has 'helped raise public awareness ... heightened a belief that pollution can be perceived as a crime [and] ... goaded industry into taking their responsibilities more seriously'.¹²⁸ He has, however, also emphasised the usefulness of civil enforcement:

Applications for declaratory relief or prohibitory or mandatory injunctions to restrain or remedy an actual or threatened breach can be dealt with expeditiously and determined on the basis of probabilities. With civil enforcement—in contrast to the criminal law—the emphasis is on the prevention or cessation of the unlawful activity rather than punishment. If injunctions are disobeyed further proceedings may be instituted for contempt of the Court's orders. Proven contempt may result in a fine, imprisonment or sequestration. Theoretically, fines for contempt are unlimited and could exceed the maximum penalties for the criminal breach of pollution statutes'.¹²⁹

Expedition is particularly important in dealing with cases of environmental pollution. Justice Stein gives one example of how civil remedies can work:

A large developer was building a shopping complex. It repeatedly pumped polluted waste waters into the stormwater drain despite warnings by the Council. The 'offence' continued. Council filed a Class 4 application in the Court for restraining and mandatory injunctions. The Court gave leave to serve short-notice of the application for interlocutory relief returnable in 24 hours. The developer appeared and consented to final orders being made.

The matter was in and out of the Court within 48 hours. But most importantly, the pollution was stopped in its tracks.¹³⁰

The need for innovative civil remedies has also been canvassed by some politicians. In his Second Reading Speech for the Environmental Offences and Penalties Bill 1990, the New South Wales Minister for Environment raised for discussion

a civil environmental enforcement process that provides for civil proceedings based on damages for destruction of the environment; that is, compensation to the general community for environmental damage caused, with the possibility being considered, as part of that proposal, for aggravated damages.¹³¹

5 PROPOSED REFORMS

Much of the work being done at Commonwealth, State and Territory level to reform environmental law is the result of a recognition that present administrative arrangements are unsatisfactory, that an integrated and cooperative approach to environmental issues is needed, and that existing statutes are outdated. Although attention has been given to the need to improve penalty structures, the issue of sanctioning is only one of many being confronted in Australia today. The following discussion of proposed reforms describes reform proposals in general, rather than concentrating on penal law.

5.1 The States

The recent establishment in New South Wales of the Environment Protection Authority has been mentioned. During debate on the Protection of the Environment Administration Bill, the New South Wales Minister for Environment foreshadowed additional reforms, among them measures to encourage industry to undertake voluntary environmental audits, the question of lender liability for financial institutions, and an expansion of civil remedies.¹³²

In Victoria the Environment Protection Act continues to be amended—on average once every year and a half. In particular, it has been proposed that the Act be amended to incorporate economically sustainable development principles as the basis for the Environment Protection Authority's activities.¹³³

In South Australia there is no coordinated approach to environmental protection. According to Davis, 'the tendency [in that State] has been to respond to a specific problem with specific legislation thereby creating a

plethora of laws, licence requirements, statutory and advisory bodies and small organisational units within government agencies to handle protection of the environment'.¹³⁴

A discussion paper on the establishment of an environment protection agency for South Australia¹³⁵ has been released and a Bill is expected to go before the Parliament in 1992. The paper highlights the need for the integration of pollution and waste management controls, a strengthening of links with planning and development, increased public participation in the setting of environmental standards, the formulation of a 'charter on environmental quality' to provide guidance to government officials, and the use of environmental improvement programs by industry. The paper stresses the use of the polluter-pays principle to finance regulatory controls and as an incentive to industry to improve its performance. It suggests the abolition of the Planning Appeals Tribunal and its replacement with a specialist planning and environment court. It touches on penal laws by proposing that penalties should be sufficient to act as a deterrent and range from on-the-spot fines to substantial penalties for serious offences. The paper also remarks that effective strategies should be established for enforcing the law, and that civil as well as criminal enforcement should be available.

In Queensland a green paper on contaminated land legislation¹³⁶ and a public consultation paper on proposed environmental protection legislation¹³⁷ have been published and public comment has been solicited and summarised.¹³⁸ The public consultation paper acknowledges the need for urgent reform of environmental protection laws; especially given contemporary environmental problems:

When present legislation was prepared in the 1960s and 1970s, matters such as photochemical smog, holes in the ozone layer and toxic waste dumps were not significant environmental issues. This legislation is proving to be inadequate, ineffective and unenforceable in dealing with current environmental issues. These laws are also too limited and do not provide for a modern, flexible approach to dealing with emerging issues.¹³⁹

It also notes the need for new legislation to apply to 'most conceivable impacts on people, land, water and air'¹⁴⁰ and suggests that such legislation should address diffuse-source as well as point-source pollution, and environmental contamination and degradation. It highlights the need for environment protection policies to set standards for environmental quality and methods of achieving them, the need for a licensing regime based on the polluter-pays principle, and the use of environmental audits and financial

assurances. It adds that prosecution should be available when education, cooperation and management approaches fail and that penalties should be consistent with penalties in other jurisdictions.¹⁴¹ Finally, it suggests that injunctions should be available for serious pollution problems and that breach of an injunction should amount to contempt of court. The establishment of a planning and environment court in Queensland is mooted.

The Tasmanian discussion paper on the Environment Protection Act¹⁴² examines the weaknesses of Tasmania's existing environmental protection statutes. In particular, it points to a lack of ecosystem focus¹⁴³, an emphasis on pollution control rather than pollution prevention, little attention to diffuse-source pollution, the lack of any ability to recover clean-up costs from environmental polluters, and the fact that 'the granting of exemptions for a number of major polluters has diminished the efficacy of the legislation'.¹⁴⁴

In relation to penalties the paper remarks,

The statutory backing for enforcement has been weak and penalties for non-compliance have been minimal. Courts have not imposed deterrent fines. The legislation has relied on 'command and control', and there have been no incentives or inducements which encourage the adoption of state of the art pollution control technology. Economic and other policy instruments have not been applied to secure better protection for the environment.¹⁴⁵

It raises for discussion administrative remedies (such as on-the-spot fines) for minor pollution incidents and a four-tier penalty structure culminating in significant penalties for acts of gross pollution. It emphasises that such penalties should be regarded as a matter of last resort: 'the thrust of the legislation should be to encourage negotiation and compliance, and to move away from the traditional "command and control" approach'.¹⁴⁶

5.2 Conclusion

Australia is witnessing significant changes to environmental protection legislation and it is still too early to comment on the likely success of new or proposed approaches. Although offences and penalties have traditionally provided the basis of Australian pollution legislation; they are little used in most jurisdictions. New and harsher penalties are being introduced or contemplated, as are more sophisticated penalty structures. Nevertheless, their presence on the statute books will achieve little if regulatory cultures remain unchanged, if enforcement guidelines are absent or inconsistently applied, if training of enforcement officers in criminal investigation is not provided, and

if judicial approaches to sentencing environmental offenders continue unaltered.

Finally, an offence-and-penalty-based approach should not be the sole means by which compliance with environmental laws is sought. Traditional civil remedies as well as more innovative approaches need to be investigated so that a range of approaches to compliance are available and the right regulatory mix found.

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ARGENTINA
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INTRODUCTION

Argentina is a republic consisting of 22 provinces, one territory (Tierra del Fuego) and one federal district (Buenos Aires), and with a population of approximately 33 million, 86 per cent of which is urban. The National Constitution formally delineates the federal structure of government as a representative system with three branches—the Executive, the Legislature and the Judiciary—and an intricate system of checks and balances.

Some of Argentina's environmental legislation was among the first such legislation enacted in Latin America. For example, forestry legislation was approved in 1948 and soil protection norms were established in the early 1980s. Yet the general perception of jurists, and other interested parties, is that environmental law, administration and judicial practice in Argentina lag far behind when compared with other countries in the region. During the period when environmental issues were receiving unprecedented attention throughout the world Argentina was ruled by a dictatorship and the economic crisis that began in 1982 has continued unabated. Social, political and economic upheaval has been in large part the cause of the environmental problems of today, and the problems are exacerbated by ineffective policies.

1 FRAMEWORK AND REVIEW OF LEGAL HISTORY

1.1 Social framework

Level of attention in the media

Media attention given to environmental problems has been variable in recent years. Coverage of international issues (ozone depletion, the greenhouse effect, climate change, and so on) still dominates, but local issues are now receiving more attention. In general the coverage, both national and international, has been disaster oriented (for example, oil spills and grave pollution problems). The United Nations Conference on Environment and Development in 1992 led to a more general coverage but since the end of the

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Conference intensive media work has been inconsistent, although spots have appeared in several radio programs and on private television channels. There is one notable exception: for more than two years a three-page weekly supplement on environment has been appearing regularly in Argentina's third-largest newspaper. The newspaper is considered to be an independent one, and the supplement contains investigative reporting and evaluation of broader policy and economic issues.

Political parties

Argentina has two major political parties, the Radical Civil Union and the Justicialista Party. There are myriad small and local (mainly provincial) parties, but their influence is declining. The two large parties and several of the smaller ones have environmental chapters in their platforms and have established special committees to deal with environmental matters. The committees within the large parties are, however, unimportant in the decision-making structure. Committees on the environment within smaller parties generally have more power within the structure. The Green Party is extremely small and relatively inactive; as a consequence, it never stands alone in elections, forming instead coalitions with other parties.

Historically, the first parties to include environmental chapters in their platforms (from the mid-1980s onward) were progressive centre-left organisations. Although it cannot be said that any major Argentine politician's *raison d'être* is the environment, some politicians are identified as being involved in environmental matters.

Parliamentary work dealing specifically with the environment began in the mid-1970s with the creation of the Committees of Natural Resources and the Human Environment within both the Upper and Lower Houses of Parliament (the Senate and the Chamber of Deputies). The derogation of the constitutional regime by a military coup in 1976 interrupted its work; with the return to democracy in 1983 both the Committees were re-established. Although the Committees have been active, particularly in the Chamber of Deputies, with the presentation of Bills and environmental declarations and with the temporary functioning of a lobby group for environmental organisations, only a small number of projects have been approved. Environment-related Bills passed into law since 1983 constituted about 2 per cent of Bills presented and over half of them involved ratification of international treaties.

Environmental protection groups and movements

The type and number of community groups in Argentina that deal with environmental subjects is somewhat difficult to establish since most such groups are *de facto* organisations that form, establish a name for themselves, and sporadically work on some issue related to the environment. As a rule they do not take the standard legal steps necessary for their determination as non-government organisations of the various types permitted by civil law (namely, civil associations and foundations) and they lack continuity. Sociologists studying and working with non-government associations have identified about 1000 groups that define themselves as action groups that aim, solely or tangentially, to deal with environmental protection issues. Other sources estimate that there are many more but, as with all non-registered activities, it is impossible to know with certainty their number and field of work. Yet it can be said that only about 10 to 20 of the groups are fully active, with a clearly defined internal organisation and regular activities. A few, perhaps two or three, are somewhat influential or are mobilisers of public opinion.

In general, non-government organisations of all types have not had a strong influence on the decision-making process, and this is the case for groups dealing with environmental affairs. The number of these groups has greatly increased since 1983, particularly in the last few years. The first groups were flora and fauna protection associations, but now there is a great variety of groups (from national offices of international organisations to local and neighbourhood associations) involved with most environmental subjects. Studies of these groups and of public opinion about them suggest that they are not well established within society and are not influential.

Major polluters

The major polluters are industrial establishments, some agricultural enterprises (through their use of pesticides and fertilisers, some of which are banned in the industrialised world), and service providers. Some of these polluters are privately owned and some are publicly owned. Recent macroeconomic reform and structural change have involved privatisation of public industries and utilities (fuel exploitation, energy enterprises, water supply, waste and sewage management, and so on). Argentina has an economy with a history of strong state intervention and it is facing the withdrawal of the state from many activities. Therefore, if polluting behaviour

continues unchanged, in the near future nearly all contaminating activities will come from private sources and industry will be the major actor.

Little of certainty is known about polluters because, with the exception of particular articles in very specific legislation, freedom of information acts, public information laws and disclosure clauses do not exist in Argentina. Industrial polluters (both private and public) engage in air and water contamination; contamination by the providers of services is largely due to a lack of investment in adequate infrastructure, both in quantity and in maintenance of existing works. For example, untreated sewage waste pollutes watercourses because facilities have not been constructed for all urban dwellers and old structures have not been maintained. Behaviour is consistent and, with a few exceptions, little positive change is foreseen for the near future. The economic crisis faced by both the region and the nation is the reason economic planners use for inaction in the face of polluting behaviour. This state of affairs will not allow for radical change in environmental control or planning in the short or medium term ... unless, of course, external and internal pressures for change are imposed.

1.2 Legal framework

Constitutional framework

The National Constitution of Argentina came into force in 1853, after a long civil war between two factions in dispute over the internal organisation of the state: federal or unitary. The federal faction prevailed, and so the National Constitution took the federal model, but with very marked centralism and very strong executive power. Past and present political practices constantly reflect these characteristics.

The Constitution follows the pattern of Latin American constitutionalism of the times and took as its model the Constitution of the United States of America, particularly the Bill of Rights and some aspects of the state organisation. At present, Argentina's Constitution is one of the oldest constitutions still in force and, although it has had some partial reforms (for example, in 1957 an article entitled 'Of Social Constitutionalism' was introduced), the policy and administrative delineations have not changed. The environmental question (and particularly its modern holistic and systemic conception) is not explicitly considered. This, among other things, is the reason why the legal system pertaining to the environment in Argentina is extremely complex.

The National Constitution does not contain norms oriented toward the regulation of natural resources as such. References to these resources are made only in terms of commercial or industrial exploitation. There are no specific provisions for control over or administration of natural resources.

The federal structure of Argentina divides powers and responsibilities between the Federal Government and the provinces. Some provinces have in recent years reformed their constitutions and several of the reforms have led to the inclusion of environmental provisions. The Civil and Criminal Codes and the Codes of Commerce, Mining, Work and Social Security come within the purview of the Federal Government. Under Article 104, all powers not delegated to the Federal Government are reserved to the provinces, which restricts the development of national environmental legislation. It is for the provinces to legislate on environmental matters within their own jurisdiction, although some federal laws have been made possible by specific provisions of the National Constitution.

Although there are no constitutionally enshrined norms specifically dealing with the environment, diverse legal opinions agree that certain articles give tacit expression to the matter. For example, Article 67 (Inciso 16) states that Congress has the capacity to 'provide whatever is conducive to the prosperity of the country, the advancement and well-being of all the provinces ...' and (Inciso 12) 'to regulate maritime and terrestrial commerce with foreign nations and between provinces'.

In cases of dispute about the jurisdiction of the Federal Government and the provinces, there is a mechanism whereby the provinces can voluntarily adhere to a law sanctioned by National Congress (for example, air protection, fauna and soil conservation laws). The City of Buenos Aires (being the federal capital), national parks and some harbours are within national jurisdiction. The National Constitution reserves explicit power over waters in matters of navigation and commerce. Article 100 of the Constitution provides that the nation's Supreme Court and lesser tribunals have the power to determine jurisdictional disputes 'arising between two or more provinces, between one province and the neighbours of another, between the neighbours of different provinces ...'.

As stated, criminal sanctions are a matter of national competence, but enforcement (police control, prosecution, and so on) may fall under either federal or provincial jurisdiction according to the circumstances. Norms included in the Criminal Code are enforced at provincial level. Some laws

complementary to the Criminal Code (which are criminal since their penalty is imprisonment) fall under national jurisdiction (federal police, federal courts) if the law explicitly states this.

It is thus apparent that areas of responsibility are extremely complex and not clearly established. In environmental matters, there are no key precedents interpreting areas of uncertainty. Further, only the Supreme Court is competent to interpret constitutional matters.

Administrative framework

In 1973, as a direct result of the Stockholm Conference, the Secretariat of Natural Resources and the Human Environment was created in Argentina, the first such organ to be created within the national administration. It was established within the framework of the Ministry of the Economy. After the 1976 coup d'état the Secretariat progressively lost its power and functions, until it was finally merged with the National Housing Authority to form the Under-Secretariat of Environmental Planning within the Secretariat of Housing and Environmental Planning (Secretaría de Vivienda y Ordenamiento Ambiental) in the Ministry of Health and Social Welfare (Ministerio de Salud y Acción Social). A new Under-Secretariat of Environmental Policy (Subsecretaría de Política Ambiental) was created within the Presidential Office in 1985. The mission of the new Under-Secretariat was to provide advice yet it had no direct competence over environmental matters and its area of jurisdiction was not clearly defined. It lost rank in 1988, becoming the National Commission on Environmental Policy (Comisión Nacional de Política Ambiental).

In June 1991 a Presidential Decree re-established the Secretariat of Natural Resources and the Human Environment within the Presidential Office: this was a direct outcome of preparations for the 1992 United Nations Conference on Environment and Development. The Secretariat began functioning in late 1991 (through Presidential Decree 2419 of November 1991) and has absorbed many of the offices that previously dealt with a variety of environmental matters (the National Natural Resources Division, the National Parks Administration, the National Institute of Hydrological Science and Technology, and so on). The new Secretariat has the largest staff and the highest funding of any administrative body dealing with the environment to date. Its functions are to deal with national matters and matters involving the Federal District, and to coordinate its work with that of the provinces. The National Commission on Environmental Policy was absorbed as a permanent consulting organisation and to coordinate national

and provincial environment councils on 'ecology and the human environment'. Although there have as yet been no official documents produced by this administrative office, its highest officials have declared that they will not apply existing or new measures that would in any form hinder industrial development. It is at this stage impossible to ascertain its power or political influence. One of the major conflicts envisaged at present involves jurisdictional delineation with the provinces. The Under-Secretariat of Environmental Planning within the Ministry of Health continues with its functions, once again making areas of responsibility within the national government unclear.

The disaggregation of administrative responsibility, however, is still occurring. The Customs Office has jurisdiction over imports (imports of wastes or banned products such as pesticides, for example). The Planning Secretariat within the Presidential Office coordinates and controls the process of social and economic development, with all the environmental consequences that this entails. The Ministry of the Economy, Public Works and Services contains a number of organisations directly involved with the environment: for example, the Under-Secretariat of Agriculture, the Secretariat of Mining, the Secretariat of Maritime Resources, the Transportation Secretariat, the Secretariat of Industry and Commerce, the Secretariat of Energy (which is in charge of energy planning and the construction and management of several hydroelectric projects), the Secretariat of Hydrology (and within it Water Works of the Nation—Obras Sanitarias de la Nación—in charge of water and sanitation), and the Harbours General Administration (which, together with the Coast Guard, from the Ministry of Defence, is in charge of controlling pollution originating from navigational use of rivers and oceans). Within the Ministry of Education is the Secretariat of Science and Technology, which is responsible for all matters relating to development and research in science and technology. These very diverse areas of control over environment and development issues are as a rule not coordinated and duplication and friction arise from differing objectives.

1.3 Environmental problems

The most important environmental protection issues currently being discussed and publicised are specific ones: water pollution, air pollution in large urban concentrations, and, more recently, waste disposal (disposal of domestic waste and imported toxic waste). According to Greenpeace Southern Cone (the local subsidiary of Greenpeace International and the environmental non-government organisation with the greatest outreach in Argentina), the

largest number of complaints from the public involve problems arising from water pollution and waste disposal. The tendency among non-government organisations and the media, and even in academic circles, has been to treat environmental problems such as water pollution or air pollution in isolation, rather than viewing environmental issues as a matter to be dealt with by means of large-scale tools of environmental planning, or even examining broad issues of development or the relationship between nature and society as a whole. The polluting behaviour that has recently received most attention, perhaps because of its visibility, is the release of untreated liquid waste into water sources.

There are differences between what public opinion regards as the most pressing cases of environmental pollution and what scientific diagnoses point out as the 'real' problems associated with protection of the environment.

Water pollution

Water pollution and water-related problems are the gravest urban problems present in the country. The principal origins of contaminants in large urban areas are industrial activity and untreated sewage. In small to medium-sized cities with an immediate rural hinterland, run-off of agricultural chemicals is also a pressing concern.

There has been no country-wide assessment of water quality in Argentina. Nevertheless, nearly all watercourses and underwater sources in urban areas show alarming levels of pollution. This problem is aggravated by the lack of running water for urban dwellers. For example, some studies have found that 32 per cent of all urban dwellers do not have running water and 64 per cent do not have sewerage systems; other studies have found the proportions to be higher.

These figures become even more alarming when Buenos Aires, the largest city, is factored out, and when the provision of water to low-income groups is factored in. In some urban areas on the periphery of Buenos Aires only 3.1 per cent of inhabitants are provided with potable water and only 8 per cent have sewerage systems. Those inhabitants that are not connected to the water supply system take their water directly from groundwater sources, which are highly contaminated.

The natural disaster of greatest frequency in Argentina is also water related: flooding of urban and rural areas. In urban areas flooding has been linked to inadequate maintenance of drainage systems.

Air pollution

Contamination of air in urban regions originates from mobile sources (vehicles) and fixed sources (mainly industry and energy generation). The chronic and acute pollution characteristic of other Latin American cities such as Santiago (Chile) and Mexico City is not present in Buenos Aires, principally because the geography of the area does not encourage the phenomenon of inversion. There are, however, areas with high concentrations of pollutants.

Although, as with water pollution, no monitoring networks have been established and few studies conducted, in the city of Buenos Aires high concentrations of carbon monoxide, suspended particles and lead have been found. In one study the air of parts of the city with heavy traffic showed concentrations of 3.9 micrograms of lead per cubic metre of air during the daytime and 1.7 micrograms at night. The legal limit is 1 microgram of lead per cubic metre. (Gasoline containing low lead began to be sold in late May 1992.)

A different situation arises in Córdoba, which is the second largest city in the country and experiences inversion because it is located in a hilly region with few winds. On days of peak smog concentrations values of more than 100 micrograms of suspended dust per cubic metre of air have been recorded. Small and medium-sized cities surrounded by agricultural land can be enveloped by toxic fumes during fumigation periods.

On a global scale, it is found that emissions of carbon dioxide amount to 0.53 per cent of the world total, a low proportion since Argentina consumes a relatively small quantity of fossil fuels.

Waste disposal

Domestic garbage in all areas but the two largest urban concentrations is disposed of in open-air dumps. This brings with it health problems caused by, for example, disease vectors and leaching to underground water. Only the Greater Buenos Aires region and the city of Córdoba have a system of urban waste disposal entailing collection and landfills. The landfills are, however, generally unprotected by measures such as membrane lining to avoid leaching. Some cities of the Greater Buenos Aires region have recently withdrawn from the collection and landfill system, and open-air dumps are again being used. In any case, waste collection does not occur in all areas. Only 50 per cent of homes belonging to low-income groups in Greater Buenos

Aires have their waste collected, while in some cities, such as Posadas (in the north-eastern subtropical region), only about 13 per cent of the low-income population has this service. In general, only 60 per cent of the nation's urban dwellers have access to garbage collection services. There are no commercial treatment plants whatsoever for industrial waste. (Theoretically, landfills are prohibited from receiving industrial waste.)

Imports of foreign toxic and hazardous waste are a recurrent problem and are receiving increasing attention as cases are being discovered more and more frequently.

Soil deterioration

Of Argentina's land surface, about 80 per cent has been studied to some extent, and it has been found that about 28 per cent of the land shows a high degree of erosion from wind and water. Some of the most seriously affected soils are in the Pampas region, where the majority of agricultural exploitation takes place. Considering that agriculture contributes very significantly to gross domestic product, and that agricultural exports are an important source of income, the extent of loss of land to erosion is alarming. Advancement of the agricultural frontier—that is, harnessing land that is fragile and less productive than, say, the Pampas region for massive agricultural exploitation—is also giving rise to deforestation.

Noise pollution

Noise pollution complaints are frequent in Argentina's large urban concentrations. There are no reliable data available on this problem.

1.4 Historical development of environmental protection laws

In Argentina there are at present very few examples of what can strictly be called environmental protection laws. Most environment-related norms deal with natural resource management (forestry, soils, and so on) and some norms that are used for environmental protection are interpreted as such without having been drafted with that intention: they arise out of times when the subject was not considered important. Examples of this are the interpretation of several articles of the 1853 Constitution as pertaining to environmental matters or the interpretation of articles in the 1920s Criminal Code drafted to control the adulteration or poisoning of water or foods, rather than contamination in the modern sense. Although some norms (for example, for the location of industrial establishments) have their roots in colonial times, it

is in the latter part of this century that most laws pertaining to the environment have been drafted.

The industrialisation of Argentina took place in the 1950s and 1960s, following the Latin American pattern of import substitution, and this, together with international events such as the Stockholm Conference of 1972, led to the enactment of the first examples of strictly environment related legislation. In Argentina, as in the rest of the region, industrial expansion took place within a context of a large natural resource base, out-of-date technologies, and rapid, uncontrolled urbanisation resulting from the need for a large labour force. When the first legislation aimed at introducing charges for pollution was approved in 1973 it was explicitly stated that this mechanism had been adopted in an attempt to compensate for the higher costs of providing potable water because the water was being polluted at source. The guiding criterion for this first piece of legislation and all environmental legislation that followed is the polluter-pays principle. The recent application of articles in the Criminal Code dealing with adulteration of drinking water and the spread of illness was made possible by the declaration of a region as a sanitary emergency area because of the current cholera epidemic.

2 SANCTIONING STRATEGIES

This section deals with the current legislative framework in Argentina, with norms defined according to their specific environmental relevance (that is, for protection of some element of the environment) and their incidental environmental relevance (that is, norms that regulate some type of behaviour that has incidental significance for the environment but that were drafted without this being the primary purpose; for example, the Mining Code). Sanctioning strategies are many and varied and statistics on the application of sanctions are generally not gathered.

2.1 Relevant national (administrative, civil and criminal) sanctions

Air pollution

National Law 20 284—Norms for the preservation of air resources (Normas para la preservación de los recursos del aire) sanctioned in April 1983—establishes norms for the 'preservation of air resources'. All sources capable of producing air pollution are subject to this Law.

Infringements of this Law are penalised with three types of sanctions: fines; temporary or permanent closure of the polluting source; and temporary or permanent withdrawal of a licence when the source is a transportation

vehicle (land, air or water). Revocation of a licence is applied without taking into account which administrative authority originally granted the licence.

Each unit that contaminates is considered independently and sanctions are cumulative. In cases of aggravated pollution, sanctions can be double those prescribed in the regulations. Recidivism is regarded as an aggravating circumstance and is seen to occur when persons having been sanctioned are found to have committed an infringement of the same type within one year. Sanctions will be double or more in this case.

Appeals can be made to the competent authority (in the City of Buenos Aires, through the Municipal Tribunal). Infringements are classified according to whether they are from mobile (transport units, for example) or stationary sources (chimneys, for example). Sections on noise are included.

The Law is in force in all federal jurisdictions and by adherence in the provinces. The relevant authorities are national, provincial or Municipality of the City of Buenos Aires sanitary divisions. If sources contaminate more than one jurisdiction an interjurisdictional committee can be established. Plans established by this Law for the prevention of critical situations of air pollution and for a registry of pollution sources have not been pursued.

Pollution of navigable waterways

National Law 22 190—Rules for the prevention and control of contamination of water and other environmental elements by pollutants from ships and other navigation agents (Régimen de prevención y vigilancia de la contaminación de las aguas u otros elementos del medio ambiente por agentes contaminantes provenientes de buques y artefactos navales) sanctioned in March 1980—establishes principles for preventing contamination of national waters, obligations on the part of the state to provide services for the management of wastes, and obligations on the part of polluters to pay the costs of environmental rehabilitation. This is a strict liability law.

The sanctions imposed are fines for causing environmental damage and the obligation to pay compensation for costs incurred in rehabilitation. The Law covers national navigable basins (rivers, lakes, and so on), international navigable rivers, and coastal waters. The Coast Guard (Prefectura de la Nación) applies sanctions; clean-up and rehabilitation work is overseen by the General Harbours Administration. In areas where there is no harbour authority clean-up is overseen by the Coast Guard. Responsible agents are shipowners, masters, captains and shippers.

Soil protection

National Law 22 428—Rules for the conservation and rehabilitation of the productive capacity of soils (Régimen legal tendiente a la conservación y recuperación de la capacidad productiva de los suelos) sanctioned in March 1981—uses subsidies for the conservation of soils through the application of specific programs. Interested parties formulate a soil conservation program, which in turn is evaluated by the relevant authority. The productive capacity of soils is emphasised.

If the work plan and proposed soil management plan are not met as agreed, the funds granted must be returned. Furthermore, criminal prosecution (applying standard criminal norms) can occur if perjury was committed in order to receive a subsidy. Offences can be committed by subsidy beneficiaries (landowners or land users) and professionals involved in the conduct of the programs.

The legislation is applicable in federal jurisdictions and through voluntary adherence in the provinces. In federal jurisdictions the Secretariat of Agriculture, Livestock and Fishing (Secretaría de Agricultura, Ganadería y Pesca) is responsible for application of the Law.

Hazardous waste

National Law 24 051—Law for the generation, manipulation, transportation, treatment, and final disposition of hazardous waste (Ley de generación, manipulación, transporte, tratamiento y disposición final de residuos peligrosos) sanctioned in December 1991—establishes the definition of 'hazardous' for any waste that could directly or indirectly cause damage to live beings or that could contaminate soil, water, air or the environment in general. It also defines wastes considered hazardous on the basis of criteria of toxicity, inflammability, corrosiveness, reactivity, biological activity and causticity.

The Law prohibits the introduction into Argentina of wastes from other countries and regulates the generation, transportation, treatment and final disposition of wastes. Anyone carrying out any of these mentioned activities is obliged to register with a special registry to obtain an 'environmental certificate', which grants authority to operate. Further, the operator must annually make a declaration providing information about operations carried out during the year. Anyone producing waste must declare this fact and produce a manifest that accompanies the handling of the waste in all its

phases. In the case of final disposition, an environmental impact assessment must be carried out before administrative authorisation is granted.

The administering authority has broad powers to inspect operations involving hazardous waste and can order the closure of works and the cessation of activity in any case of violation of the Law. In the case of spills (*derrame*, which technically means a liquid spill, is the word used by the Law, although it is understood to include any exposure to dangerous waste), a transporter is obliged to notify the authorities and to take all necessary measures to obviate the danger. Both the waste producer and the transporter are responsible for immediate and subsequent clean-up of an area where a spill of hazardous waste has occurred.

This is an offence of strict liability (civil responsibility)—with a minimum of possible exemptions from punishment. The legal sanctions are fines to the value of US\$1000–5000, temporary closure of works or temporary cessation of activities, and permanent closure of works or permanent cessation of activities. Recidivism attracts more stringent penalties: if an infringement is repeated within three years fines are multiplied by the number of times the action has been repeated. A fourth infringement leads to permanent closure of works.

The administering office is the highest environmental authority to be designated through regulation by the executive power. An Interministerial Committee on Hazardous Waste must cooperate with the administering authority to coordinate all relevant government areas, with representatives of the Ministry of Defence, the Ministry of Economy, Public Works and Services, and the Ministry of Health and Social Welfare.

Strictly criminal sanctions are prescribed in Chapter IX of the Law (Articles 55 to 58), as follows:

Article 55. The same penalties established by Article 200 of the Criminal Code will apply to any person who, using the wastes referred to in this law, poisons, adulterates, or contaminates, in a manner dangerous to health, the soil, water, the air, or the environment in general.

If the deed causes the death of any person the penalty will be from 10 to 25 years' reclusion or imprisonment.

Article 56. If any of the deeds foreseen in the preceding article are committed through imprudence, negligence, lack of the appropriate skills, or failure to observe regulations or ordinances, a prison term of one month to two years will be imposed.

If illness or the death of any person results the penalty will be imprisonment for from six months to three years.

Article 57. When any of the deeds foreseen in the preceding two articles results from the decision of a legal person, the penalty will be applied to directors, managers, trustees, members of the board, administrators, legal representatives, or representatives of the legal person that could have intervened in the punishable deed, without prejudicing other criminal responsibilities that might exist.

Article 58. Federal justice has competence over criminal actions that derive from the present law.

An investigation can be initiated by judges, public prosecutors, the police, public servants, the injured party, or any person through a complaint. An investigation is obligatory when a public servant has knowledge of the offence. Procedural matters (including presentation of evidence) are the responsibility of the Public Prosecutor; the injured party has the right to complain, present evidence and request sanctions.

Although the Law was passed by Congress in December 1991, and it included an article whereby the Executive had a maximum of 90 days to commence it, commencement had not occurred by August 1992.

Water and sewerage provision and sanitation

Decree 674 of 1989 (with related National Law 13 577 of 1949 and its actualisation, National Law 20 324 of 1973)—Industrial and/or special establishments that introduce in a continuous or discontinuous form residual effluents or sediments to sewers, drains or watercourses: Pollution Control (Establecimientos industriales y/o especiales que produzcan en forma continua o discontinua vertidos residuales o barros originados por la depuración de aquellos a conductos cloacales pluviales o a un curso de agua: Control de la Contaminación) sanctioned in May 1989 and regulated in August 1990—deals with water and sewerage provision and sanitation.

Obras Sanitarias de la Nación (OSN) is the national government authority in charge of this aspect of the environment. Although OSN is an independent state-owned company, it must adhere to the general directives, controls, and so on, of the national Under-Secretariat of Hydrological Resources (Subsecretaría de Recursos Hídricos), which is directly dependent on the Ministry of Economy, Public Works and Services. Laws 13 577 and 20 324 extend the jurisdiction of federal territories to surrounding areas that are not national whenever OSN needs to control water supply to the federal capital.

OSN thus has domain over hydrological resources in the federal capital and in most of the areas surrounding it.

National Law 13 577 of 1949 creates OSN and National Law 20 324 of 1973 delineates its new institutional objectives and functions, some of which involve pollution control. Specifically, the objective of this public enterprise is 'the study, planning, construction, renovation, enhancement, and exploitation of water provision works and urban sanitation ...' (Article 2). In order to adequately provide the waterworks and sewerage system, OSN is authorised in Article 31 to

take the necessary measures to purify the waterways in cases where these could affect health in the cities or towns where it offers its services, and to impede the direct or indirect pollution of the sources of water it uses. It has the power to force the closure of industrial establishments whose owners do not fulfil the prescriptions ordered.

OSN is specifically authorised to control pollutants through Decree 674 of 1989. This Decree is a regulation stemming from another law (Decree 2125 of 1978) and a previous decree of 1973, both of which apply the polluter-pays principle and the sworn-declaration format for industrial contaminators of watercourses. An amount taking into account the quantity and characteristics of polluting effluents is paid in order to permit polluting behaviours. The current Decree changes the previous one by employing corrective methods over time, providing for actualisation with inflation of the amount to be paid and allowing for some degree of citizen participation in the application of the norm.

When the Decree's criteria for permissible effluents are exceeded (in quantity or quality) or when an act is committed in a manner not regulated by the norm, sanctions include fines with recidivism clauses (within three years of the first offence), increases in the severity of fines for each contravention, the closure of effluent channels, and the publication in two national newspapers every two months of a list of establishments sanctioned.

Aeronautics

National Law 17 285—the Aeronautics Code (Código Aeronautico)—contains prescriptions dealing with 'abnormal' noise and other damage caused by aeroplanes in flight. Article 155 states,

Any person who suffers damage on land has the right to restitution according to the conditions fixed in this chapter, having only to prove that this damage originates from an aeroplane in flight or from a person or thing

that fell or was thrown from it, or from abnormal noise. There will, however, be no indemnification nor restitution if the damage is not a direct consequence of the event that originated it.

The offence is one of strict liability for environmental damage caused by, for example, noise and the jettisoning of fuel or other pollutants. Indemnification has maximum limits.

The Aeronautics Code is national and its application is by federal jurisdiction (that is, federal courts of justice). Responsibility rests with the aircraft owner and the operator.

Wildlife protection and conservation

National Law 22421—Law for the Protection and Conservation of Wildlife (*Ley de Protección y Conservación de la Fauna Silvestre*)—makes provision for the protection and conservation of wild fauna resources. The analysis here is limited to specific criminal offences. Offences typified in the Law require specific damage: capture or hunting of an animal ('hunting' being defined as causing the death of the animal). Article 24 deals with hunting on private property without the owner's permission. Article 25 proscribes the capture and commercialisation of specific species. Article 26 deals with hunting by unauthorised means. Sanctions are also applied to persons who transport, store, sell or commercialise products of wild fauna.

Mining

National Law 1919—the Mining Code (*Código de Minería*)—was sanctioned in 1886 and has since been partly revised. In the context of environmental crime, the most important reform was effected in 1980, when the concept of 'environmental preservation', was introduced in Article 282. Article 434 (Inciso C) imposes on the operator of a mining concession the obligation to '... take the necessary measures to avoid pollution of the environment, damage to persons, goods, or resources in the area where the operations and other operations related to them are carried out ...'

In Argentina, minerals are the property of the state. Mining concessions are granted to individuals or enterprises on payment of a fee and submission of an investment plan. Argentine mining law considers that the proprietor of the mine has certain obligations and that failure to comply with them can lead to the penalty of forfeiture. Examples of the obligations to be met are payment to the state for the exploitation of the mine and fulfilment of proposed investment plans. Violation of the environmental norms, however, carries only

a fine as a sanction. Side sanctions relating to damage to objects or persons must entail indemnification. This is a strict liability matter.

Dams

National Law 23 879—Law that establishes that the Executive would proceed to carry out an evaluation of the environmental consequences that are produced or could be produced in Argentine territory by any dam constructed, in construction or planned, be such a dam national or foreign (*Ley que establece que el Poder Ejecutivo procederá a realizar la evaluación de las consecuencias ambientales que producen o podrían producir en territorio argentino cada una de las represas construidas, en construcción y/o planificadas, sean éstas nacionales o extranacionales*) sanctioned in September 1990—has not yet been promulgated by the Executive. It cannot, therefore, be legally applied at present. Nevertheless, the Law states that an environmental impact assessment must be carried out by the Executive for a hydroelectric dam and that the Ministry of Health and the Ministry of Economy, Public Works and Services, together with the national environmental authority and relevant province or provinces, can approve or reject the dam.

Responsibility under civil law

The Civil Code is a vast work derived in the mid-eighteenth century from the Napoleonic Code, a systematisation of Roman law by Savigny, and a project for the Brazilian Civil Code by Brazilian jurist Texeira de Freitas. As with the Argentine National Constitution, environmental matters defined as such are not considered in the Civil Code. Some environmental matters are considered as problems of 'vicinity'—disturbing noises, bad odours, drains, and so on—and are within a chapter entitled 'Restrictions and limits of power' ('*Restricciones y Limites del Dominio*'). These matters follow Roman criteria and, until the latest reform, after proof of damage was established, monetary indemnification was granted. In 1968 the last, albeit partial, reform was undertaken and with it Article 2618, upon which civil environmental litigation is based, was modified. Specifically, the 'vicinity' criterion was not changed; the current Article states:

Disturbances caused by smoke, heat, odours, light, noises, vibrations or similar damage through the exercise of activities in neighbouring properties should not exceed normal tolerance, taking into account the conditions of the place and even when administrative authorisation exists ...

Judges should weigh production demands and respect for regular use of property; priority in use should also be taken into account.

This Article has been widely criticised for its tolerance towards industrial establishments.

Judges may impose fines for damage to the property of neighbours and to the neighbours themselves (physical as well as 'moral' damage; that is, the unpleasantness that the contaminating acts cause) and order the cessation of the annoying behaviour. This last measure was brought in by the 1968 reforms. This Article of the Code provides for short-duration trial procedures.

The system of responsibilities devolving from the Civil Code reform of 1968 establishes a criterion of strict liability (Article 1113) applicable to all matters involving damage caused by an object. Given that national law and practice do not permit litigation by any interested party, only by those directly affected, several jurists have theorised about the possibility of taking legal action against polluting behaviours that do not arise out of 'vicinity'. This matter has not been tested fully by legal action.

Particulars concerning the offender: public officials

Argentine law sanctions public officers generally through its Civil and Criminal Codes. Under civil law, public officers can be sanctioned for negligent acts. Fines can be imposed for the damage caused. State organisations in which such a public servant carries out his or her duties are vicariously liable (Civil Code, Articles 43 and 1112).

The criminal law provides numerous instances of sanctions for offences committed by public officials. Some common criminal offences become aggravated when a public officer is the offender, the victim, an accomplice, or a concealer. The sanctions applied are imprisonment, fines, and prohibition on acting as a public servant.

2.2 Specific criminal law provisions regarding environmental protection

The Argentine Criminal Code (National Law 11 179) was sanctioned in 1921 and has been amended many times. It basically exhibits the features of liberal criminal law from which the National Constitution takes its character.

Environmental protection is not specifically covered by the Code, yet some protection is provided through interpretation of norms (Articles 200, 202, 203 and 205) related to public health when contamination of drinking water and acts that spread dangerous and contagious illness are involved.

Chapter 4. Crimes against public health. Poisoning or adulteration of drinking water, foods or medicines.

Article 200. Any person who poisons or adulterates, in a manner dangerous to health, drinking water, food or medicinal substances destined for public use or consumption by a community will be subject to reclusion or imprisonment of from three to 10 years.

If the deed is followed by the death of any person, the penalty will be from 10 to 25 years' reclusion or imprisonment.

Article 201. Penalties for the preceding article will be applied to any person who sells, offers for sale, delivers, or distributes medicines or merchandise dangerous to health, concealing their harmful characteristics.

Article 202. Any person who causes the spread of dangerous and contagious illnesses to others will be subject to reclusion or imprisonment of from three to 15 years.

Article 203. When any of the deeds envisaged in the three preceding articles are the result of imprudence, negligence, want of skill, or failure to observe regulations or ordinances, a fine of from 25 to 500 australes¹ will be imposed if no illness or death occurs, and imprisonment of from six months to two years if illness or death does occur.

Article 205. Any person who violates the measures adopted by competent authorities to impede the introduction or spread of an illness will be subject to imprisonment of from six months to two years.

Criminal sanctions provided for in the Criminal Code and other related legislation

The Criminal Code, National Law 24 051 (Hazardous Waste—Articles 55, 56 and 57) and National Law 22 421 (Fauna Conservation) respectively treat health problems, environmental pollution, and unauthorised hunting of wild animals as criminal matters. No other administrative laws treat protected interests related to the environment as criminal matters. Other values within criminal law that might be considered as 'protectible' with regard to the environment—humans' right to a healthy environment, the rights of future generations, and indigenous populations' rights to habitat—are not considered.

The Criminal Code and National Law 24 051 describe diverse actions as sanctionable. Specifically, these are health-endangering actions. Such offences are ones of abstract endangerment, although aggravating circumstances require concrete results: the death or illness of a human. All these offences are formulated as requiring an intentional act (*dolus*) or negligence (*culpa*). It is for the judge to determine what penalty within the prescribed range will apply in these situations.

Article 57 of the National Law on Hazardous Waste establishes particulars of the offender; that is, responsibility falls on those who have carried out the decision making for the relevant legal person. The traditional opinion of Argentine jurists is that a legal person cannot in general be sanctioned criminally. Thus Article 57 does not modify the guiding principle of criminal responsibility being borne by natural persons.

The offences described in the Fauna Conservation Law require specific damage. Offences are limited to intentional acts (*dolus*); negligent actions are not penalised.

As a general principle in criminal law provisions, attempt is limited to intentional acts. In case of voluntary abandonment of the offence, there will be no sanction. If a person who attempts a crime abandons it for a reason beyond his or her control (for example, the victim escapes) then the penalty will be reduced. This reduced penalty is regarded as a special privilege. Sanctions are reduced to one-third of the maximum penalty or one-half of the minimum penalty (Criminal Code, Articles 42, 43 and 44).

3 INTERNATIONAL OBLIGATIONS

The structure of international criminal law reflects the general principle of territoriality and the concept of 'the place where the crime is committed'. In environmental criminality under international law there is no jurisprudence relating to the extra-territoriality of environmental damage. In the case of actions that take place in a foreign country and the consequences of which are an offence nationally, extradition can be requested, should there exist extradition agreements with the foreign country. This is the case when in the offender's country of residence the action is a criminal act.

Argentina tends, as a rule, to subscribe to international treaties. The process is complex. The Foreign Office (Ministerio de Relaciones Exteriores) takes part in international negotiations and eventually subscribes to the treaty. These treaties, however, have no validity unless they are ratified by the National Congress. For internal purposes, a treaty further needs specific regulation drafted by the Executive, just as with any law ratified by Congress, before it can be applied. The National Constitution attaches equal importance to national laws and international treaties; this has been confirmed by Supreme Court rulings. The obligation to prosecute on the basis of international agreements arises when all these steps are complete.

Following are some of the international agreements ratified by Argentina and relating to environmental matters (Argentine law number and date of ratification by Congress are included):

- the International Convention for the Prevention of Pollution of the Sea by Oil (London 1954, with amendments of 1962 and 1969)—National Law 21 353. Ratified in July 1976;
- the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London, Mexico City, Moscow, Washington 1972)—National Law 21 947. Ratified in March 1979;
- the American Convention on Human Rights (the San José de Costa Rica Pact) (San José de Costa Rica 1969)—National Law 23 054. Ratified in March 1984. Chapter II, Article 4, recognises the right to life, thus: 'All persons have the right to have their life respected. This right will be protected by the law.' Interpretations establish that this Article is broad enough to permit defence against environmental aggression. Chapter II, Article 5, states, 'All persons have the right to have their physical, psychological and moral integrity respected.' Interpretation of this norm also allows for defence against environmental damage. The Pact establishes the opportunity to appeal to an established Interamerican Commission on Human Rights when all national jurisdictional resources have been exhausted and the matter has not been resolved;
- the Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques (Geneva 1977)—National Law 23 455. Ratified in March 1987;
- the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (and Annex) (Brussels 1969)—National Law 23 456. Ratified in March 1987;
- the Protocol on Substances that Deplete the Ozone Layer (Montreal 1987)—National Law 23 778. Ratified June 1990;
- the Convention on Cooperation with Uruguay to Prevent and Fight Against Incidents of Contamination of Aquatic Life Produced by Oil and Other Prejudicial Substances (Buenos Aires 1987)—National Law 23 829. Ratified in September 1990;
- the Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal (Basel 1989)—National Law 23 922;
- the International Convention for the Prevention of Pollution from Ships (MARPOL)(London 1973, as modified by the Protocol of 1978)—National Law 24 089. Ratified in July 1992.

4 ENFORCEMENT

4.1 Empirical data

No regular official statistical records are kept for matters relating to the enforcement of environmental protection measures. Some data exist for the enforcement of certain types of norms, but they are very limited. To overcome this lack of information, the authors interviewed a range of key persons involved in the subject—jurists, environmental researchers (legal and others), legislators, and so on. The authors also made use of information gathered from a variety of publications. Other work on the application and scope of sanctioning techniques has used the same methodology because of the lack of statistical information.

Information was only found on the enforcement of Decree 674 of 1989, which deals with control of industrial liquid effluents in bodies of water from which the federal capital's drinking water is taken. The Decree follows the polluter-pays principle and sworn declaration is the modality: industrial establishments periodically declare the quantity and quality of their effluents. According to studies by OSN—the agency responsible for administering the Decree and at the same time the agency that provides water for the federal capital—only a small proportion of the industries located in the drainage basin comply with the regulations. For example, for one of the bodies of water that supports the greatest concentrations of industry (and therefore is one of the most polluted) OSN found that only 14.5 per cent of the industries operating there complied with the regulations. OSN reports that for some years only 28 per cent of industries in the entire basin complied with the regulations.

4.2 Perceived effectiveness of sanctions

The effectiveness of sanctions is perceived to be extremely poor. All sources and all branches of power, from jurists to legislators to the highest officers in public administration, have this perception. Even Argentina's national report to the United Nations Conference on Environment and Development stated that application of and compliance with Argentine environmental legislation are deficient.

Although an evaluation of judicial power in the country is beyond the scope of this report, a number of general deficiencies are evident. The public and the specialists perceive the judicial system to be slow, expensive and biased. Restructuring of the way the judicial system functions has been

proposed and criminal law procedures are to be changed in the short term to make the law more flexible. For example, oral trial (as opposed to written) is to be introduced for criminal cases. Yet a global restructuring of the judicial system is not foreseen.

Litigation is expensive (for both the victim and the offender): extrajudicial arrangements in cases of offences against property are common because they are less expensive and relatively speedy. In criminal law, where extrajudicial arrangements are not permitted, the victims rarely prosecute. Further, there are no privately administered legal defence funds for environmental matters. The social implications of this situation are that low-income groups have little recourse to legal protection.

The judicial system is also perceived to be biased and politically managed. Although this is obviously a difficult perception to assess—and if it were possible to assess it might be found that the Judiciary's level of independence was the same as that of the Legislature and the Executive—circumstances such as the naming of Supreme Court justices or Federal Court judges are indeed the result of political decisions made by powerful parties or interest groups.

There is also a perception that powerful polluters (such as large companies and transnational corporations) are not adequately prosecuted, particularly when taking into account the damage they cause. It seems that prosecution is much more common for smaller industrial and commercial enterprises, and to some extent with state-owned endeavours.

But a change began to take place at the end of 1991. Since then, in nearly a dozen cases that have come to public attention, some judges have used criminal norms when dealing with matters involving pollution. Although there have been no sentences yet, preventive imprisonment has been enforced in a number of cases and bail ranging from US\$500 000 to US\$1.5 million has been imposed on managers and owners of industries belonging to very powerful economic consortia. Although the cases are pioneering and have received much attention, the situation is one of individuals applying the law and reflecting a strong personal preoccupation with pollution. Other judges dealing with the same cases and the same evidence have dismissed the cases for want of merit.

The situation with administration and conciliation is similar. Agencies that deal with environmental protection are often consultative bodies without well-defined functions and missions of control. They tend to be fragmented and to

act on a very limited scale. Experience suggests that the low priority given to the subject at the policy-making level renders the application of norms virtually impossible. Little importance is attached to the protection of the environment (particularly because of the economic factors with which it comes into conflict), so resource allocation for appropriate environmental administration is deficient. Furthermore, enforcement personnel lack training in what is a relatively new area of work and the correct technical tools are not provided. A circular situation arises when public officials use this as an excuse for not carrying out any environmental administration.

The general perception at the highest levels of decision making in the country is that economic growth is not possible if environmental control takes place. The zealous application of free-market techniques within national, provincial and municipal jurisdictions means that the state is withdrawing and will continue to withdraw from what were considered its traditional roles: providing basic services and acting as a controller. Administrative restructuring is leaving these traditional roles to the marketplace. The context within which this restructuring is taking place is one of socio-economic crisis in the region, of deepening social differences, increasing levels of poverty, and further depletion of natural resources.

5 PROPOSED REFORMS

5.1 Reforms currently being evaluated

The greatest deficiency in Argentine environmental legislation is the lack of a global environmental law. Argentina is the only federally administered country in Latin America lacking such a piece of legislation. Several Bills have, however, been presented in the Chamber of Deputies. The first Bill, presented in 1988, was not considered by the Committees within the prescribed time and was re-presented before Congress in 1990. This Bill and two other projects (one elaborated in 1991 and the other in early 1992) have been amalgamated and the amalgamated version has been approved by the Committee of Natural Resources and Human Environment. A number of steps must now be taken for the approval of this Bill as law: evaluation by all committees with jurisdiction over the subject; if approved by all committees, a vote by the entire Chamber of Deputies; submission to the Senate to be evaluated by all relevant committees; and, if approved, a vote by the Senate as a whole. Once the Bill is approved by both Houses the Executive has the power to veto it; if this is not done within a prescribed period, the Bill

becomes a law of the nation awaiting executive regulation in order for its application to be effective.

Several other initiatives are being evaluated by the environment committees, the most important ones being environmental modifications to the Civil Code with regard to bodies of water, a law on the use of chemicals in agriculture, and legal ordering of hydrological basins, which includes their conservation. A reform to the Criminal Code establishing 'ecological crimes' was presented over a year ago but it has not been considered by committees and is due to lapse shortly.

5.2 General proposals and conclusions

The greatest and most immediate formal problems in environmental legislation in Argentina are the vacuums that exist. Existing laws are fragmented and do not reflect modern knowledge of environmental matters. The norms that have been established are extremely sectoral; there is a lack of global environmental norms. The existing norms do not take into account the interactions between environmental sectors, nor do they take into account the interactions between biological, physical and social components. Legal tools are generally reactive, attacking only particular causes of a problem. Unreformed, old legislation does not permit new knowledge to be incorporated, and the lack of clear, constitutionally enshrined environmental legislation inhibits the creation of new environmental legislation. Reform of the Criminal Code to include specific environmental norms is also essential.

Many interrelated factors must also be considered. Most environmental legal tools in Argentina are *lettera morta*. The legalist mode, whereby the establishment of a law as a solution in itself has been widely used in Argentina, has produced dismal results. Legislation in and of itself is no solution. Norms and their applications must coincide with the values of society. Information and training are crucial. First, those who will apply the norms must be trained. Second, society cannot know the deleterious effects of polluting behaviour if this information is withheld or misrepresented. Society cannot therefore appeal for change if it lacks full knowledge.

Several examples have occurred recently when criminal procedures have been applied to polluters. 'Crimes' in Argentina are seen as the traditional offences against human life (murder), property (theft) or honour (rape). Recent actions by several judges who imprisoned individuals found guilty of spreading epidemics through polluting behaviours met with a generally positive response from the public. This is a change to strive for: to consider

all grave environmental offences as crime, and to adopt the concept of collective property—in this case environmental goods or 'commons'—that must be protected.

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NOTE

1. Adjustable for inflation until March 1991. No adjustments allowed after that date due to new economic law prohibiting inflation adjustments for all exchanges. Equivalent to US\$25–500.

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BRAZIL

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INTRODUCTION

In order to cast light on the issues associated with the legal protection of the environment in Brazil, this introduction summarises the general characteristics of Brazilian society.

The Federal Republic of Brazil is a federation made up of 26 states and one federal district (Brasilia). The population of approximately 155 million is predominantly urban (76.7 per cent), a result of rural-urban migration in recent decades. This migration exerts tremendous pressure on urban resources and results in long-term social and political problems. The population is relatively young, with 36.4 per cent under the age of 15 years; 4.3 per cent of the population is 65 years or older. The percentage of young people is consistently increasing, which is increasing the demand for education, health and social services and jobs. Illiteracy affects 18 per cent of the population and is more prevalent in the north of the country than in the south.

In 1990, 10 per cent of the economically active population controlled 49.7 per cent of national income, the largest concentration of wealth being found in the north-east. Almost 60 per cent of the population owns their home, 7.2 per cent are in the process of purchasing a home, and 73.4 per cent have access to drinking water. This seems to suggest a thriving informal sector supporting the economy and preventing its collapse.

More pertinent to this report, however, is the alienation of a great part of the population, ignorant of the intricacies of the law, having very limited access to judges and the courts, and trying to settle their disputes through mediation of neighbours or natural leaders, or corruption.

More than anything else, poverty and illiteracy preclude the effective functioning of the enforcement mechanisms created in the wake of legislation aimed at protecting the environment. So far, pioneer leaders, movements and organisations have been able to bring about the enactment of laws and the building up of a bureaucratic machine to supervise them. The next step

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towards attainment of environmental goals should be the education of the common citizen to be the servant, and the guardian, of the law. But we are still far from this ideal.

1 FRAMEWORK AND REVIEW OF LEGAL HISTORY

1.1 Social framework

The origins of legal protection of the environment, only recently a popular issue in Brazil, can be traced back to colonial times, to the old Portuguese legislation rooted in medieval customs and practices. These old statutes (*Ordenanças do Reino*) had different names according to the kings who proclaimed them and remained in force from the sixteenth to the twentieth century, when, in 1917, they were superseded and revoked by the Brazilian Civil Code (Law 3071 of 1 November 1916).

These statutes represented the summing up of even more ancient laws, collected by order of the Portuguese kings since the fifteenth century. They included several articles dealing with the waste and destruction of natural resources such as forests and orchards and the stealing of animals. Hunting animals with nets, wires and other instruments capable of causing pain and the killing of certain species during specific months were also forbidden. Sanctions ranged from fines to banishment. The notion of zoning was also present: some statutes prevented hunting in specific areas. Fines for felling trees were graded according to the economic value of the species felled. This last was of great importance in the protection of the so-called Brazilian wood, employed in the dyeing of textiles and the main source of wealth for the settlers in the sixteenth century.

During the Spanish domination of Portugal and its colonies (1580 to 1640), under the Philippine Statutes of 1603, a number of articles were inserted with the aim of stimulating the planting of trees on vacant land, forbidding hunting in some privileged holdings, outlawing the felling of trees (especially fruit trees and orchards), and reiterating the interdiction on inhumane hunting and fishing. The idea of pollution seems also to emerge in this legislation: it forbids the throwing of waste into rivers and lakes, thus avoiding the endangerment of fish and their species.

From the point of view of legal theory, it is important to note that these ancient laws already involve the idea of liability, one of the juridical pillars of the modern apparatus of legal protection of the environment. Since that time the concept of objective liability has been used as the basis for punishing

damage intentionally ('maliciously', states the law) caused by a neighbour to the victim's animals and orchards (1617 and 1750), and the theory of subjective liability has been used to justify sanctions against damage caused without guilt or intention by a landowner or his or her employee against a neighbour (1608). These concepts were later incorporated in the Brazilian Civil Code, the only difference being the exclusion of compensation for damage caused when the owner of an animal can prove beyond doubt that he or she had kept it with due care or that it had been provoked by another or by carelessness on the part of the plaintiff, or whenever the damage resulted from an accident or *force majeure* (Article 527).

There is no evidence of the actual application of the old statutes for the protection of the environment in Brazil. This failure can be attributed more to the disappearance or destruction of archives than to lack of concern on the part of law enforcers. Presumably, too, the apparent indifference of colonial administrators to the environment can be in part explained by the vastness of the land, the presumed inexhaustibility of resources, and some cultural factors, such as the lack of a clear distinction between private and public goods. Furthermore, an important factor was the settlers' general indifference to the common welfare in a colonisation characterised by individualism, greed and predation, when most agriculture was carried out on large estates managed by landowners but in fact operated by ignorant slaves. Besides, the variety and quantity of these rules—both the statutes and the extraordinary laws (*leis extravagantes*) aimed at supplementing formal legislation and including all manner of instructions—made for much duplication, confusion and misinterpretation in the courts. All these handicaps may explain the lack of sentences dealing in colonial times, and even after Independence in 1822, with environmental matters.

It is nevertheless noteworthy that the pioneering and idealistic nature of these laws, such as those aimed at protecting swamp and coastal vegetation (1763), persists in current environmental legislation. It is also noteworthy that the legal concept of 'common wealth', as applied to the environment and created in these old texts to support the legal protection of forests, remains in the Constitution (1988), which asserts that the protection of the environment rests on 'goods of common use to the people' (Article 225). The idea of liability and the obligation to compensate for environmental offences, also dating back to this old legislation, has had deep and lasting effects on the minds of Brazilian jurists.

The colonial legislation also aimed to counteract the damage caused by the one-crop system introduced to Brazil along with the sugar cane plantations and African slavery from the first century of colonisation. Long before the discovery of the new land, the Portuguese kings took great care to stimulate and protect food crops. Their concern was reproduced by the Dutch settlers in the seventeenth century, when they occupied a large area of north-east Brazil. The edicts of the Dutch High Council specifically stressed the protection of the cashew tree and the banning of the practice of throwing sugar cane bagasse into rivers and dams. The purpose of this ban was to protect the poor, who obtained most of their food by fishing in fresh waters. A similar ban had been present in the old Portuguese statutes. The Dutch settlers also took care to extend interdictions to the killing of animals, mostly hunting species and birds.

On the other hand, incentives created to produce food crops such as manioc, beans, corn and rice—the main diet of the poor—were designed to protect the poor from famine, an impending threat in colonial times. It is thus evident that, from its beginning, social and ecological concerns were intermingled in the legislation. The issuing of such laws continued throughout the colonial era, closely following patterns of settlement in Brazil's hinterland.

Sometimes, the interests of agriculture conflicted with the concerns of forest conservation, and agricultural expansion resulted in deforestation and soil erosion. The only factor favouring the preservation of forests was the economic value they assumed for the Portuguese Crown. Such a concern led to a prohibition on land appropriation in the vicinity of rivers and in coastal areas, wherever soil conditions were favourable to forest development. In 1796 a special magistrate was appointed to supervise the preservation of forests. He combined judicial and police functions and had the power to fine and imprison. He was a forerunner of the special agencies that recently took over, by constitutional mandate, the supervision of environment problems—a kind of ombudsman on environment matters.

The transfer of the Portuguese court to Brazil in 1808 led to several initiatives aimed at the protection of the environment and the preservation and conservation of native species; for example, the Royal Botanic Gardens were created in the same year.

Brazil became independent from Portugal in 1822 and the new nation's first Constitution was promulgated in 1824. This Constitution did not make any specific provision for environmental offences, but the first Penal Code

(1830) included two articles criminalising the illegal felling of forest trees. Legislation that followed established sanctions against felling dyeing wood and smuggling it out of the country. Under the Empire, the first Land Law (Law 601 of 1800) had sanctioned damage resulting from the felling and burning of forests, imposing fines and prison sentences. Competence to supervise the application of the Law was given to police officers in 1854, who combined the functions of the magistrates previously mentioned.

It would seem that the coining of the expression 'ecology' by Haeckel in 1866 and the development of the new science in the nineteenth century had not the slightest influence on the historical process of environmental conservation in Brazil; for instance, the first Republican Constitution (1891) does not include any article on the subject. New vistas were, however, opened by the Civil Code (1916), which revoked all legislation based on the ancient statutes in an attempt to place legal civil relations in Brazil within the liberal and bourgeois patterns of Western societies.

The Civil Code's main contribution to environmental protection is to have introduced rules sanctioning the abuse of rights of vicinity, whereby the owner or renter of an estate or building could obstruct the action of a neighbour if that action might harm his or her security, health or peace (Article 504). Similarly, a plaintiff can compel an owner or renter to demolish or repair his or her property whenever the property as it is might imperil the security of the plaintiff's estate (Articles 504 and 555). In the opinion of some jurists these rules surpass the protection of private interests and should be understood as a form of collective protection (now called 'multiple', 'general' or 'diffuse' interests), thus assuming a social and public character.

Special legislation on environmental protection emerged in the wake of the 1930 revolution and was fostered by the nationalistic, state-oriented ideology of the time. The legislation aimed at the regulation and protection of natural resources, such as the Codes on Forests, Mining, Waters, Hunting and Fishing. Later, the Penal Code (1940) established sanctions against pollution of drinking water, food and medical drugs.

After the United Nations Declaration on the Human Environment in 1972 (the Stockholm Declaration) the ecological movement spread round the world, and in Brazil experts and organisations began to protest about the destruction of natural resources and call for more action to protect those resources. The topic was taken up by the media, extending it beyond the narrow circle of ecological agencies and experts who had started their pioneering and

popularising work by concentrating on the defence of specific natural areas—mostly Amazônia and the Atlantic forest—against predatory attacks of all sorts.

One outcome of the awakening to environmental concern was the First National Encounter of Ecology, a forum held in Curitiba, Paraná, in September 1978. A paper presented to the forum called for the inclusion of legal protection of the environment in the Constitution, then in a preparatory stage, and severe sanctioning of environmental crimes.

From proposals such as this sprang Law 7347 of 1985, a fundamental piece of legislation defining the public civil action to be adopted in cases of damage to the environment, the consumer, hunting rights, artistic, historical, heritage or tourist values, or the landscape. 'General interests', it became thereon understood, are those that do not relate to a given legal relation but are based on generic, occasional or transient facts, such as when people live in the same region, consume the same products, are part of a given social and economic context, or become involved by means of the same private commitments.

By the time the Constitution was promulgated on 5 October 1988, the environment had come to be considered national property and environmental problems had emerged as a national issue. Public opinion began to focus on natural catastrophes. The actions of both official agencies and private organisations aimed at environmental preservation started to loom large in the media, and in public discussion in Congress, the State assemblies and elsewhere personalities involved started to attract attention and the public to listen to them.

Besides Amazônia and the Atlantic forest, other problems were receiving attention—desertification of vast areas in the north-east and south, pollution of beaches by waste, frequent fires in national parks and reserves (threatening the survival of rare species of animals and plants), inefficient control of hazardous substances, and high levels of pollution in large cities such as Rio de Janeiro and São Paulo and in small industrial centres such as Cubatão.

Several political parties inserted in their platforms clauses making it obligatory for party members to defend the environment and to support projects leading to its protection. The Workers Party, for instance, expressly declares in its platform 'the need to preserve the ecology and, for that purpose, to stand against any enterprise damaging to the equilibrium of the environment or to plants and animals'. The Brazilian Democratic Movement

advocates an 'ecological policy to protect water resources and primary vegetation, to ensure reforestation, to protect the atmosphere, and to define the use of industrial zones'. In order to attain such goals, the Party will support the creation of ecological organisations, mostly local groups and movements, and will 'fight with the people to preserve the natural patrimony and the quality of life'. The Labour Democratic Party pledges to protect Brazilian nature against pollution and the deterioration of the environment 'which may result from a predatory waste of resources, depressing the quality of life of the Brazilian people'. It also emphasises the protection of Amazônia, 'our last original natural reserve'. The Green Party inveighs against 'the destruction of nature and the pollution of air, water and food by predatory capitalism and general lack of responsibility'; it 'stands for the protection of Amazônia, the Atlantic Forest, and all green areas threatened by extinction in the country'.

Legal progress in relation to environmental problems presupposes a general climate of opinion, prior to legislation and its enforcement, and dates from all these earlier discussions and endeavours.

1.2 Legal framework

Before elaborating upon the legal instruments used for the protection of the environment in Brazil, some clarification of terms and powers is appropriate.

After a long period of discretionary rule, the 1988 Constitution, the basic law of Brazilian political organisation, was elaborated by a National Congress specifically elected for the purpose. The Constitution establishes the form of government and the political institutions and defines the three powers in the Republic, their functions, and the rights and duties of citizens. The three powers are the Legislature, the Executive, and the Judiciary. Brazil is a federal republic and its political and administrative organisation takes in the Union, the States, the Federal District, and the municipalities (*municípios*).

The Brazilian Constitution devotes a great number of articles to the economic and financial order. Protection of the environment is one of the principles that is supposed to regulate economic development. Under Title VIII are included all norms related to the social order. One of its chapters deals explicitly with the protection of the environment.

A 'federal law' is a general rule elaborated by the two chambers of the National Congress, where it is presented by a deputy or a senator, then voted upon and, if approved, submitted for the President's consideration; the

President may veto it totally or in part. 'Special laws' are those regulating one or more social facts, or certain matters in a particular, exceptional or complementary way. Many articles of the 1988 Constitution require special laws in order to be activated, others are self executing. The former are called 'complementary laws'. 'State laws' are those that apply only within a State. 'Municipal laws' are concerned only with the municipalities; voted upon by municipal councils, they are enforced by their mayor and valid only for people within that municipality. A delicate problem in legal protection of the environment is the delineation of federal, State and municipal competence, a matter the judiciary has often been called upon to resolve.

A 'code' is a body of legal rules systematically articulated and organised and covering a specific field of the law; for example, the Civil Code, the Penal Code, the Code of Civil Procedure, the Code of Penal Procedure, and the Commercial Code. A code is elaborated and voted upon by the National Congress, promulgated by the President, and made effective by a law. In contrast with the Anglo-Saxon legal system, laws and codes in Brazil bind the judiciary and make for greater rigidity in the system. Environmental matters are dealt with in a variety of special laws covering such areas as pollution, water protection and mining: many jurists favour the development of an environment code to integrate all special legal texts.

A 'decree' is *lato sensu* any act or resolution by an agency or competent public authority endowed with compelling power and aiming at securing or promoting political, social, legal or administrative order, or to acknowledge, proclaim or attribute a right; it also may be an act from the Head of the Executive determining adherence to a legal norm included in the sphere of competence of the Executive Power. An 'executive decree' is any decision originating from the Head of the Executive, such as the appointment of functionaries and their removal and exoneration; it can also create the regulations that enable a law to be implemented. A 'judicial decree' is any sentence from a judicial authority. A 'legislative decree' is a resolution within the executive competence of the Congress, not subject to the sanction of the Head of the Executive. Its promulgation falls upon the President of the Supreme Court. A 'law-decree' is a decree endowed with the compelling power of a law. Law-decrees are products of the dictatorship (1937-41) and the authoritarian period (1964-85) when the Executive assumed legislative powers.

A 'provisional law' (*medida provisória*) is a measure endowed with compelling force and amended in cases of urgency and importance by the

President, who must submit it immediately to the National Congress. If it is not approved and converted to law by the Congress, it will lapse in 30 days.

Article 24, paragraph 1, of the Federal Constitution states that in the entire area of concurrent legislation only the Union is competent to establish general norms. 'General norms' are taken to mean norms that by their nature can be applied to the Brazilian nation as a whole and apply to all Brazilian citizens. In concurrent legislation, a hierarchy is therefore established between the federal norm, which is generic (Article 24, paragraph 1), the State norm, which is specific to a State within the Brazilian Federation (Article 24, paragraph 3), and the municipal norm, which is based on local interest (Article 30(1)).

In the case of concurrent legislation, a federal norm overrides State and municipal norms. When a general norm aiming at establishing an orientation in favour of environmental protection for the entire country intrudes on the field of State competence or tries to dispose of local interests it becomes unconstitutional. In such cases, a judge will try to apply Article 225 *caput* of the Constitution and will look for the best form of protection.

Before the Federal Constitution was elaborated in 1988 the Penal Code (Decree 2848 of 7 December 1940) did not contemplate specifically crimes against the environment. Whatever was considered as such was subsumed into crimes against public health (Articles 267 to 285) or crimes against public safety and well-being (Articles 250 to 285); for example, adulteration of drugs, corruption of food or drinking water, criminal fires and production of hazardous substances.

The Project of the Special Part of the Penal Code of 1984 devoted the entirety of Title XIII to crimes against the environment (Articles 401 to 416). This was obviously a significant advance over the Code actually in force. It was based on the idea of restraining overcriminalisation and penalisation and showed much concern with problems of national development. It was, however, never made effective and is quoted here merely as an indication of the ideas that ultimately led to the 1988 Constitution.

Brazilians' growing concern with environmental questions became very evident in the 1980s, as reflected in the penal laws and the Constitution. The National Assembly, called upon to draft the new Constitution, reacted to the general climate of opinion and the strenuous work of several pressure groups that voiced the need for the protection of natural resources as an important part of national wealth.

The Federal Constitution

The Federal Constitution of 1988 became the basic legal text for any matter involving environmental protection (see Attachment A) and represented a landmark in the field. It established principles not previously fully developed and, in great part, still not enacted in ordinary legislation. It conferred on any Brazilian citizen the legal capacity to commence an action aimed at preventing acts and deeds detrimental to the environment, which was understood to be a fundamental legal possession of the nation (Article 5(LXXIII)).

More direct and explicit, Article 225 and its paragraphs emerged as the core of every action towards legal protection of the environment and the matrix of all subsequent legislation. It includes a general statement followed by several specifications:

Every Brazilian citizen is entitled to an environment endowed with ecological equilibrium, and, as such, a property of common use of the people, essential to a healthy quality of life, it being incumbent on public authorities to protect it for the benefit of present and future generations.

This norm has an absolute and declaratory character. It aims to impose on public authorities and the national community certain duties and to endow them with well-established rights. Paragraph 1 of Article 225 lists the principles that should guide public authorities, such as the following:

- to preserve and restore the essential ecological processes and to monitor the ecological status of species and ecosystems;
- to preserve the diversity and integrity of the nation's genetic heritage and to monitor agencies devoted to research into and manipulation of such heritage;
- to define, in all the units of the Union, those components that deserve special protection, their alteration or suppression being allowed only through specific legislation;
- prior to the establishment of any economic endeavour that might create a threat of environmental degradation, a study of its impact on the environment is required, care being given thereafter to disseminating and publicising its contents and conclusions;
- to control the production, merchandising and use of technologies, procedures and substances that might endanger life, the quality of life and the environment;

- to promote environment protection through education at all levels and public awareness of environmental problems;
- to protect animals and plants and, for such purpose, to forbid any practice or activity that may jeopardise their ecological function or may result in species' extinction or in cruelty to animals.

Paragraph 2 of Article 225 provides that whoever exploits mineral resources will be compelled to restore the environment thus degraded, in accordance with technical advice as required by the relevant environmental agency. This is an innovation. Any entrepreneur in the area of mineral resources—an individual or a legal person—is constitutionally obliged to rehabilitate the environment degraded by his or her activity. The Constitution does not envisage the payment of indemnities: it clearly states that the environment shall be restored. Similarly, it does not leave the public agency to decide whether to request the restoration of the damaged environment: it is the legal duty of the agency to order such restoration, and to propose and approve the technical methods to be applied in the process. Ordinary law will determine how the public agency should act in order to force the exploiter of the resource to comply with the law, either through administrative or judicial decision.

In the opinion of expert commentators, the rule that considers mining activities as degrading, without any reservation, represents a remarkable advance. But two forms of degradation can result from mining: that which may be prevented before licensing, through the study of environmental impacts; and that which can be prevented during the actual functioning of the mine. The Constitution imposes on all mining operations an obligation to restore the environment affected.

Paragraph 3 of Article 225 has much to do with this study. It states that all those who engage in behaviour damaging to the environment, be they individuals or legal persons, will be subject to penal and administrative sanctions, in addition to the obligation to pay for the damage. This overcomes the obstacle created by penal law, which considers liability of the individual as a basic principle, by including legal persons as active subjects of the infraction. This widening of responsibility also results from the new definition of acts and deeds against the economic and financial order and against consumers (Article 173, paragraph 5).

As noted, the constitutional mandate is not self-executing, but depends on the making of ordinary laws, which will define both the penal and

administrative sanctions to be applied and the obligation to restore the damage inflicted. Also noteworthy is the criminalisation of behaviour considered potentially or actually damaging to environment, even when the agent is a public authority. On the other hand, the protections extended by the Constitution do not, as previously, specifically relate to different sectors of the environment; rather, the environment is taken as a global concept.

Paragraph 4 of Article 225 establishes a sort of constitutional reservation for entire regions such as the *Amazônia* forests, the Atlantic forest, the *Serra do Mar* (a range of coastal mountains), the Mato Grosso swamplands and the coastal area, all defined as public property. Their use can only be effected in accordance with specified conditions, which include the protection of natural resources.

The chapter on the environment in the Constitution must be interpreted in connection with other articles, such as Article 200(VIII), which provides that public health authorities will cooperate to safeguard the environment and to protect the labour force. Similarly, urban complexes and sites of historical, artistic, archaeological, palaeontological, ecological, and scientific interest are described as national cultural property and, as such, it is the responsibility of public authorities, with the cooperation of the community, to protect them, using surveys, inventories, registers, controls, records, expropriation and other forms of preservation (Article 216, paragraph 1). As it does for damage to the environment, the basic law criminalises damage and threats to national cultural property (paragraph 4).

The question of how to reconcile the provisions in the chapter on the environment with those in the chapter on social and economic development (Title VII, Chapter I, Article 170) awaits resolution. In the latter chapter private ownership, the social function of property, free competition, full employment, and the protection of the environment are all defined as ruling principles of the economic order. Moreover, the same basic text states that the social function of property is achieved in rural areas when settlements follow the legislative requirements for rational and adequate use of the available natural resources and the preservation of the environment (Article 186(I) and (II)).

The notion of state intervention and the application of penal sanctions for misuse of land is apparent in constitutional provisions relating to vacant public lands or those confiscated by government authorities in order to protect natural ecosystems (Article 225, paragraph 5).

Nuclear industries, which have become an important issue for the media and the public, also receive specific mention in the Constitution, which states that prior to construction such industries must have their location defined by federal law (Article 225, paragraph 6).

Present texts

The Brazilian legal system is now supported by a wide array of documents aiming at protection of the environment and securing quality of life.

The Penal Code of 1940 criminalised the destruction of plants and animals (Article 163), the poisoning, corruption or pollution of drinking water (Articles 270 and 271), and crimes against public health. Protection was extended to forests, game and fisheries by Law 4771 of 15 September 1965, Law 5197 of 3 January 1967 and Decree 221 of 28 February 1967. Air pollution and noise began to be criminalised under Decree 3688 of 3 October 1941 (Articles 38 and 42), and Law 6016 of 31 December 1973 extended the legal text to include the sea wherever it is polluted by river water (Article 300).

Law 6933 of 31 August 1981, seven years before the Constitution, was the first legal document to give the country the fundamentals of an environmental policy, creating, at the same stroke, its principles, purposes and instruments. A national system of environment protection was thus built up, although singularly lacking in penal sanctions. Legal texts also established basic guidelines for industrial zoning in critical pollution areas (Law 6803 of 2 July 1980) and for ecological stations and areas for environmental protection (Law 6902 of 27 April 1981).

Even though subsequent legislation did not provide for criminal sanctions against environmental damage it did sanction proceedings for public liability for damage to the environment, the consumer and the rights or properties of artistic, aesthetic, historical, tourist, and panoramic value; for example, Law 7347 of 24 July 1985. At least, it criminalised the withdrawal or delaying of presentation of technical data deemed necessary to civil lawsuits, whenever formally required by the Public Prosecutor's Office (Article 10)—a prescription that brings indirect support to environmental protection.

By the end of the 1980s other important legal texts were brought forth covering, for instance, the prohibition of whaling in Brazilian waters (Law 7643 of 18 December 1987), the regulation of fishing during breeding periods

(Law 7679 of 23 November 1988), and the use of chemical products in agriculture (Law 7802 of 11 July 1989).

Although most of this legislation does not assume a strictly penal character, it is important as part of the general legal framework for environmental protection. A number of these legal texts warrant mention:

- Decree 55 795 of 24 February 1965, which created the annual Tree Celebration;
- Law 5106 of 2 September 1966, which created tax incentives for forest development projects;
- Decree 1110 of 8 July 1970, which created the Brazilian Institute of Colonisation and Agrarian Reform;
- Law 6001 of 19 December 1973, which created the Indian Statute;
- Law 6938 of 31 August 1981, which laid the basis for a national policy on environmental protection;
- Decree 89 336 of 31 January 1984, which created the concept of ecological sites of interest;
- Law 7595 of 8 April 1987, which provided for the creation of special agrarian courts within the federal judicial system;
- Law 7735 of 22 February 1989, which established the Brazilian Institute for the Environment and Renewable Natural Resources and sanctioned the abolition of the position of Special Secretary for the Environment;
- Law 7797 of 10 July 1989, which established the National Fund for the Environment.

Within the scope of this legislation several administrative texts are of note: Decree 97 631 of 10 April 1989, which provided for the registration of private companies in the Brazilian Institute of Environment and Renewable Natural Resources; Decree 97 633 of 10 April 1989, which created the National Council for Animal Protection; and Decree 97 634 of 10 April 1989, which established measures for controlling the production and marketing of hazardous substances.

Penalisation and criminalisation

Environmental crimes are sanctioned by recourse to a variety of norms and legal texts (see Attachment B). Some unification resulted from the Penal Code and Law of Penal Infractions (1940), which absorbed all criminal deeds save misdemeanours. Fishing was treated in the so-called Code of Fishing (Law 221 of 28 February 1967). The inclusion of these rules in the codes meant

that they became federal law and exclusive competence for handling such infractions fell upon the federal judiciary.

Law 7655 of 12 February 1988 changed this approach entirely, criminalising misdemeanours listed in the Code of Hunting and creating criminal offences related to fishing activities. Sanctions were made more severe and bail made unavailable, symbolic of a clear trend towards more severe penalties. The same did not occur with fishing: Law 7679 of 23 November 1988 revoked many articles of the Code of Fishing and was more lenient.

After promulgation of the Federal Constitution and its strong emphasis on environmental crime two legal texts became very important: those on agrottoxins (Law 7802 of 18 July 1989) and on pollution (Law 7804 18 July 1989).

Special laws dealing with environmental crimes move away from the criteria of the Penal Code for the assessment of fines. The Code uses the fine per day (Article 49 and its paragraphs), whereas the law on allotments and division of urban land (Law 6766 of 19 December 1979) establishes a correlation between the fine applied and the highest minimum salary in the country. The law that regulates the procedure to be followed in assessing responsibility for damage to the environment and other interests assesses fines through indices of monetary correction, a procedure essential in countries of permanent and even chronic inflation (Law 7347 of 24 July 1985).

Specific laws dealing with crimes against the environment adopt a variety of criteria. The Code of Forests (Law 4771 of 15 September 1965), for instance, adopts the method of evaluating fines in predefined portions of the minimum salary (from one to 100 times the minimum monthly salary). The Code of Fishing adopts the same criteria as the Penal Code. The law forbidding whaling in Brazilian waters establishes a fine in units of monetary correction. Laws against the use of agrottoxins and pollution provide for fines and take as their basis the highest value of the monetary standard. All these legal texts also impose the sanction of imprisonment.

It is thus clear that uniformity in the law is somewhat wanting. The information presented seems to support the opinion of some jurists, who call for a general Code of Environment, created by revoking, unifying or revising present legislation.

The federal system of institutions for environment protection

The national policy

The National Policy on Environment Protection was defined by Law 6938 of 31 August 1981 and was amended by Law 7804 of 18 July 1989. It not only establishes the guidelines for a national policy but also creates the National System for the Protection of the Environment (SISNAMA), the National Council on the Environment (CSMA), and the Record Files for the Defence of the Environment.

The National Policy on Environment Protection attempts to reconcile the aims of preserving, enhancing and restoring the quality of the environment with the aims of social and economic development and the interests of national security and the protection of human life. It is based on the following principles: ecological equilibrium, the environment being considered public property and, as such, to be protected for collective use; rational use of soil, water and air; planning and control of the use of environmental resources; protection of ecosystems and preservation of representative areas; control and zoning of potentially or actually polluting activities; incentives for study and research into technologies oriented towards rational use and protection of environmental resources; monitoring of environmental quality; rehabilitation of degraded areas; protection of areas threatened by degradation; and environmental education, including community education, in order to enable the citizenry to participate in environmental protection.

The definition of priority areas for government action must be compatible with the interests of the Union, the States, the Federal District and the municipalities. Criteria and standards for environmental quality await further clarification in law, as do norms for the use and exploitation of natural resources. National technologies need to be developed for the judicious use of environmental resources, and wide diffusion of such technologies and general information is necessary to encourage the public to preserve the environment. The preservation and rehabilitation of resources are defined in view of the continuity of the ecological equilibrium. Sanctions involve the obligation to rehabilitate or to pay compensation for damage, or both.

Such principles and goals must be implemented in legal norms so as to guide the actions of governments—Union, State, Federal District and municipal—in all matters related to the preservation of the environment. Entrepreneurial activities must be consistent with the general law and with national policy.

The national system

In order to enforce these principles and goals, a system of public agencies and foundations has been created, with responsibility for the protection and enhancement of environmental quality. The system thus created—SISNAMA—is constituted as follows:

- the Federal Council of Environment Protection (CSMA), which acts as a consulting agency for the President of the Republic, developing the National Policy and guidelines for all actions impinging on the environment and natural resources;
- the National Board for the Environment (CONAMA), a consulting and decision-making agency established to undertake research, advise the Federal Council and propose norms and standards;
- the Brazilian Institute for the Environment and Natural Resources (IBAMA), which is the executive agency with the task of coordinating action, at federal level, to implement the National Policy;
- sectoral agencies and public foundations;
- State agencies, which may assume the task of implementing programs and projects and overseeing activities that have the potential to cause environmental degradation;
- municipal agencies, which, within their areas of competence, have the same duties as the State agencies.

Delineating the areas of competence of the Union, the States and the municipalities is a delicate matter. The States and the municipalities, in their areas of competence, will establish complementary norms and standards, in accordance with the guidelines elaborated by the National Board for the Environment.

Thus far, the courts have acknowledged the authority of the States to impose penalties on those who cause pollution, be they physical or legal persons. Even if the culprit is a municipality, the imposition of fines does not imply encroachment on the municipality's independence; rather, it is done in strict compliance with the Constitution, which subordinates municipalities.

On several occasions State courts have accepted the competence of the Union to impose sanctions on mining companies found to be polluting the environment, thus causing damage to the health and security of the population.

The Federal Council of Environment Protection is chaired by the President of the Republic and has as members all Federal Ministers, a representative of the Public Prosecutor, three representatives of the Legislature and five Brazilian citizens nominated by non-government environmental agencies. The Council is particularly important for the purpose of this study because not only does it establish norms and criteria proposed by IBAMA for the licensing of potentially or actually polluting activities or to determine alternatives, it also passes judgment, as a final administrative court, on fines and other penal sanctions applied by IBAMA and sanctions agreements between IBAMA and involved parties, changing, for instance, financial sanctions in favour of an obligation to perform services related to environmental protection. It can also determine, after due consideration by IBAMA, the revocation or restriction of financial incentives and the withdrawal or suspension of lines of credit from official banks. It has, therefore, not only an active role but also judicial functions in the administrative sphere of environmental protection.

The instruments of national policy develop their action through the following: standards on environmental quality; zoning; evaluation of environmental impacts; licensing and revision of actually or potentially polluting activities; incentives for the development and use of technology of ecological interest; the national system of information on the environment; the federal record of activities and instruments for the defence of the environment; and, most pertinent to this study, disciplinary or compensating sanctions conducive to the preservation of the environment or the remedying of environmental degradation; the 'Report on the Quality of the Environment' to be published annually by IBAMA; the supply of information about the environment; and the Federal Record of activities potentially or actually polluting the environment or that use the environment's resources.

Within the rules set up by SISNAMA, the building, implementation, amplification and functioning of establishments and activities using environmental resources and deemed actually or potentially polluting must be subject to prior licensing by the State agency as part of the national system, and by IBAMA in a complementary character. On the other hand, licensing is a prerequisite for the approval by financial agencies of projects involving predatory or polluting methods of exploitation.

Recently the President of IBAMA made public (*Diário Oficial*, Brasília, 17 February 1992) a proposal unifying federal legislation on the environment, a first step towards the long-sought national code. In the introduction, he

stated that it has the 'main purpose of opening discussion about the definition of its contents and calls for contributions to its final version to be forwarded to the National Congress'. The proposal contains 407 articles and repeals 25 laws and four law-decrees.

The main feature of the proposal is the widening of IBAMA's and CONAMA's responsibilities, distributed in existing legislation to other agencies. It also creates a highly centralised bureaucracy and assumes 116 functions of doubtful feasibility. Further, it involves norms of constitutional, penal, administrative, civil, procedural, and even international, law.

Since its publication this document has attracted much criticism, mainly because IBAMA is an executive agency and has no powers of decision making. It is subordinate to the Secretary-General of the Environment, within the President's Cabinet, and the National Council for the Environment (CONAMA). It flies in the face of the hierarchic principle to have a subordinate agency regulating the status of its superiors.

By increasing the bureaucratic procedures for discussion and approval of projects, and by centralising these procedures, the proposal also increases the bureaucratic difficulties faced by private enterprise when it strives to obtain the necessary licences for any environment-related projects. Whenever new activity involves direct or indirect changes to the environment it will depend on the elaboration of previous studies and on an environmental impact assessment. The proposal also states that all contracts, agreements and grants relating to the environment must be raised within 180 days of promulgation of the new law.

According to the proposal, no loans, subsidies or grants will be offered by financial agencies to mining activities without prior approval of the environmental agency, which means that in this regard the Bank of Brazil would come under the control of IBAMA. The United Nations Conference on Environment and Development will no doubt bring innovations in these matters, and experts have already sounded a warning about the need to wait for the outcome of the Conference before promulgating any laws dealing with environmental matters.

1.3 Environmental problems

The principal areas of long-standing environmental concern in Brazil are as follows:

- the Amazon valley (Amazônia), where destruction of natural resources is a direct consequence of irrational occupation, a predatory economy and, more recently, investment through private and public projects;
- the Atlantic forest (Mata Atlântica);
- the Mato Grosso swamplands (Pantanal matogrossense, or simply Pantanal), an area of 140 000 square kilometres in which more than 1500 animal species still thrive;
- the swamps around bays and beaches, such as Guanabara, where Rio de Janeiro is located.

Beside these specific areas of concern, public opinion has been attracted to other broader environmental problems, such as the following:

- desertification of areas in the north-east and the south;
- pollution of Atlantic beaches by city sewage and the spilling of oil from ships, mostly in the ocean near Rio de Janeiro and Santos (State of São Paulo);
- the burning of national parks and forest reserves by accidental fires, intruders and tourists;
- indiscriminate use of chemicals;
- air pollution in State capitals and industrial cities, such as São Paulo, Rio de Janeiro, Belo Horizonte, Porto Alegre and Cubatão.

It is difficult to gauge the status of each of these 'environmental catastrophes' as viewed by government or the public. If the size of investments is taken as a test of official concern, Amazônia undoubtedly looms large on the list. Between the opening of the Transamazônica Highway in 1970 and the killing of environmental leader Chico Mendes in 1988, more than US\$10 billion was channelled into the region in the form of fiscal incentives and financing of development programs. Many of the programs were launched without any effort to promote preservation or environmental awareness and the resulting devastation provoked international concern. The World Bank responded by announcing that projects would be considered for loans only if due protection of the environment was part of them. By that time, experts had calculated that 12 per cent of Amazônia had been devastated: a total of 251 400 square kilometres. The percentage was put at 5 per cent by the Brazilian Institute for Territorial Research.

No matter what the figures are, it is apparent to all the experts that burning the forest, a consequence of poor agricultural techniques and incoherent settlement, threatens the survival of species and causes

desertification, a particularly serious problem since only 10 per cent of Amazônia is productive.

Concern about the Atlantic forest has resulted since the 1970s in action by environment agencies and the creation of parks and ecological reserves. The SOS Atlantic Forest movement was instrumental in bringing resources to the area and exerting pressure on federal and State agencies to extend their services to it.

The Mato Grosso swamplands were plagued by fires, by prospectors who polluted the rivers, and by sand deposits caused by the reckless spread of pastureland. A group of ecologists met in Corumbá in 1988 and requested a master plan for the area. The First International Congress for the Protection of Pantanal, in 1989, was also important in bringing to notice the problems of this region.

During a Seminar on Supported Development and Conservation, which took place in São Paulo in 1986, the preservation of swamps near bays and beaches was called for. In the same year the first lawsuit against the devastation of such vegetation was brought in the State of São Paulo. It aimed at preventing the devastation of an area of 120 000 square kilometres near the city of Santos.

In coping with these problem areas, and the incidental catastrophes that emerge, the Government has been the chief actor and only recently have private organisations entered the scene. This seems to explain why most of the action has been administrative, monitored by IBAMA. Criminal actions are still rare.

2 SANCTIONING STRATEGIES

According to the Constitution, and to its main interpreters, sanctions for environmental crimes and misdemeanours are civil, penal and administrative and are applicable both to individuals and to legal persons. The Constitution prescribes, among other things, the following types of sanctions: deprivation or restriction of freedom; loss of property; fines; alternative social compensation; and revoking certain rights (Article 5(XLVI)).

In this matter, the Constitution seems to reproduce Law 6838 of 31 August 1981, which criminalised not only specific actions against the environment (such as pollution and irreversible damage to animals and plants), but also non-compliance with measures deemed necessary to the preservation or reparation of nuisance and damage caused by degradation of

environment quality. For such crimes, the following sanctions apply: fines, calculated in Treasury Bonds and made greater in cases of recidivism; loss or restriction of incentives and fiscal exemptions granted by public authorities; loss or revocation of lines of credit from official banks; and suspension of activity (Article 14(I) to (IV)).

The polluting agent is also obliged, without taking into consideration the existence of intention, to pay compensation for damage inflicted on the environment and on third parties victimised by his or her activity. The Public Prosecutor, of either the Union or the States, is the legitimate party to sue, in civil or penal courts, for any damage caused to the environment.

2.1 Types of legal action

The legal protection of the environment is carried out both by the creation of specific legislation and by the use of extant legal instruments.

In the case of non-availability of land needed for the protection of natural ecosystems, there are specific legal measures used to delineate public land (Law 3081 of 22 December 1956 and Law 6383 of 1976).

The so-called popular action (Law 4717 of 20 June 1965) has been widely used as an instrument of defence against any aggression representing abuse of economic power or administrative excess harmful to the environment, to the people's economy or to public property, this last including rights and items of economic, artistic, aesthetic or historical value (Article 1, paragraph 1). This form of lawsuit has proved efficient in the defence of 'collective or general interests' (*interesses difusos*). In the context of these interests of wider scope than the traditional individual rights or interests, it was deemed necessary to supplement the existing legislation, allowing for a kind of extraordinary legitimation *ad causam* for civil associations, to promote the defence of such interests.

Finally, a civil public action was created by Law 7347 of 1985, conferring exceptional legitimacy on civic and other associations in the defence of rights that are not their own and enabling them to sue for damage to the environment, to the consumer or to property or rights: in short, the defence of general interests and not directly those of the party involved.

The widespread use of civil public action has led many courts to take precautionary steps. They have decided, for instance, that the mere indication of damage to the environment, as well as to rights and property, determined by aesthetic, tourist or landscape value, is insufficient to validate the issue of

an order to cease a project. Subjective arguments must be supported by expert opinion.

2.2 Criminal sanctions

The Brazilian Penal Code (Special Part) does not make provision for ecological crime as such, but does insert environmental elements in chapters or articles dealing with special problems, such as protection of animals and plants. In order to penalise acts or omissions of a given agent such acts or omissions must be classified as crimes against property, particularly damage (Articles 163 to 167), crimes against public safety (Articles 250 and 252 to 259), or crimes against public health (Articles 270 and 271).

'Damage' (Article 163) consists in destroying, making useless or causing to deteriorate things belonging to others. It is punishable by imprisonment of one to six months or a fine. It becomes qualified damage when it is aggravated with violence or serious threats against a person, with the use of explosives or inflammables, when it is exerted against properties of the Union, a State or a municipality, or when it results in considerable loss to the victim. In these circumstances sentences of six months to three years apply, plus the penalty corresponding to violence (Article 163(I to IV)).

The Penal Code concentrates on crimes, leaving to the special codes or laws (Hunting, Fishing, Mining, and so on) the corresponding misdemeanours (*contravenções*). Law 3688 of 3 October 1941, amended after many of these special environmental laws were enacted, took up the matter of misdemeanours with the apparent intention of paralleling the articles of the Penal Code, through setting up corresponding chapters devoted to offences against property (Articles 24 to 27) and against public safety (Articles 28 to 38). Some of these articles, pertinent to environmental protection, were duplicated in later special codes, such as the article dealing with the careless use of firearms (Article 26F of the Code of Forests, Law 4771 of 15 September 1965) or the article that forbids the emission of hazardous substances, fumes, vapours, gases, and so on (Article 38 of the Code of Forests).

In the same vein, the Penal Code forbids owners from letting loose their animals on another's property (Article 164) and outlaws the destruction, misuse or damaging of a property preserved by a competent authority for its artistic, archaeological or historical value; the sanction is imprisonment for from 15 days to two years or a fine (Article 164).

Article 250, within Title VIII (on crimes against public security), penalises fires harmful to life, physical integrity or property by imposing imprisonment for from three to six years and a fine. Punishment is more severe if the crime is committed with the aim of securing financial profit and when the fire is set in crops, pastures, woods or forests. If the fire is intentional, the term of imprisonment is increased by from six months to two years.

The use of toxic gases in such way as to place in jeopardy life, physical integrity or property is punished with imprisonment for from one to four years and a fine (Article 252). Acts causing inundation or causing buildings or walls to fall down (Articles 254 and 256) are similarly sanctioned. The spreading of sickness or a plague harmful to forests, crops or domestic animals warrants a punishment of two to five years' imprisonment and a fine (Article 259).

In the case of crimes of common danger (Articles 250 to 252), the Penal Code distinguishes between intentional and unintentional crimes. If in the first instance an action results in serious bodily injury, the prison term is increased by half; if the offence results in death the prison term is doubled. In the case of unintentional crimes, if an offence results in serious bodily injury, the prison term is increased by half; if it results in death, the sanction is the same as that applied to unintentional homicide, thus increasing the prison term by one-third.

The chapter on crimes against public health contains several articles that apply to ecological crimes. It envisages, for instance, the poisoning of drinking water for community or private use or of food or drugs (Article 270) and the corruption or pollution of drinking water for community or private use so that it becomes unfit for consumption or detrimental to health (Articles 271, 272 and 273).

2.3 Civil sanctions

The Code of Civil Procedure lists three procedures for civil lawsuits: summary procedure, ordinary procedure and cautionary procedure.

Summary procedure (Code of Civil Procedure, Article 275) attempts to abbreviate the course of a lawsuit by restricting the testimony of the plaintiff and the defendant to a single hearing. It limits delay of court proceedings to 90 days in the judge's court and to 40 days in the Court of Appeals. A common problem is the need for technical expertise, especially when a suit involves damage to urban or rural property or activities harmful to the

security, peace or health of occupants of neighbouring dwellings. The presentation of evidence may delay the procedure, since according to some jurists evidence cannot be collected before the hearing. Many jurists claim that summary procedure can be applied, for example, to compel real estate entrepreneurs to promote the planting of trees on their property or to obviate misuse of neighbouring property, such as through the emission of gases, pollution of water, noise and vibrations. They also claim summary procedure favours the plaintiff, and that it is effective in cases involving damage to property so as to harm forests or any other form of protected vegetation.

Article 275(II)(j) of the Code of Civil Procedure is an extension of Article 554 of the Civil Code, granting to any owner or renter of property the right to sue for any misuse of the neighbouring property that damages his or her security, peace or health. This procedure is invoked only to forbid the misuse, not as a form of compensation, although it is commonly understood that, in specific circumstances, the two types of action can be combined.

Ordinary procedure (Code of Civil Procedure, Article 287) can be used as a means to secure compliance with Article 555 of the Civil Code: 'The owner is entitled to compel the owner of the neighbouring property to pull it down or to repair it whenever it presents a risk of falling down ...' In such cases, it is commonly held that compensation can be demanded, but the aim pursued can also be compliance, such as changes in the factory's system of ventilation or the installation of filters, or abstention from an action, such as the emission of hazardous substances. Failure to comply with such an order will result in a monetary penalty. Interpreters tend to enlarge the concept of 'neighbourhood', going beyond the contiguous or confining properties.

Cautionary procedure (Code of Civil Procedure, Article 788) aims to prevent serious offences where compensation would prove difficult. A prerequisite is 'grounded fear'. Potential victims can request 'a deposit for imminent damage' (Civil Code, Article 555). The judge has authority to take any precautionary steps he or she may deem necessary, such as an interdiction on the demolition of property to preserve health, security or any other public interest. The judge can grant the requested remedy *in limine*, in the absence of the defendant.

Article 632 of the Code of Civil Procedure is useful in environmental protection cases. It enables third party performance of a defendant's obligation. For example, a court may order a defendant to repair his or her factory chimney. Failure to comply with the order will result in a fine

(payable to the third party) and a third party may perform the defendant's obligation and recover his costs.

2.4 Water protection

'Water protection' means the protection of ground and surface waters, rivers, coastal waters, estuaries, swamps and the ocean. The following basic legal texts regulate this ecological domain:

- Article 20(III) to (VII), paragraph 1, Article 21(XII) and (XIX), Article 22(IV), Article 26(L) and Article 231, paragraph 3, of the Constitution;
- Articles 270 and 271 of the Penal Code;
- Article 303 of the Project of the Penal Code 1969;
- Articles 401 and 402 of the Anteproject of the Penal Code (Special Part) 1987;
- Articles 584 to 586 of the Civil Code (Decree 4657 of 4 September 1942);
- the National Code of Water (Decree 26 643 of 1934);
- Law 5357 of 1967, Law 7661 of 1988 and Article 15 of Law 7804 of 1989;
- Articles 10 to 12 and 47 of the Code of Mining.

The crime of pollution, in any form, is envisaged in Law 6938 of 31 August 1981, as amended by Law 7804 of 18 July 1989. It provides for sanctions of imprisonment for from one to three years and a fine of 100 to 1000 monetary units (MVR) to be imposed on any polluter that places at risk human, animal or plant safety or threatens to exacerbate an already dangerous situation. The punishment is doubled if the offence results in irreversible damage to animals, plants and the environment, or serious bodily harm, or if the offence results from industrial activity or transportation or is committed during night hours or on Sundays or holidays. Any competent authority that fails to act to prevent the offending conduct incurs the same sanctions (Article 15).

The basic elements of criminal liability as related to pollution in the Penal Code are as follows:

- the active agent, which is any capable person. Notwithstanding the attribution of penal responsibility to legal persons by Article 225, paragraph 3, of the Constitution, the matter is still under discussion;
- the passive agent, which is the community;
- the legal object, which is protection of the environment, as defined in Law 7804;

- the sanctioned conduct, which is to pollute (that is, any action leading to harm or desecration or that places at risk any human, animal or plant security, or that exacerbates a risk already present). The danger must be not only possible but also demonstrable;
- the crime, which reaches its consummation when risk arises, damage in itself being not necessary;
- the subjective element (intention), which can be direct or eventual (that is, the agent may have the intention to create the danger and can also be aware of the risk created by the offence, therefore assuming the risk, even though not desiring it). The law does not envisage the unintentional form. Some jurists regret this omission since in many cases it may be difficult to prove an agent's intention, which will eventually divert serious offences to the administrative sphere, as is frequently the case with oil spills in bays and on beaches (Law 5357 of 1967);
- technical evidence, which is required to verify the existence of danger;
- penal action, which is public and thus cannot be suspended by bargaining or agreement between the prosecutor and the parties involved;
- competence of the enforcer, which depends on the circumstances of the crime and the passive agent.

The procedure is the same as in the Code of Penal Procedure. In cases where unintentional conduct is accepted, less serious offences are more leniently sanctioned: one to three years' imprisonment and a fine. By imposing a sentence of reclusion rather than detention, as is usual with unintentional offences, the lawmakers also divert the procedure to the ordinary form.

Administrative sanctions

The basic legal texts regulating administrative sanctions for water pollution are Law 5357 of 1967, Decree 62 934 of 1968, Law 6902 of 1981, Decree 87 648 of 1982, and Decree 88 351 of 1983. Control of administrative norms rests with the Department of Ports and Coasts and the Minister of the Navy, in cooperation with relevant federal and State agencies, as listed in Law 5357. The sanctions are as follows:

- confiscation of materials and implements used in activities conducive to or actually causing pollution or able to affect sources of water in protected areas (Law 6902 of 1981) and confiscation of materials and implements used in activities conducive to accelerated siltation of streams in protected areas;

- forfeiture of exploration licences, when water pollution results from mining works. Forfeiture can be imposed when a miner who has been fined twice in one year continues to ignore the order of the administrative agency;
- forfeiture of mining licences, when water pollution results from mining activities. A licence can be forfeited when a miner, even though fined twice in one year, continues to ignore the order of the administrative agency;
- fines of 10 to 1000 monetary units are applied when a watercourse becomes degraded beyond official standards or when water pollution may cause interruption to a community's water supply. A fine of two to 20 times the basic value is applied wherever garbage, oil, waste, ash or any other object or residue is thrown into the water. A fine of 10 minimum salaries of the highest value in the country is imposed when pollution resulting from mining activities harms sources of water. Such fines are subject to readjustment according to the indices of monetary correction in cases of construction and activation of potentially polluting industries affecting the sources of water in protected areas or in the case of activities conducive to the siltation of streams in protected areas.

2.5 Protection of animals

The basic legal texts for offences relating to the protection of animals are as follows:

- Article 23(VII), Article 24(VI) and Article 222, paragraph 1 (VII) of the Constitution;
- Article 168 of the Penal Code;
- Articles 401 to 403 and 409 to 413 of the Anteproject of the Penal Code (Special Part) 1987;
- the Code of Hunting (Law 5197 of 3 January 1967);
- the Code of Fishing (Decree 221 of 28 February 1967);
- Laws 7643 of 1987 and 7653 of 1988;
- Decree 2467 of 1988.

Sanctions and procedures in criminal law are determined by Law 7653 of 12 February 1988 (which is an amendment of Article 27 of Law 6197 of 1967), the so-called Law of Protection of Animals, or Code of Hunting. Article 34 of the Code, as amended provides, 'In crimes as defined by this law bail is not allowed; such crimes will be investigated through summary procedure, Title II, Chapter V of the Code of Penal Procedure being applied.'

Therefore the procedure to be followed is that applied to crimes and not to misdemeanours.

Similarly, the Federal Court of Appeal, interpreting the amended law, decided, 'In order to establish penal action to investigate crimes against animals, according to Law 7653 of 1988, the Public Prosecutor must present an indictment following summary procedure in the terms of Article 539 of the Code of Penal Procedure and no longer under the procedure used against specific misdemeanours'. The innovation lies in the introduction of summary procedure for crimes punishable with reclusion rather than detention.

Thus, once an indictment is presented, the procedure consists of the interrogation of the defendant, following which a term is granted for the presentation of a preliminary defence. In a further hearing witnesses for the prosecution are heard, then the clearing sentence is proffered. The next step is the hearing of witnesses, for both the defence and the indictment, followed by argument and sentencing. The tendency is to omit the clearing sentence, the presentation of the witnesses for the prosecution being immediately followed by the fixing of the final hearing date. The clearing sentence¹ is implicitly excluded without placing the lawsuit at risk of annulment.

In short, the differences between summary and ordinary procedure lie in the number of witnesses (five in the first, eight in the second); in the shortening of the time taken for the clearing sentence; and in the oral presentation of arguments in summary procedure, whereas in ordinary procedure they should be written (Code of Penal Procedure, Articles 499 and 500). According to current jurisprudence, the adoption of ordinary procedure, in cases where summary procedure should have been used does not mean nullification of the case, whereas the reverse would have done so.

In cases of fishing offences, the Code of Fishing and the concurrent legislation provide for reclusion for criminal acts and fines for misdemeanours. The Code of Penal Procedure had established that summary procedure, as defined in Article 531, should be followed, but the 1988 Constitution changed that, and penal proceedings must now be initiated by means of an indictment presented by the Public Prosecutor.

Thus, the investigation of crimes punished with reclusion (Laws 7643 of 1987, 7653 of 1988 and 7679 of 1988) follows two different procedural paths: typically, Law 7653 of 1988, which altered the Code of Hunting, will follow summary procedure; crimes specified in Laws 7653 of 1987 and 7679 of 1988 will follow ordinary procedure.

Administrative sanctions

The basic legal texts regulating administrative sanctions for offences involving plants and animals are the following:

- Law 6276 of 1 December 1975;
- the Code of Hunting (Law 5197 of 3 January 1967);
- the Code of Fishing (Decree 221 of 28 February 1967);
- Decree 84 017 of 21 September 1979;
- Law 6902 of 27 April 1981.

Administrative control over offences involving plants and animals rests with the Union, which acts through the specific agency belonging to the Ministry of Agriculture or in agreement with the States and municipalities (Article 24, Law 5197 of 1967). IBAMA assumed the functions of a former agency in 1989. Supervision and control of fishing activities was assigned to an independent authority created by Delegated Law 10 on 11 October 1962 and regulated by Decree 1942 of 21 October 1962. Once extinguished by Law 7735 of 22 February 1989, the functions of that authority were absorbed by IBAMA.

Confiscation of fishing equipment and products occurs in cases of the absence of a licence (Article 29, paragraphs 1 and 2, Code of Fishing) or scientific authorisation (Article 30, Code of Fishing) or when fishing is in contravention of IBAMA determinations and in view of species' interrelations, minimum sizes and periods of protection (Article 33, Code of Fishing). The same sanction applies to the importation of fishing equipment and products and exportation without the authorisation of IBAMA (Article 34), when exotic species are introduced without a licence (Article 34), when fishing is carried out in proscribed places (Article 35a), when fishing occurs in places where it can endanger seafarers (Article 35b), when the equipment used is forbidden by law (Article 39), and when the enterprise marketing fish is not duly registered (Article 52). Confiscation of weapons, ammunition and materials for hunting or fishing and the proceeds of the offence may also occur when such items are introduced to national parks or reserves (Decree 84 017 of 21 September 1979).

Similarly, confiscation will apply to weapons of any type, tools for felling trees, or nets for capturing animals if they are brought to or used in ecological reserves (Law 6902 of 1981). Confiscation is also the sanction applied for possession of materials threatening extinction of rare species in regional biosystems in protected areas (Law 6902 of 1981).

Foreign vessels can be requisitioned if they are engaged in fishing activities without the authorisation of the Minister of Agriculture (Article 64, Code of Fishing). Commercial fishing in general is forbidden in the absence of due authorisation (Article 19).

2.6 Protection of forests

The basic legal texts for offences relating to the protection of forests are as follows:

- Article 23(VII), Article 24(VI) and (VII), Article 222, paragraph 4, and Article 225, paragraphs 1(VII) and 4, of the Constitution;
- Articles 163, 164, 250 and 259 of the Penal Code;
- Articles 401 to 403 and 406 to 408 of the Anteproject of the Penal Code (Special Part) 1987;
- the Code of Forests (Law 4771 of 15 September 1965);
- Decrees 97 628 and 97 635 of 1989;
- Laws 7754 and 7802 of 1989.

Forest-related misdemeanours are provided for in Article 26 *caput* of the Forest Code. It enumerates the sanctions for several varieties of offence. Sanctions vary from simple imprisonment (from three months to one year) to fines of from one to 100 times the minimum monthly salary, as paid in the same place and on the date the misdemeanour occurs. (Simple imprisonment differs from reclusion and detention: with simple imprisonment the offender is segregated, whereas reclusion and detention include the obligation to work.) The minimum sentence of three months is understandable because in many cases the misconduct is limited and damage to the environment minimal. In some cases Article 8 of the Code of Penal Procedure can be used, which empowers the presiding judge to decide whether or not to impose the sanction. The Forest Code allows for supplementary application of the Code of Penal Procedure (Article 30).

The procedure for the investigation of forest-related misdemeanours is the summary procedure (Article 36), as determined by Law 1508 of 12 December 1951. The Constitution of 1988 removed from police authorities the function of investigation: it is now the function of the Public Prosecutor 'to promote the entire public penal action' (Article 129(1)). Neither police nor judicial authorities, however, have competence to initiate the investigation of misdemeanours. Any action must be initiated by indictment following the requirements of the Code of Penal Procedure. Having received an indictment, a judge will fix a date for the hearing, when witnesses for the prosecution and

defence will be questioned and following which argument and judgment will take place (Articles 1 to 3, Law 1508 of 19 December 1951, with Article 36 of the Code of Forests). Having in view the particular conditions of rural courts, where most of the suits take place, the Court of Appeal in the State of São Paulo has introduced an innovation that allows the defendant to be questioned wherever he or she lives and not necessarily in the jurisdiction where the charge is brought.

It is, however, essential that the parties be notified through a judicial mandate, without which the process is nullified. Lack of such notification would limit the defence, which is forbidden by the Constitution.

Administrative sanctions

The basic legal texts regulating administrative sanctions for offences involving forests are Decree 289 of February 1967 and Law 4771 of 1965 (the Code of Forests). Responsibility for supervision and control of forest-related activities and for the application of norms prescribed in the Forest Code rests with the Union through the executive agency—IBAMA—or through agreements signed with the States and municipalities (Article 22, *caput*, of Law 4771 of 1965). In urban areas control rests with the municipalities and the Union intervenes as a third party (Article 22).

The administrative sanctions may take several forms, depending on the misdemeanour committed. Orders to replant are used to sanction industries using great quantities of forest materials. They must arrange for replanting to the extent that the replanting, under rational exploitation, will equal their own consumption (Law 4771, Article 20). The same article provides for a fine equal to 10 per cent of the commercial value of the forest materials consumed. The licence of an individual or legal person can be revoked in cases of recidivism, non-compliance with standards of rational tree-felling, or felling beyond the quantity set in the licence (Article 17(IV) of Decree 289 of 28 February 1967). The activities of unlicensed sawmills and other industries producing timber can also be banned (Article 17(III)).

3 CONCLUSION

Environmental protection in Brazil is plagued with legal gaps and contradictions.

Article 225 of the Federal Constitution was a landmark in some respects: it defined the right of every citizen to the environment as a property of common use of the people; it made it a duty for public authorities to protect the

environment for the benefit of present and future generations; it delineated delinquent conduct, defining at the same stroke ecological crimes punishable by law.

Since many articles pend, however, from regulation by complementary and ordinary law, enforcement lags behind the good intentions of the framers of the Constitution and much rests on the interpretation of courts. The Constitution is relatively recent, jurisprudence is in its infancy, issues are not clear, judges are at a loss to resolve questions, and parties still hesitate to resort to the judicial system.

Another important factor is the maze of previous legislation, where Codes of Hunting, Fishing, Mining, and so on, apply different procedures and impose conflicting sanctions. Laws enacted in the 1930s, constantly amended, partly revoked or further amended, cannot cope with the modern problems of environmental degradation caused by urbanisation and industrial growth. In the 1940s the Penal Code and ensuing specific legislation defined types of ecological crime but it had no backing in efficient sanctions and still lags behind the Constitution.

This contradiction becomes stark when Article 225, paragraph 3, of the Constitution is read: 'Behaviour and activities offensive to the environment will place law-breakers—individual or legal persons—under penal and administrative sanctions, in addition to the obligation of repairing the damage caused.' Penal law, on the other hand, envisages only the penalisation of individual persons, and courts are adamant in refusing to consider the penal responsibility of legal persons, independent authorities, companies (public or private) or collective agents. Under Brazilian penal law criminal conduct is the product of an individual will and criminal intention is linked to individual persons.

This extreme position excludes government agencies and private organisations and firms from being penalised for environmental crimes. A mitigating stance is taken by those who hold to the thesis of the social responsibility of agents without implying individual guilt. This may eventually lead to the application of penal sanctions in the name of public welfare, values and interests.

This concept of penal responsibility makes irrelevant all the ecologically oriented legislation enacted in the wake of the Penal Code and the trend of such legislation towards criminalisation which, incidentally, echoes an international tendency. On the other hand, the creation by the Executive of a

complex machinery for the legal protection of the environment has led to a preference for administrative sanctions as a response to environmental crimes. Law 6938 of 1981, for instance, gives full strength to administrative sanctions, whereas Law 7804 of 1989 applies both penal and administrative sanctions.

It is also well known that, unless the law clearly states the protective norm and its sanction, the Executive has shown itself lenient in the prosecution and punishment of offences against the environment, a problem common to all countries in Latin America.

Experts claim that 'the great innovation of the Constitution (that is, the penal liability of legal persons) is largely theoretical since the ordinary legislation (Laws 7802 of 1988 and 7804 of 1989, which deal with pollution and misuse of hazardous substances in agriculture) does not provide for any such liability. The matter remains unresolved.

The maze of environmental legislation also gives rise to duplication and confusion of basic concepts. Pollution, for instance, is variously defined according to whether the pertinent law is federal or State. The courts have often been called upon to clarify confusion resulting from duplication of legislation. A good example is defining the spheres of influence of Laws 6938 of 1981 and 7347 of 1985, both of which set out a policy for environmental protection, and municipal laws, which can regulate urban planning and landscape protection but cannot define either the risk to the protected property or the relevant sanction, both matters within the competency of the Union.

In the 1980s the Court of Justice of the State of São Paulo stated that Laws 6938 and 7347 are specific in the definition of the National Policy for the Environment. Municipal laws can deal with urban planning, landscape protection, and so on, but cannot go beyond the limits of municipal interest. They therefore can define neither what might be damage to a protected resource nor the appropriate sanction, all this being the exclusive province of the Union. The São Paulo statement was the result of a municipality attempting to legislate about the type of building to be erected in a low-density area by applying criteria more pertinent to a medium-density zone. In so doing, the municipality violated the criteria established by federal law and nullification occurred to the extent of the inconsistency.

When sanctioning a crime of pollution resulting from mining activities, the Court of Justice of the State of Mato Grosso decided that each State is committed to the protection of the environment within the limits of its

jurisdiction. In order to prevent prospecting activities detrimental to plants and animals in the Pantanal (swamplands), the State Court supported the interdiction imposed on a mining company by a State agency and established, 'Under such conditions it is to be concluded that upon the State falls the obligation to fight for the preservation of the environment in its territorial limits, thus safeguarding the public interest ...'

The Court of Appeal of the State of Espirito Santo decided that a State has the duty and the authority to impose fines on a municipality, as on any individual or legal person, public or private, charged with polluting the environment, thus acknowledging State competence, secondary to the Union, to apply sanctions in cases of environmental crime.

Interpreters draw a distinction between concurring and secondary competence in environment matters. In the first, the different agencies to whom competence is assigned, are autonomous to legislate. The duty to abide by the Constitution is compelling to them only when a constitutional norm is involved. In the absence of a federal law, the States and the Federal District concur with the Union in legislating for environmental protection.

The coexistence of special legislation creates different situations of penalisation according to the offence under consideration. Law 7802 of 1989 (the Law of Hazardous Substances), for instance, contemplates the possibility of penalising individual and legal persons through their employers or employees in order to protect labour engaged in producing or transporting hazardous substances (Article 16).

All this leads to a need, pointed out by many jurists, for the unification of environmental legislation, which would create the opportunity to erase obsolescences and contradictions and make enforcement mechanisms more rational, rapid and effective. IBAMA has just taken the first step towards developing a unified code.

Another important aspect introduced by the Constitution in Article 225, *caput*, is the duty of public authorities to protect the environment 'for the benefit of present and future generations'. At present this can be made effective by the concept of risk. In a system oriented not only towards punishment but also towards prevention, their function is to anticipate any undesirable outcome. Penal laws for the protection of the environment, and the Penal Code itself, cover so-called consequential crimes but, going further towards protection, Laws 6938 of 1981 and 7804 of 1989 define a crime of

danger or risk and do not even require that such risk be direct and immediate—as in the case of acid rain.

The best instrument to prevent offences against the environment is, however, the environmental impact assessment, which is required for any economic endeavour with the potential to cause environmental degradation (Article 225(IV), Federal Constitution). Some State Constitutions have followed the Federal Constitution in requiring an environmental assessment before any potentially threatening activity can be licensed. As a public instrument, environmental impact assessment allows for direct intervention by the public agency involved: it was defined much earlier than the Constitution, in Law 6938 of 1981 (Article 8(III)), which established the National Policy for the Environment.

It would seem that Article 225 of the Federal Constitution is still a rich quarry for the legislator. The compatibility of its precepts with those of the social and economic order involves the question of development versus environmental protection. The conflict is reflected in the administrative sphere. In the recent past, a federal agency operating in the Amazon valley had intended to exploit the forest under its domain, and to harvest rubber and fish. The creation of IBAMA changed the perspective and now the agency has the duty to take into account both social and economic development and the protection of the environment.

Similarly, the Constitution explicitly preserves private ownership as basic to economic activity (Article 170(II) and (VI)) but also gives protection of the environment equal status. In order to elucidate the concept, the word 'patrimony' is used instead of 'property'. By this is understood a one-ness of things and rights, active and passive, able to be evaluated in monetary terms and owned by an individual or legal person. National patrimony is the whole body of properties, economically evaluated, that belong to the private domain of the Union or over which it exerts a right of ownership through a title *in persona* or *in re*. This private property of the state coexists with the private property of individuals and legal persons. The Union, however, can impose norms for its use by individuals or legal persons, as in the case, for instance, of requiring mining activities to protect soil, water, the forest or animals. It is incumbent on the courts to settle conflicts between the state and the legitimate interests of private or public owners.

The legal protection of the environment is still burdened by the obsolescence of the various laws. The Code of Penal Procedure, dated 1940,

for instance, does not foresee the needs of modern life. The requirements that a police investigation be conducted during the course of the penal action and that witnesses be brought before the judge is sufficient to demonstrate its obsolescence. Among other things, it is felt urgent to introduce negotiation as a new way to speed up procedure. This would mean that where the parties come to an agreement the judge validates it in a sentence and it becomes effective.

In penal law the concept of negligence, as applied to environmental protection, needs to be clarified. At present in Brazil penal law makes provision for only two types of crime from the point of view of motivation: intentional and unintentional. Whereas the concept of intentional crime turns on the will and behaviour of the agent, the concept of unintentional crime does not focus on the purpose of the agent's activity, almost always licit, but focusses on lack of care in creating a result, thus making punishable the agent's behaviour.

Unintentional crime has three grades: imprudence, when the agent engages in a dangerous activity; recklessness, when the agent does not take due precautions; and incapacity, when the agent is technically inept or incompetent. A precondition is the agent's inability to foresee the effects of his or her action and to prevent its consequences. When such foresight is possible only through extraordinary or exceptional attention, the act results in civil responsibility, which must be proved beyond doubt.

Dismal as the situation may seem, Law 7347 of 1985 affords hope in the field of civil liability. The Law's main contribution lies in the protection of general interests, as defined in the Constitution (Article 129(III)), and in affording an instrument of defence, the public civil action. It also opens the courts to the intervention of private associations and invests in the Public Prosecutor the authority to sue for damage to the environment (Article 5). There is a lag in the publication of statistical data on court actions in general and environmental actions in particular. In the State of São Paulo, however, which is very advanced in the protection of the environment, 265 cases came before the courts and 400 cases are under investigation.

In sum, it seems that judges and courts in Brazil will become less and less prone to adopting penal law as the mainstay of the legal system of environmental protection. Traditionally, penal law requires a clear awareness of the values it aims to protect. There is insufficient social pressure in Brazilian society to raise environmental problems to the level of national

issues. Besides, goals are not easily identifiable, causal relations are not clearly perceived, evidence is difficult to collect, and sanctions are blocked by social and cultural contradictions. How, for instance, does one sanction low-income people who live in poor rural areas or in urban *favelas* when they ignore rules against deforestation because they are accustomed to burning wood for domestic purposes?

Nevertheless, criminalisation and penal law will remain as the *ultima ratio* when the offence is deemed serious or causes serious damage to the community, and in cases of recidivism.

The future seems to belong to a mixture of administrative and penal sanctions, to the use of the civil public action, to environmental impact assessment: in short, to diversion, prevention and arbitration.

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NOTE

1. In Brazilian law, before a judge passes judgment on a lawsuit he or she reviews it to ensure that it is in order, there are no procedural gaps, or missing evidence or testimony (Code of Civil Procedure, Article 133). A final sentence is then pronounced. This process enables judgment in civil lawsuits to be expedited.

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ATTACHMENT A

ASPECTS OF THE CONSTITUTION RELATED TO THE ENVIRONMENT

Title II—The Fundamental Rights and Guarantees

Chapter I—Individual and Collective Rights and Duties

Article 5(XXIII), (LXXI) and (LXXIII)

Title III—The Organisation of the State

Chapter II—The Union

Article 20(I) to (XI) and paragraphs 1 and 2

Article 21(XIX), (XX)(XXIII, letters a to c) and (XXV)

Article 22(IV), (XII) and (XXVI)

Article 23(I), (III), (IV), (VI), (VII), (IX) and (XI)

Article 24(VI), (VII) and (VIII)

Chapter III—The Federated States

Article 26(I) to (IV)

Chapter IV—The Municipalities

Article 30(I), (II) and (VIII)

Chapter VII—Public Administration

Article 43, paragraph 2(IV) and paragraph 3.

Title IV—The Organisation of Powers

Chapter I—Legislative Power

Article 49(XIV) and (XVI)

Chapter II—Executive Power

Article 91(I) to (VII) paragraph 1(III)

Chapter IV—The Public Prosecution Office

Article 129(III)

Title VII—The Economic and Financial Order

Chapter I—The General Principles of Economic Activity

Article 170(III) and (IV)

Article 174, paragraphs 3 and 4

Article 176, paragraphs 1 and 4

Chapter II—The Urban Policy

Article 182, paragraphs 1 and 2

Chapter III—The Agricultural and Fiduciary Policy and Agrarian Reform

Article 186(I) to (IV)

Title VIII—The Social Order

Chapter II—Social Security

Article 200(VII) and (VIII)

Chapter III—Education, Culture and Sport

Article 216(V), paragraphs 1, 3 and 4

Chapter IV—The Environment

Article 225, paragraph 1(I) to (VII), paragraphs 2 and 6

Chapter VIII—The Indians

Articles 231, paragraphs 1 to 3 and 6, and 232

The Transitory Constitutional Dispositions

Articles 43 and 44, paragraphs 1 and 3

ATTACHMENT B

MAIN CIVIL LEGISLATION RELATING TO THE ENVIRONMENT

**Table B.1 Main civil legislation relating to the environment:
administrative sanctions**

Subject	Legislation	Legal regulation	Type of penalty
Water protection	Law 5357 of 1967 (detritus in water)	Article 1 (detritus or oil in water)	Fine
	Decree 62 934 of 1968	Article 102(II) combined with Article 54(XI) and (XII) (water pollution resulting from mining)	Loss of research/work authorisation
		Article 100(II) combined with Article 54 (XI) and (XII) (water pollution resulting from mining)	Fine
	Law 6902 of 1981	Article 9(a) and (c), paragraphs 1 and 2 (activities potentially causing pollution or accumulation of sand)	Apprehension/fine
	Decree 87 648 of 1982	Article 312(XII) and paragraph (dumping of waste)	Fine
		Article 319 and Article 320, paragraphs 1 and 2 (construction without due authorisation)	Demolition
	Decree 88 351 of 1983	Article 37(I) and (V) (water pollution collecting water supply)	Fine
Emission control (air pollution and noise)	Decree 62 934 of 1968	Article 102(II) combined with Article 54(XI) and (XII) (air pollution resulting from mining)	Loss of research/work authorisation
	Law 7565 of 1986 (Code of the Air)	Article 45 (noise)	Embargo
	National Code of Traffic	Article 89(XXX) (smoke emission)	Fine/retention
Plant protection	Law 4771 of 1965 (Code of Forests)	Article 20 and paragraph unique (companies consuming great quantities of wood)	Replanting/fine
	Decree 289 of 1967	Article 17(III) and (IV) (non-observance of the policy of rational wood exploration or manufacture without due authorisation)	Cancellation of registration

Table B.1 (cont'd)

Subject	Legislation	Legal regulation	Type of penalty
Animal protection	Decree 221 of 1967 (Code of Fishing)	Article 29, paragraphs 1 and 2 (fishing without a licence)	Apprehension
		Article 30 (fishing without scientific licence)	Apprehension
		Article 34 (import or export without due authorisation/introduction of exotic species without due authorisation)	Apprehension
		Article 35, (a) and (b) (fishing in proscribed places)	Apprehension
		Article 39 (use of proscribed instruments)	Apprehension
		Article 33 (fishing in breeding periods)	Apprehension
		Article 52 (trade in aquatic animals by a non-registered company)	Apprehension
		Article 64 (reoffending against Article 52)	Loss of registration
		Article 19 (fishing company working without due authorisation)	Apprehension
	Law 6276 of 1975	Article 1 (foreign boats fishing in Brazilian waters without due authorisation)	Apprehension
	Decree 84 017 of 1979	Articles 49(II) and 51 (introduction of guns for hunting and fishing in national parks and reservations)	Apprehension
	Law 6902 of 1981	Article 7, paragraph 1(c), (d) and (e) combined with Article 4, and Article 9, paragraph 2(d) (fishing with proscribed equipment)	Apprehension
Water protection	Civil Code	Articles 1, 4, 5, 6, 7	Apprehension
		Articles 584 (activities potentially causing pollution); 585 (use of other people's source of water), and 586 (prescribed sanctions)	Confiscation and damages

Table B.2 Main civil legislation relating to the environment: criminal sanctions

Subject	Legislation	Legal regulation	Type of penalty
Water protection	Penal Code	Article 270 (poisoning of drinkable water, or alimential or medicinal substances)	Imprisonment (reclusion and fine)
		Article 271 (corruption or pollution of drinkable water)	Imprisonment (reclusion/detention)
	Law 7804 of 1989 (completing Law 6938 of 1981)	Article 15 (crime of pollution)	Imprisonment (reclusion/detention)
Emission control (air pollution and noise)	Penal Code	Article 252 (use of toxic or asphyxiating gas)	Imprisonment (reclusion) and fine/imprisonment (detention)
		Article 253 (production, provision, acquisition, possession or transportation of explosives, or toxic or asphyxiating gas)	Imprisonment (reclusion) and fine/imprisonment (detention)
	Decree 3688 of 1941 (Law of contraventions)	Article 38 (emission of smoke, steam or gas)	Fine
	Law 7804 of 1989 (completing Law 6938 of 1981)	Article 42 (disturbance of other people's work or quiet enjoyment)	Fine/simple imprisonment
Waste removal	Decree 3688 of 1941 (Law of contraventions)	Article 15 (crime of pollution)	Imprisonment (reclusion and fine)
		Article 37 (dangerous throwing or placing)	Fine
Plant protection	Penal Code	Article 163 (harm)	Imprisonment (detention)/fine
		Article 164 (introduction or abandonment of animals in other people's property)	Imprisonment (detention)/fine
		Article 166 (alteration of specially protected sites)	Imprisonment (detention)/fine
		Article 250 (fire)	Imprisonment (reclusion) and fine/imprisonment (detention)
		Article 259 (dissemination of disease or plague)	Imprisonment (reclusion) and fine/imprisonment (detention) and fine
	Law 4771 of 1965 (Code of Forests)	Article 26 (imposes sanctions for some infractions)	Imprisonment/fine
Animal protection	Penal Code	Article 163 (harm)	Imprisonment (detention)/fine
	Decree 221 of 1967 (Code of Fishing)	Article 9 and Article 35(c) and (d) (unauthorised fishing)	Imprisonment (reclusion) and fine
	Law 5197 of 1967 (Code of Hunting)	Article 27 (imposes sanctions for some cases of infraction)	Imprisonment (reclusion)
	Law 7643 of 1987 (prohibits whaling)	Article 2 (sanctions)	Imprisonment (reclusion) and fine/confiscation of boat
	Law 7679 of 1988 (prohibits fishing of some species during breeding periods)	Article 1, IV(a) and (b) and Article 8	Imprisonment (reclusion)

ATTACHMENT C

INTERNATIONAL TREATIES AND OTHER AGREEMENTS IN THE FIELD OF THE ENVIRONMENT

Title	Subject	Into force in Brazil
International Convention on the Regulation of Whaling	To protect all species of whales from over-fishing and safeguard for future generations the great natural resources represented by whale stocks. To establish a system of international regulation for whale fisheries to ensure proper conservation and development of whale stocks.	4 January 1974
Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere	To preserve all species and genera of native American fauna and flora from extinction and to preserve areas of extraordinary beauty, striking geological formations or aesthetic, historic or scientific value.	26 November 1965
International Plant Protection Convention	To maintain and increase international cooperation in controlling pests and diseases of plants and plant products, and in preventing their introduction and spread across national boundaries.	14 September 1951
Antarctic Treaty	To ensure that Antarctica is used for peaceful purposes, for international cooperation in scientific research, and does not become the scene or object of international discord.	16 May 1975
Convention Concerning the Protection of Workers against Ionising Radiation	To protect workers, as regards their health and safety, against ionising radiation.	5 September 1967
Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water	To obtain an agreement on general and complete disarmament under strict international control in accordance with the objectives of the United Nations to put an end to the armaments race and eliminate incentives to the production and testing of all kinds of weapons, including nuclear weapons.	15 December 1964
International Convention on the Conservation of Atlantic Tuna	To maintain populations of tuna and tuna-like fish in the Atlantic Ocean at levels permitting the maximum sustainable catch for food and other purposes.	1 April 1969
Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and other Celestial Bodies	To establish an international legal regime for the exploration and use of outer space.	5 March 1969
International Convention on Civil Liability for Oil Pollution Damage	To ensure that adequate compensation is available to persons who suffer damage caused by pollution resulting from the escape or discharge of oil from ships. To standardise international rules and procedures for determining questions of liability and adequate compensation in such areas.	17 March 1977
Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof	To exclude the seabed, the ocean floor and the subsoil thereof from the arms race as a step towards disarmament, the reduction of international tension and the maintenance of world peace.	10 May 1988

(cont'd)

Title	Subject	Into force in Brazil
Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction	To prohibit the development of biological weapons and eliminate them as a step towards general disarmament for the sake of all mankind.	26 March 1975
Convention for the Protection of the World Cultural and Natural Heritage	To establish an effective system of collective protection of the cultural and natural heritage of outstanding universal value, organised on a permanent basis and in accordance with modern scientific methods.	1 December 1977
Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter	To control pollution of the sea by dumping, and to encourage regional agreements supplementary to the Convention.	26 August 1982
Convention on International Trade in Endangered Species of Wild Fauna and Flora	To protect certain endangered species from over-exploitation by means of a system of import/export permits.	4 November 1975
Protocol of 1978 Relating to the International Convention for the Prevention of Marine Pollution from Ships (MARPOL)	The 1978 Protocol modifies various provisions of the 1973 London Convention, and in particular Annex I. It also postpones the entry into force of Annex II of the Convention for at least three years.	29 April 1988
Convention Concerning Prevention and Control of Occupational Hazards Caused by Carcinogenic Substances and Agents	To protect workers against hazards arising from occupational exposure to carcinogenic substances and agents.	26 June 1992
Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques	To prohibit the military or other hostile use of such techniques in order to consolidate world peace and trust among nations.	12 October 1984
Convention Concerning the Protection of Workers Against Occupational Hazards in the Working Environment due to Air Pollution, Noise and Vibration	To protect workers against occupational hazards in the working environment.	14 January 1983
Treaty for Amazonian Operation	To promote the harmonious development of the Amazon region and permit equitable distribution of the benefits of such development among the contracting parties.	2 August 1980
Convention on the Physical Protection of Nuclear Material	To facilitate the safety of nuclear material and to establish effective measures for its physical protection.	8 February 1987
Convention on the Conservation of Antarctic Marine Living Resources	To safeguard the environment and protect the integrity of the ecosystem of the seas surrounding Antarctica, and to conserve Antarctic marine living resources.	27 February 1986
United Nations Convention on the Law of the Sea	To set up a comprehensive new legal regime for the sea and oceans and, as far as environmental provisions are concerned, to establish material rules concerning environmental standards as well as enforcement provisions dealing with pollution of the marine environment.	10 December 1982

(cont'd)

Title	Subject	Into force in Brazil
International Tropical Timber Agreement	To provide an effective framework for cooperation and consultation between countries producing and consuming tropical timber, to promote the expansion and diversification of international trade in tropical timber and the improvement of structural conditions in the tropical timber market, to promote and support research and development with a view to improving forest management and wood utilisation and to encourage the development of national policies aimed at sustainable utilisation and conservation of tropical forests and their genetic resources, and at maintaining the ecological balance in the regions concerned.	1 April 1985
Convention for the Protection of the Ozone Layer	To protect human health and the environment against adverse effects resulting from modifications of the ozone layer.	17 June 1990
Protocol on Substances that Deplete the Ozone Layer	To protect the ozone layer by taking precautionary measures to control global emissions of substances that deplete it.	17 June 1990
Convention Concerning Occupational Health Services	To establish and maintain a safe and healthy working environment and the adoption of work to the capacities of workers in light of their state of physical and mental health.	18 May 1990
Convention Concerning Safety in the Use of Asbestos	To prevent and control the exposure of workers to asbestos and to protect them against health hazards due to occupational exposure to asbestos.	11 June 1990
Convention on the Regulation of Antarctic Mineral Resource Activities	To provide for principles, rules and institutions to assess the possible impact on the environment of Antarctic mineral resource activities, to determine the acceptability of those activities, to govern the conduct of the activities, and to ensure that all such activities are undertaken in conformity with the Convention. The aim of the Convention is to prohibit activities that would cause damage to the environment or ecosystems of the Antarctic or effect global or regional climate patterns.	25 November 1988

CZECHOSLOVAKIA

*Jaroslava Novotná**

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INTRODUCTION

The Czech and Slovak Federal Republic is a country in which the state of the environment has attained the character of ecological catastrophe in many respects. The reasons for this are numerous, not least the absolute under-estimation of the problem.

These circumstances have resulted in almost complete devastation of some regions of the Republic. Their number includes the area surrounding the aluminium plant in Ziar and Hronom in Slovakia, where almost 25 000 hectares of forest have been destroyed. The construction of numerous hydroelectric schemes in recent years has also had serious ecological consequences; the Nove Mlýny reservoirs in Moravia and the Babčikovo–Nagymaros project in South Slovakia are examples. Moravia and South Bohemia have been greatly damaged by the construction of a gigantic nuclear power plant at Dukovany and the continuing construction of another plant at Temelin. The most seriously damaged region, however, is North Bohemia, where there is an extraordinary concentration of thermal power plants and brown coal extraction operations. For instance, the town of Kadan is surrounded by four thermal power plants, open-cut brown coal mines and a military zone. The town of Most was torn down to give way to brown-coal mining; the new town was built on the mine spoilbanks and is surrounded by open-cut brown coal mines, two thermal power plants and a number of plants producing chemicals. The town of Chomutov is flanked by the Kadan open-cut mines on one side and by the Most open-cut mines on the other side; in the town itself there are, apart from metallurgical works, deep coal mines. And there are many other examples. The concentration of industry in this region has caused the annihilation of more than 120 000 hectares of forests in the Ore Mountains, thus causing the biggest Czechoslovak ecological catastrophe. In the Ore Mountains concentrations of sulphuric acid reach 23 tonnes per square kilometre annually.

* General Prosecutor's Office of the Czech and Slovak Federal Republic, Prague. This report was completed in October 1991 and amended in May 1992.

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The devastation of the environment in North Bohemia is known because it is visible. Pollution data, however, are not publicly available—in some cases pollution levels have not even been measured. The state of the environment in the affected regions is chronic, but public opinion has been manipulated for a long time and medical research has generally been lacking. The affected regions were preferred for housing construction and premiums were offered to those willing to work there: 2000 koruny per year if a worker stayed in the region for 10 years.

At present the region is the site of clashes of opinion. In response to public demand the Czech Government halted the operation and expansion of some open-cut mines, but a considerable number of those employed in the mines are calling for the revocation of this decision.

The disputes about the ecological consequences of the Babčikovo–Nagymaros hydroelectric scheme on the Danube are probably known throughout the world. Moreover, these disputes have serious consequences for Czechoslovak–Hungarian relations.

1 FRAMEWORK AND REVIEW OF LEGAL HISTORY

1.1 Social framework

The deterioration of the environment in Czechoslovakia, particularly in North Bohemia but also in the capital itself, has no parallel in Europe or almost anywhere else in the world. Major and speedy efforts are an absolute necessity if the Czechoslovak population is to be protected: the most devastated regions are permanently inhabited by millions of people.

In addition to this, the period in which the devastation of the environment has reached such alarming proportions (the solution to which would require far greater financial resources than are available in the Republic) coincides with the period in which the entire economy is undergoing fundamental change through far-reaching decentralisation and privatisation of the national economy. It is also a time in which relations between the Republic and other states, especially those of Western Europe, are changing dramatically and the proclaimed 'return' of Czechoslovakia to Europe is, or should be, taking place.

The contemporary situation is also characterised by a considerable increase in disputation about the status of the Czech and Slovak nations within the framework of a joint state. In the codification of environmental protection an extraordinarily significant role is being played by the very division of competencies between the Czechoslovak Republic and both

nations. Moreover, there is no general legal norm in the Republic that comprehensively deals with environmental matters.

It is debatable whether a principal codification can concern only aspects of the environment; that is, whether it should concern primarily the codification of the interactions and relations within the environment (such as between water management legislation and legislation on the protection of nature). The relationships between the various pieces and types of legislation have not been clarified, and this causes serious difficulties of application. The result has been a number of interpretations: whether the environment should be treated as an entity or whether it should be treated in terms of its individual components. This is an extraordinarily complex problem, and an extraordinarily urgent one. Further, there are the questions of whether there can exist an Act of the Federal Assembly on the protection of nature and of the form of the much discussed Act on the environment.

The majority of analogous Acts adopted in European countries (including the British Control of Pollution Act of 1974 and a number of West European regulations) and, generally speaking, all such Acts adopted in the countries of the former Eastern Europe codify not only the basic principles of environmental protection but also those of its individual components, or at least some of them. This latter represents a sort of 'special part' of the Acts, although it is not so termed in the Acts themselves.

In the Czech and Slovak Federal Republic proposals to codify environment protection oscillate between the declaration of a few basic principles of protection and detailed codification including matters such as principles of waste disposal, soil protection, and nature conservation.

Existing so-called 'departmental regulations' setting out the legal regime for individual components of the environment such as water, soil and air are concerned almost exclusively with the solution of specific problems. Examples are the determination of competencies of the individual organs of state administration—water management organs, building authorities, organs of state protection of nature, and so on—and the specification of what a particular type and level of administrative organ may permit or forbid, some bans as well as rights being specified directly in legal regulations. In other words, they represent a significant and exclusive administrative type of management in the form of prohibitions, orders and permissions and the specifying of those who are entitled to perform such administrative acts.

This administrative management has played a negative role, particularly in the fields of economic and environmental management. There are innumerable examples of the negative environmental effects of this management style: exceptions permitting the discharge of waste waters at variance with the Water Act (No. 138 of 1973 CoL) and, more significantly, the method of solution of discrepancies in planning and building procedures in accordance with section 136 of the Building Act (No. 50 of 1976 CoL), according to which, in cases of dispute, the organ superior to the building authority had over-riding power (this organ has merged with the central authority of state administration for the environment).

Management by the specification of duties and the issue of administrative Acts did not fare well in the conditions of a centralised economy. On the other hand, the fundamental qualitative change in the national economy, involving dramatic decentralisation and privatisation, may considerably increase the significance of these administrative forms of management by the very separation of the state from the means of production.

What is entirely missing in the codification of environmental protection, however, is a system of environmental protection based economic instruments. Such instruments include principles of taxation policy, some principles of codification of property and its restriction, the codification of customs duties, and credit policy.

In the Czech and Slovak Federal Republic this problem extends to codification of the property of wild creatures, elucidation of the concept of property in relation to groundwaters (which groundwaters should be considered as groundwater resources that are state property *ex lege* and which groundwaters are the remaining ones) and clarification of principles of land ownership (including the ownership of forest land and of the products that are obtained from it).

Further complexity arises from the fact that the codification of property and taxes falls within the competency of the Czech and Slovak Federal Republic rather than the Czech and Slovak Republics. This is best illustrated with an example. In the framework of the drafting of the Act of the Czech National Council and the Act of the Slovak National Council on the state protection of nature criticism was voiced that the property relation to some protected species of animals is not codified and that it was these very Acts that should do so. These Acts, otherwise generally codifying the problems of state protection of nature, however, cannot do so, because the codification of property relations is the province of the Federal Assembly.

Successfully codifying environmental protection necessitates the adoption of a large number of fundamental legislative measures. The question is, Who should do so? In the current state of revolutionary development of the legal system many ministries of the two Republics are preparing myriad regulations dealing with the problems of the environment. In many cases, however, the codification must be federal. Moreover, the ministries of the Republics have no right to submit drafts to the Federal Assembly.

In managing environmental protection, virtually no use has been made of instruments of economic stimulation; in particular, any evidence of pricing mechanisms is virtually absent. This has without doubt been a major cause of deterioration of the state of the environment. Consider, as an example, a tree protected by the state (as a protected product of nature). The tree has the same monetary value as any other tree of its species; in practice, its value would probably be less because of its greater age and poorer condition. But it is the price determined in accordance with the relevant price regulation that is decisive in the case of possible criminal prosecution or compensation for damage. Serious, too, are the consequences of the fact that there is no price for water in a watercourse, although here too any damage incurred is assessed in terms of the difference in the price of the object before the damage and the price after the damage.

Paradoxically though, the codification of the environment (which has been concerned exclusively with administrative procedures; that is, management by means of prohibitions and orders) has been used in cases of relatively serious and extensive interference with the codification of property relations, this being based on the idea of the unity of the socialist state as the holder of power and the owner of the means of production. Some codifications from the field of the environment, even though they did not rely on property relations, actually served to enhance the status of the state as owner of the means of production within its jurisdiction.

Generally speaking, however, the influence of relations adopted in the field of environmental protection on property relations within society has escaped the attention of both the lay and professional public, with the exception of those who were parties to the property relations. Important features are the generally unnoticed but relatively extensive nationalisation of land and forests.

For instance, the Water Act (No. 138 of 1973 CoL) included in the concept of watercourse the land forming the bed of the watercourse (the bed

comprising the floor and the banks as far as the so-called river bank line) so that this land, if not national property before the Act, became national property *ex lege* on the day the Act came into force, 1 April 1975. In the case of the land forming the natural bed of the watercourse, this land was nationalised without entitlement to compensation (section 38, paragraph 3, of the Act).

The same applies to any change in the natural bed of a watercourse, which frequently occurs. If the change was caused by the action of the watercourse, the new bed becomes the natural bed of the watercourse, in accordance with, for example, section 6, paragraphs 1 and 2, of Decree No. 19 of 1978, valid in the Czech Republic. In the Slovak Republic an analogous decree, No. 6 of 1978, deals with both the pre-existing bed and the changed bed of a watercourse. Naturally, the provisions can also be applied in connection with section 31, paragraph 1, of the Water Act. Any growth on the land as far as the bank boundary line was simultaneously nationalised; such growth, in particular trees and shrubs, is almost always considered a part of the land on which it is situated until its separation. Further, since a tree growing on an area of land is usually considered a part of that land it will share the legal fate of the land and be subject to the provisions of section 31, paragraph 1, of the Water Act. In other words, trees growing on the banks as far as the bank boundary line were nationalised without compensation.

Another case is the Forest Act (No. 61 of 1977 CoL). According to section 31, paragraph 3, of the Act, any forests on land used according to the Act are always (regardless of the time of their planting and of whether the person who planted them is the owner of the land) the property of the state, or of an agricultural cooperative if it is using the forest. This resulted in relatively extensive nationalisation (or transition to cooperative property) of forests. Moreover, in accordance with section 27, paragraph 1, of the Act, the administration of national forest property (defined in section 11, paragraph 1) passed exclusively to the state organisations of forest management, free of charge, one year after the Act came into force. This has very serious implications for the property of communities.

Numerous other examples could be quoted. Suffice to say that even the two examples cited illustrate that environmental protection did not use economic instruments, especially the property relations and their codification for its purposes; on the other hand, the codification of environmental protection was used to enhance the role of the state in centralising property ownership or, at the very least, in socialising parts of the environment.

The issue arises of whether the centralisation or socialisation of ownership of some parts of the environment was beneficial in terms of environmental protection. Let us return to the forests for an example. Almost all regulations codifying the transfer of forests to state or cooperative ownership simultaneously exempted such forests from the general regimes of protection and from the application of regulations codifying the protection of trees growing outside forest boundaries. For instance, section 34, paragraph 1, of the Water Act provides that the administrator of a watercourse is entitled, in the interest of the management of that watercourse, to remove growth on the land adjacent to the watercourse. The administrator needs no permission because the organs specified in section 13, paragraph 2, of Act No. 40 of 1956 (on State Protection of Nature) decide on permission for exceptional felling of trees only in cases not covered by specific regulations. No compensation is paid, either, because the administrator of the watercourse has also become proprietor of the vegetation concerned. The administrator would not pay compensation in any case, since the owner of the land would be obliged to enable the administrator to exercise his or her right without compensation in accordance with section 36, paragraph 1, of the Water Act.

Another example is groundwater, considered most frequently as a component of the land under which it is found (see section 120 of the Civil Code). The assessment of groundwater as a component of the land is no longer possible in the case of natural groundwater resources: Article 10 of the Constitution of the Czech and Slovak Federal Republic (as amended by the Constitutional Act No. 100 of 1990) states that the property of the state includes natural groundwater resources. The benefit of the nationalisation of groundwater or parts of it should consist primarily in the creation of a uniform system of administration of the water property of the state, but the appointment of administrators of minor watercourses is very difficult in practice and can be expected to become more so upon the introduction of the administration of groundwater resources.

It is unnecessary at this point to examine the usefulness of the present wording of Article 10 of the Constitution. It has become a rule that the provisions of the regulations codifying the legal regime of components of the environment interfered with property relations in order to facilitate the administration of these components, not to enhance their protection. It can further be said that the regulations codifying the legal regime of the components of the environment have been interfering with the codification of property relations largely in order to facilitate and simplify state

administration in the sectors concerned with these components of the environment.

Property relations can, however, play a highly significant role in the protection of the environment. It is usually the proprietor who can, in the case of damage to an object, claim compensation for the damage caused. There is definitely not much motivation if, for instance, the proprietor of vegetation on the land in personal use is the state: the state is the proprietor of the land, and the trees and shrubs growing on it are considered its components.

This situation results in a number of paradoxical—even absurd—situations. Section 203 of the Civil Code provides that a user may seek protection of his or her right against unauthorised interference in the same way as a proprietor. Consequently, a user can request that the court adjudge it the duty of the state to refrain from activities that endanger the permanent vegetation on land that the user is using. If, however, the activities of the proprietor—the State—result in damage to such vegetation (and, because it forms part of the land, it is actually damage caused to the land), should the user remain powerless because the proprietor of the damaged growth (or of the land) is the person who caused the damage?

In the case of groundwater, damage caused to it is provided for in section 29, paragraph 1, of the Water Act, which specifies that compensation shall be payable to the person or entity that had permission to dispose of the water, regardless of ownership. Should the damage be caused by a citizen, however, and not an enterprise, the Civil Code applies and ownership of the source of the groundwater becomes decisive. Groundwater resources are, as noted, the property of the state; other groundwaters are usually considered a part of the land. If there is doubt about whether the water concerned is a watercourse, the water management authority decides; there is no provision stating who should decide if there is doubt about a groundwater resource. Compensation for damage would be problematic in any case, if only because the price of groundwater is not established and is not reflected even in the price of the land of which it forms part.

The foregoing discussion serves to illustrate the need for change in property relations in the field of environmental protection.

A serious future problem will certainly be the question of ownership of waters: minor watercourses, ponds, reservoirs, and so on. Even though the draft codifications of property rights and the rights of use of land generally envisage the privatisation of reservoirs, at present the wording of the

Constitution and, in particular, the definition of the term 'watercourse' in the Water Act make it impossible. In spite of efforts to achieve comprehensiveness this definition poses a number of difficulties. Section 31, paragraph 1, of the Water Act defines 'watercourses' as waters permanently flowing on the surface of the Earth and between banks, either in a natural bed (such as torrents, creeks and rivers) or in an artificial bed (such as canals and reservoirs). This apparently clear definition has often had strange consequences. It is problematic, for example, whether water raised and held (that is, not naturally flowing) by a hydraulic structure is in fact a watercourse, and whether the water flowing in a pipeline for part of its course is still a watercourse.

The latter problem is exemplified by the River Bilina: in part of its course (the Ervenice Corridor) it flows through several kilometres of pipelines (that is, neither between natural banks nor on the surface of the Earth, but above the Earth) and, as a result, the administrator of the Bilina watercourse has refused to administer this part because in his opinion it is not a watercourse within the meaning of the Act. On the other hand, even the smallest pond indubitably is a reservoir and therefore a watercourse and, according to the Constitution, the property of the state. This perplexing situation could probably be solved by an amendment of section 31, paragraph 1, of the Water Act, so as to define the watercourse either quantitatively (with reference to the volume of water, flow rate, and so on) or by some other method.

Experience in the Republic has proved that the underestimation of property relations leads to serious negative consequences for the national economy: it is the very proprietorship of an object that usually inspires the proprietor to handle it carefully, to maintain it, protect it, and generally behave in such a way as would not result in its damage. This concept is fundamental for the Republic's economic reform and is the starting point for the entire privatisation process.

From the viewpoint of the codification of property relations, practically all parts of the environment—water, soil, plants, forest and other growth—are considered land or parts thereof. The transfers of the previous administration between state economic organisations and subsequently state enterprises were effected according to Decree No. 119 of 1988 CoL, free of charge. It is obvious, however, that components of the environment must be assigned an adequate price; otherwise, it will be impossible to ensure their effective protection and it will be impossible to estimate the costs of damage and so derive appropriate levels of compensation for that damage. On the other hand,

the current scenario of economic reform envisages the liberalisation of prices. This is essential if there is to be free exchange within the market and a plurality of proprietors.

The discussion thus far has concerned itself with the problems arising out of the privatisation process and its connection with the legal regulation of components of the environment. What also warrants discussion is the privatisation of activities aimed at environmental protection.

Since the events of November 1989—when the 'Wenceslas Square incident' occurred, leading to the crumbling of the Communist monopoly on power—legislation has aimed not only at privatisation but also, in part, at using privatisation as an instrument for environmental protection. For instance, section 11 of Act No. 111 of 1990 (on State Enterprises) provides that state enterprises have relatively significant obligations in the field of environmental protection ... implementation of those obligations is another matter. Analogous is the case of agricultural cooperatives. On the other hand, a contradictory position arises for joint-stock companies and trading companies, regulated by the Economic Code, which have no such obligations imposed upon them; in fact, section 119a of the Economic Code, which forbids production discharges or emissions that threaten the environment, does not apply, under section 3 of the Code, to private entrepreneurs (and their trading companies) and enterprises with foreign participation.

Now that Constitutional Act No. 100 of 1990 has come into force, large parts of Act No. 111 of 1990 and Act No. 162 of 1990 appear superfluous. Article 12 of the Constitution states that the exercise of property rights and the rights of use must not damage the environment unnecessarily. Further, Article 8, paragraph 1, of the Constitution provides that property rights must not be abused to the detriment of the rights of other persons or of society.

The provisions in section 11, paragraph 1, of Act No. 111 of 1990 and section 44, paragraph 8, of Act No. 162 of 1990 are superfluous; they also represent exceptions to the rule that *superfluum non nocet*. By concretely elaborating a constitutional duty for specified subjects only, the legal system necessarily suggests that no analogous duty applies to other than those specified subjects.

A far greater role than that played by the aforementioned provisions of Act No. 111 of 1990 and Act No. 162 of 1990 can be played, to the benefit of the environment and its protection in the conditions of a market economy, by the provisions of section 15, paragraph 2, of the Act of the Czech National

Council on communities, according to which the community cannot withhold its consent to the location of premises or a part thereof, with the exception of the circumstance in which the location of the premises or a part thereof would threaten the environment.

In conclusion, as far as the processes of environmental protection and implementation are concerned, the codification in force is not very useful. For instance, the frequently quoted Act No. 162 of 1990 allows a citizen to have amalgamated land only for the purpose of building or operating a small hydroelectric power plant—but not for the purpose of, say, constructing a small waste-water treatment plant. This simple example illustrates the fact that environmental protection, in the sense that it is an activity, has not yet been equated with other economic activities. Without this, it will be impossible to privatise environmental protection, and the restriction of these activities to subjects connected with the state has not proved successful in the past.

1.2 Legal framework

The nature of the environment

The very first attempts at defining the concept of the environment in the field of law accentuated the environment's material character. The environment was considered as a set of components of the material world defined by certain characteristics. While the legally codified care of the environment is a human activity, the environment is matter. The law codifies the care of the environment as a human activity that forms the object of legal norms and their applications. The environment itself is that at which the rights and duties of legal subjects are aimed: the object of their legal relations.

The material character of the majority of the components of the environment, particularly with reference to its international codification, cannot be doubted. If the prohibition of appropriation and the status of *res communis omnium* apply to certain spaces (as the forms of the existence of the matter) it follows at least that the spaces are capable of being the object of appropriation; that is, that they are *res*. With reference to the space defined by the imaginary lines limiting the territory of our state, the material character of waters, soil, land, forests and other growth is indubitable. Watercourses, the basic forest land, and natural and curative resources are national property in accordance with Article 10 of the Constitution of the Czech and Slovak Federal Republic. Protected territories are territories subjected to certain protection and, ultimately, land. They are, consequently, things as all other

soil (in the meaning of the space for human activities, not merely as the surface stratum of the Earth). For example, section 12, paragraph 5, *in principio* of Act No. 40 of 1956 CoL (on State Protection of Nature) refers to 'the circumstance that the real estate is a protected territory ...'; section 5 of Order No. 119 of 1978 CoL of the Government of the Slovak Socialist Republic refers to 'administration of national property'.

All the aforementioned objects can be subsumed under a single definition of 'the thing' in the Czechoslovak legal system. Section 13, paragraph 1, of Act No. 101 of 1963 CoL states in part that things are material objects and controllable natural forces 'serving the needs of men'. The Act is, naturally, a self-contained *lex specialis*; it is therefore questionable whether this definition can be applied to the entire legal system. Another problem consists in the question of whether 'serving the needs of men' refers to both material objects and controllable natural forces or only to the latter. Should we not apply the second interpretation, freely living animals would also be things, although obviously they do not serve the needs of men. At present the law does not offer any support for their being considered, for example, as accessories of the land. The hunting of such animals (game) would have to be considered as the manufacture of things from natural resources. Such a conclusion could, however, be scarcely considered correct. Nor is it possible to accept the thesis that wild animals are things but form the object only of the right to hunting, a material right of quasi-static character. The object of such a right could consist only in the animals specified in section 19 of the Act No. 23 of 1962 in the Slovak Republic (read with Decree No. 171 of 1975 CoL) but not other wild animals. Nevertheless, it follows from the additional clause of section 4 of the Misdemeanours Act that at least the animals forming the object of the hunting right are things. A literal interpretation of Act No. 101 of 1963 CoL, therefore, would be incorrect and formalistic.

Czechoslovak law clearly defines the term 'care of the environment' only twice: in section 2, paragraph 1, of Act No. 20 of 1966 CoL and in section 1 of Decree No. 45 of 1966 CoL. These provisions of the Public Health Act and its implementation Decree confirm that the components of the environment are primarily the air, water and soil (specifically the recreation and spa regions, publicly accessible areas, areas of human settlements, and the environs of industrial works) and specified buildings (residential buildings, service facilities, and so on). Further, section 1, paragraph 1, of Act No. 50 of 1976 defines soil, water and air as principal components of the environment.

The regulations of administrative law are the only legal rules that expressly deal with the environment. They differentiate between the living environment and the working environment. This differentiation necessarily leads to the need for a more accurate definition of 'environment' as a legal term, in such a way that it is deemed to mean a specific set of components of the material world considered by law to be components of the environment.

The objects of legal relations, however, are not things only. From the material concept of the environment, it follows that other objects of legal relations (such as the values of human personality and health) are not included. In the field of norms imposing secondary legal duties, the term 'object of legal relation' approaches the term 'object of attack'. Objects of attack include people; consequently, the terms are not identical. In this context it is worth bearing in mind the notion that humankind itself cannot be reduced to the environment of other people: the people form the environs of humankind, but environs are not identical with the environment. Incorporation of people in the environment would result in the exchange of the subject, which is human society, for the object. According to Czechoslovak law the environment cannot include even such components as human relations. Relations among people form the object of the law; the environment, however, is considered as the object of legal relations, even as a whole. It is not merely a sum of its components but represents a quality of its own.

Various human activities may change this quality. If their effect is negative, we speak about threatening or damaging the environment (worsening its quality). This process may have the most varied forms: damage to greenery, scattering of wastes, air pollution, and so on.

The problems of responsibility

The components of the environment are 'things' in legal meaning. Rights to them, particularly property rights, are, however, not made explicit. The air space does form part of the state territory and as such is subject to the jurisdiction of the state. But the atmosphere, which reaches 16 times as high as the recognised upper limit of the air space and flows freely from one state to another, is the property of neither the state nor anybody else.

Wild animals have already been discussed. Act No. 23 of 1962 CoL states in section 2 that the hunting right consists in the appropriation of hunted or dead game. More complex is the problem of the right to animals that, in keeping with the Act, are not considered game at all. For this reason, for instance, the decision published under No. 28 for 1983 of the penal section of

the Collection of Judicial Decisions pronounced the impossibility of compensation for damage. Similarly, animals not specified in section 15 of Act No. 102 of 1963, or even the animals specified therein but not living in running waters, do not form the object of fishing rights; this is argued on the basis of section 15 in combination with section 6, paragraph 2. Damage to the specified components of the environment damages the entire society, but society is not a subject of law and therefore cannot act as the damaged party.

No less serious is the character of the origin of damage to the environment. Such damage often occurs as a result of a combination of circumstances, each circumstance being sufficient to produce the damage. Damage can also occur as a result of a gradual increase in negative effects or the simultaneous effect of several actions, none of which alone could cause the damage. It has been stated that in such cases there is no responsibility since it is impossible to ascertain causal relations. It can be argued that an action produces an effect not only when the effect would not occur without the action but also when the effect would occur anyway, but in a different manner. The question of how far the responsibility extends then arises. It holds, naturally, that a particular action does not lose the character of cause only because the result has also been caused by other actions. The action represents the cause of the result and would take place in another way, particularly later. Such action, consequently, is the reason for responsibility, even if the damage would have occurred anyway, unless the law expressly states otherwise (compare section 237 of the Civil Code). By expressly stating the cases when responsibility does not arise if the damage would have occurred anyway, the law resolves simultaneously the question of responsibility in all such cases. In the case of damage resulting from an accumulation of negative effects, it is a question, when such damage has been done in the legal meaning, of whether the damage occurs after the beginning of the origin of damage or after the termination of the process.

It follows, then, that the principal instruments of environmental protection cannot consist in sanctions specified for resulting offences, in particular sanctions punishing the violation of a subjective right. Such principal instruments must consist in sanctions applicable regardless of the manner of causing the damage; that is, the sanctions that are a legal consequence of a pure action. A typical sanction for a breach of legal duty, even though the breach has not caused any damage, is the administrative sanction. Penal sanctions, which also may be imposed for a formal offence, do not come into consideration as a principal instrument of environmental protection, particularly with regard to the purely ancillary role of penal repression. (At

the same time, administrative sanctions are formulated in the legislation as subsidiary to penal sanctions; for example, Act No. 200 of 1991 CoL).

Moreover, only natural persons can be subject to penal sanctions. And the purpose of penal sanctions is, together with educational objectives, to punish the perpetrator of the offence, while the purpose of administrative sanctions is primarily a return to the legal state. In the case of breach of duty in state administration the principal aim is to achieve a remedy. In the case of administrative and property sanctions punishment of the perpetrator does not form the substance of the measure but is merely an accompanying phenomenon. Administrative responsibility, therefore, combines the positive features of reparatory sanctions with the possibility of punishment of formal offences, as in the case of criminal responsibility.

Consequently, the decisive instrument of environmental protection is sanctions, the prerequisite for which does not consist in the effect but merely in the perpetrator's action.

Non-uniformity of administrative responsibility

Administrative law is the only branch of law that protects the environment, and particularly its individual components, by specific provisions and therefore expressly; the other branches of law grant protection to the environment only through other objects (life and health of persons and property) and only implicitly.

Sanctions protecting individual components of the environment or the environment as a whole against specific human activities, however, do not have equal impact. Failure to fulfil a duty stipulated by administrative law may be (if the prerequisites of responsibility have been fulfilled) punished as a misdemeanour. In some cases this is the only protection; for example, in the state protection of nature. The subjects of administrative law include citizens, administrative organs and also organisations, and there is no reason that organisations should not also be subject of sanctions.

In the field of environmental protection, administrative law provides that offences can be sanctioned in accordance with specific regulations codifying the legal regime of only some environmental components. These specific regulations double environmental protection also in relation to the possibility of punishment of natural persons. They specify the administrative responsibility of the employees of responsible organisations, which transfers responsibility for the misdemeanour from the specific to the general. Only the

Building Act (No. 50 of 1976) specifies the misdemeanour as a counterpart of the responsibility of the organisation.

The protection of some components of the environment is stricter than the protection of others. Fulfilment of the primary legal duty is ensured by the imposition of administrative fines both on organisations and on their employees.

With a single exception (section 26, paragraph 1, of Act No. 61 of 1977 CoL), the legal regulations codifying environmental protection do not speak about the guilt of organisations. This exceptional provision, however, is of great importance for the specification of the principle on which the administrative responsibility of organisations is based. The provision, specifying that the fine shall be imposed not only on the organisation but also on the employee who has caused the organisation to breach its duty, could also be interpreted in such a way that if the employee is not guilty no fine shall be imposed on either the employee or the organisation. Such an interpretation would, however, be incorrect. The administrative responsibility of organisations is consequently, with the aforementioned exception, objective.

That is where the uniformity of administrative responsibility of organisations ends. Some regulations have a fixed upper limit for fines (for example, section 106 of Act No. 50 of 1976); others allow for increasing limits, but at different rates. Section 270b of the Labour Code makes it possible to increase the upper limit of a fine as many as five times in cases of repeated breach of duty. In other cases the fine can be doubled under section 7 of Order of the Government of the Czech Republic No. 26 of 1975 CoL and Order of the Government of the Slovak Republic No. 31 of 1975 CoL, or under Act No. 61 of 1977 CoL, Act of the Czech National Council No. 96 of 1977 CoL, and Act of the Slovak National Council No. 53 of 1975 CoL.

The term for the application of sanctions is not uniformly specified either. Generally, fines may be imposed only within the specified periods. In Act No. 61 of 1977 CoL, Act of the Czech National Council No. 96 of 1977 CoL, Act of the Slovak National Council No. 100 of 1977 CoL, and Order of the Government of the Slovak Republic No. 31 of 1975 CoL, however, only the commencement of proceedings is limited.

In some legal regulations imposition of a fine by the administrative authority is obligatory; in others it is optional (Act. No. 50 of 1976 CoL and Act No. 53 of 1966 CoL, as amended by the Act No. 124 of 1976 CoL). The procedure for imposing fines is governed by the Rules of Administrative

Procedure (Act No. 71 of 1967 CoL); misdemeanour procedure, however, is codified separately by Act of the Czech National Council No. 200 of 1991 CoL.

Further, administrative punishment of the employees of organisations in accordance with the regulations on environmental protection is characterised by considerable diversity, particularly in the terms for imposition of fines or the commencement of proceedings.

It can be concluded that protection of the principal components of the environment is made stricter by the possibility of administrative punishment other than the punishment of misdemeanours. The codification of administrative responsibility in accordance with the regulations codifying the legal regime of these environmental components is, however, highly variable. It is questionable whether this variability is necessary, particularly in light of the fact that the transparency of codification is one of the prerequisites for legality and that obscure regulations can fulfil their function as instruments for control of society only to a very limited extent.

Czechoslovak law also contains a third protection regime. If damage is done to forests or to buildings, structures and facilities on forest land and serving forest management, the person who has caused the damage is bound to restore the place concerned to its original state (section 10, paragraph 2, of Act No. 61 of 1977 CoL). A threat or damage to some components of the environment may, therefore, give rise to responsibility for a misdemeanour, while a threat or damage to other components may give rise also to the responsibility of organisations and their employees for administrative offences in accordance with specific regulations (apart from the responsibility of other natural persons for the misdemeanour). Damage to forests and the objects specified in section 10, paragraph 1, of Act No. 61 of 1977 CoL may form also the reason for the origin of responsibility in accordance with paragraph 2 of the Act.

1.3 Historical development of environmental protection law

While in a number of other countries the first environmental protection regulations were adopted in the field of water management, in the Czech lands (Bohemia, Moravia and Slesia) the regulations concerned the protection of nature. The first such regulation was Order No. 660 of 1838, establishing the natural reserves of Zofin and Hojna Voda. On 31 December 1933 the so-called New Year's Eve Edict was issued, listing the natural reserves established to that date.

The term 'environment' was used for the first time in 1962, in section 1 of Act No. 4 of 1952 CoL, dealing with hygiene. The problems of environmental protection as related to the protection of human health were codified for the first time by Act No. 20 of 1966 (on the Care of Public Health), which remains in force.

It was mainly during the 1970s that legal rules were adopted codifying the regimes of individual components of the environment; for example, the Water Act (No. 138 of 1973 CoL), the Acts of the National Councils on State Administration of Water Management (Nos 130 of 1974 CoL and 134 of 1974 CoL), the Forest Act (No. 61 of 1977 CoL), the Acts of the National Councils on State Administration of Forest Management (Nos 96 of 1977 and 100 of 1977), and the Building Act (No. 50 of 1976 CoL). Their purpose was primarily to codify state administration within individual components of the environment. An Act codifying the environment as such—that is, as a whole—has not yet been adopted. In 1991, however, the first Act on Waste Disposal (No. 258 of 1991 CoL) was adopted.

The problems of the environment are the focus of a great deal of attention, not only because people in degraded regions are demanding better living conditions, subsidies for heating costs in areas devastated by coal mining, and so on. The contemporary problems of the environment in the Czech Republic were summarised for the first time in 1990, in the so-called *Blue Book* issued by the Ministry of the Environment of the Czech Republic.¹

Constitutional Act No. 100 of 1960—the Constitution of the Czech and Slovak Federal Republic—forms the basis for environmental protection. Article 12 provides that the exercise of property rights or of the right of use shall not impair human health or the human and natural environment to an extent greater than necessary. Article 15, paragraph 2, is concerned with the creation of ecological balance by protecting nature and maintaining a healthy environment whilst exploiting natural resources considerably.

In reality, the division of power between the federation (the Czech and Slovak Federal Republic) and its two constituent Republics (the Czech Republic and the Slovak Republic) plays the decisive role. The Czech and Slovak Federal Republic has competence in the following spheres:

- legal regulation of the fundamental issues of the environment;
- legal regulation and state supervision in relation to nuclear safety;
- the ecological policy of the Czech and Slovak Federal Republic;

- development of national information systems for the environment, in cooperation with the Czech Republic and with the Slovak Republic;
- implementation and the coordination of international cooperation.

Other matters pertaining to the environment fall within the competence of the individual Republics.²

The relationship between competencies at the federal level and the level of the Republics is institutionally expressed so that on the basis of Article vi of Constitutional Act No. 296 of 1990 CoL the Federal Committee for the Environment was established as the central organ of state administration for the environment. The Committee's Chairman is member of the Government of the Czech and Slovak Federal Republic, has the status of a Minister, and is appointed by the President of the Republic. The Vice-Chairman and other members are appointed by the Government of the Republic.

Act of the Czech National Council No. 2 of 1969 Sb. (present text No. 105 of 1991 Sb.) (on the Establishment of Ministries and Other Central Organs of Administration in the Czech Republic), creates the Ministry of the Environment as the central organ of state administration headed by a member of the Government of the Republic. This Ministry is, pursuant to section 19 of the Act, the organ of supreme state supervision in relation to the environment: it coordinates the environment-related activities of all ministries and other organs of state administration within the Czech Republic; it administers the Fund for the Formation and Protection of the Environment of the Czech Republic; and the Czech Technical Inspectorate of Air Protection, the Czech Inspectorate of Water Resources and the Czech Hydrometeorological Institute are subordinate to it. Pursuant to section 1, paragraph 1, of Act of the Czech National Council No. 282 of 1991 Sb., the Czech Inspectorate of the Environment is also subordinate to it.

Finally, the Slovak Commission for the Environment is created pursuant to section 1, paragraph a, of Act of the Slovak National Council No. 347 of 1990 Sb. (on the Organisation of Ministries and Other Central Organs of State Administration in the Slovak Republic). The Commission is headed by a member of the Government of the Slovak Republic and is the central organ of administration for the protection and formation of the environment in the Republic. To it are subordinate the Slovak Inspectorate of the Environment, by means of which the Commission performs the function of supervision in relation to the environment, and the Slovak Hydrometeorological Institute. Act of the Slovak National Council No. 128 of 1991 Sb. creates the State

Fund of the Environment of the Slovak Republic, which is administered by the Commission. (Its financial resources include fines levied to sanction violations of obligations in individual sectors of the environment.) The Commission controls district Offices of the Environment and the Slovak Inspectorate of the Environment as well as being the main supervisory organisation in the environment field, but it has no sanctioning competence. Its professional arm is the Slovak Inspectorate of the Environment, exercising control under conditions fixed by special regulations (for example, in relation to the water system and air protection).

Another fundamental document of the Czechoslovak state and society in the sphere of the environment is the Charter of Basic Human Rights and Freedoms created by Constitutional Act No. 23 of 1991 Sb., adopted on 9 January of that year. Article 11, paragraph 3, provides that the exercise of ownership must not impair human health, nature or the environment beyond the extent specified by the law. Article 35 specifies that all people have a right to a favourable environment and to timely and full information about the state of the environment and natural resources, but that in the exercise of their rights people may not endanger or damage the environment, natural resources, genetic riches, nature or cultural monuments beyond the extent fixed by the law. Article 36 provides that any person can claim this right through an independent, impartial court or, in specified cases, through another authority, and that any person dissatisfied with the outcome of such a claim can appeal through the court. Further, all people have the right to compensation for damage caused to them by unlawful decisions of the court, a state authority or the administering agency, or by incorrect procedure of authorities. Pursuant to paragraph 4 of Article 36, the conditions and details in these cases are specified by law, in accordance with the division of legislative competence.

As stated, the Czech and Slovak Federal Republic does not yet have any fundamental legal regulation of the comprehensive care of the environment in the form of a basic 'Act on the Environment'. Nevertheless, since the beginning of 1988 drafting work for such an Act has been occurring. After the comments received in the interdepartmental procedure, the Federal Committee for the Environment has elaborated its latest version, which will be discussed by the Governments of both Republics and by the Government of the Czech and Slovak Federal Republic. After this, it will be submitted as the government draft of the Act to the Federal Assembly of the Czech and Slovak Federal Republic for adoption. When adopted, the Act will form the basis for legal regulation in the sphere of the environment and will represent the general legal norm, although there will continue to be special legal regulations for the

protection and care of the environment and of its components. The Act rests on the principles of sustainable development of society, the tolerable load, the deliberate management of natural resources, prevention, circumsppection, direct responsibility, rescue and restitution. Importantly, the draft of the Act emphasises, among other things, the concept of 'pollution of the environment' (section 7, paragraph 1), which is the introduction to the environment of physical, chemical and biological matter that is foreign to that environment, and the concept of 'damage done to the environment' (Article 7, paragraph 2), which is deterioration in the state of the environment as a result of pollution, inconsiderate interference with the landscape, the impairment of ecological stability, or some other human activity going beyond the extent fixed by special regulations.

The draft of the Act also provides, in section 2, that violation of obligations under special regulations on the environment will result in fines or other sanctions that do not affect contingent criminal responsibility. In contrast with economic instruments (particularly taxes) and with restitution in cases of ecological detriment, the purpose of these fines as sanctioning measures is to ensure the immediate cessation of the undesirable conduct. The relevant organs of state administration will also have secondary sanctioning powers pursuant to section 28 of the draft Act: in cases when serious impairment of the environment is imminent or the impairment has already taken place they can demand temporary cessation or limitation of the activity that has caused the impairment, in advance for a period of not more than 30 days. At the same time they must suggest to the state administration authority that it take corresponding measures.³

2 SANCTIONING STRATEGIES

2.1 Relevant national (administrative, civil and criminal) sanctions

The system of administrative law in the Czech and Slovak Federal Republic provides the principal means for protecting the environment. The focus of protection, including sanctioning competency, resides within the organs of state administration.

The number of norms of different legal force is large and they are complex and scattered, having been established at times of varying economic and political conditions. Nevertheless, the norms can be classified according to whether they impose general obligations or deal with specific components of the environment and specific sources of degradation.

The general norms in the sphere of administrative law have as their basis several elements: the status and competency of communities; the status and competency of district authorities; the obligations of state enterprises; and the obligations of citizens and private entrepreneurs.

Status and competency of communities

The communal system as the basis of the territorial division of the nation can be explained thus: every part of the territory of both Republics belongs in principle to a community and the territory of every community is a part of a district. The community is the legal person, acting in its own name and bearing the responsibility following from its legal relations. It has its own property and financial resources, which it administers in accordance with conditions fixed by legislation (section 4 of Act of Czech National Council No. 367 of 1990 Sb. and section 1, paragraph 1, of the analogous Act of the Slovak National Council).

Section 14, paragraph 1, of Act of the Czech National Council No. 367 of 1990 Sb. provides, among other things, that the community will act independently in the interests of creation of a healthy environment. (Such activity is labelled 'independent' because the community is subject only to the laws and the generally binding regulations issued by central organs of their implementation, and not other norms, orders, instructions, and so on). Protection of the environment can be ensured by section 15, paragraph 2, of the Act, which provides that the community can refuse to allow the siting of a legal or natural person's or a state organ's enterprise on community land.

The supreme organ of the community—the local authority—decides, within the framework of the Act, on measures for the protection and maintenance of the environment within the territory of the community. Under section 48, paragraph 2, the local council can impose a fine of up to 100 000 koruny on subjects who pollute public grounds, impair the environment of the community, or place things outside a reserved place. The fine can be imposed within one year of the day on which the offence occurred, provided no special regulation establishes a different sanction for the offence (section 51, paragraph 1); the levying of the fine does not relieve offenders of the obligation to remove, within a fixed time, the objectionable state (paragraph 2); the monies gathered through fines are the income of the community (paragraph 3).

The community then exercises, pursuant to section 21, paragraph 1, of the Act, the so-called transferred activity. This means that the community follows

the laws and other generally binding legal regulations and, within their limits, the resolutions of the Government and the directives of the central organs of state administration.

As the capital of the Czech and Slovak Federal Republic, Prague has special status as a municipality. In relation to the environment it is of note that if a legal person or an entrepreneur impairs the environment (in the sense of section 16, paragraphs 1 and 2, of Act of the Czech National Council No. 367 of 1980 and Act No. 418 of 1990 Sb., on the Capital of Prague) and this behaviour has unfavourable consequences for more than one town quarter the municipal authority of the capital, rather than each affected town quarter, decides on the imposition of a fine, which may amount to 200 000 koruny (section 16, paragraph 3). The fine must not be levied if it has already been levied by a town quarter. For the construction of a workshop without the consent of a Prague town quarter, the town quarter can levy on the subject a fine of up to 100 000 koruny. (The town quarter gives construction consent pursuant to section 8, paragraph 1, of Act No. 367 of 1990, and can refuse such consent if the location of the workshop would endanger the environment.)

Act of the Slovak National Council No. 369 of 1990 Sb. (on the Communal System Valid for the Territory of the Slovak Republic) is not explicit on the question of the sanctioning competence of the community. It establishes the obligation of the inhabitants of a community to protect and improve their environment and it charges the community, within the framework of its self-administration, with protection of the environment. The monies gathered through fines levied for petty offences form part of the income of the community (section 7, paragraph 1).

Status and competency of district authorities

Put simply, the Czech and Slovak Federal Republic is administratively divided into large administrative units called 'districts' (Act No. 36 of 1960 Sb., on the Territorial Division of the Country; legal measure of the Presidium of the Czech National Council No. 248 of 1990 Sb., amending Act No. 36 of 1960 Sb., on the Territorial Division of the Country; and Act No. 36 of 1960 Sb., on the Territorial and Administrative Division of the Slovak Republic) in which the organs of state administration are 'district authorities' (section 1 of Act of the Czech National Council No. 425 of 1990 Sb. and section 1, paragraph 1, of Act of the Slovak National Council No. 472 of 1990 Sb.)

Pursuant to section 2 of Act of the Czech National Council No. 425 of 1990 Sb. (on District Authorities, the Regulation of their Competence and on Some Other Measures Connected with It), the district authority has, within its territorial province, state administrative powers in relation to specific matters. This includes sanctioning competence in cases of offences against the environment, if this is fixed by special regulations, and, when the original territorial divisions of the country were abolished, the transfer of regional competence, including contingent sanctioning power. The district authorities comply with the laws and regulations and, within their limits, the resolutions of the Government of the Czech Republic and the directives of the central organs of state administration (section 7 of the Act).

Pursuant to section 1, paragraph 2, of Act of the Slovak National Council No. 472 of 1990 Sb. (on the Organisation of the Local State Administration) district authorities in the Slovak Republic are responsible for the healthy conditions of the life of the population. Act of the Slovak National Council No. 595 of 1990 Sb. (on the State Administration for the Environment) regulates the structure of the organs of state administration in the environment in a manner differing from the equivalent legislation in the Czech Republic. Pursuant to section 1, paragraph 2, of the Slovak Act, the district authorities have state administrative power in relation to the formation and protection of the environment, as enumerated in Annexes A, B, C and D of the Act. Generally, these authorities operate according to specific regulations pertaining to air, water and nature protection. They ensure the protection of the environment by means of different forms of decision making, approvals and permissions for the activities of natural and legal persons, and they have power to impose fines.

Obligations of state enterprises

Pursuant to section 2, paragraph 1, of Act of the Federal Assembly No. 111 of 1990 Sb. (on State Enterprises), a 'state enterprise' is a producer of goods that carries on its entrepreneurial activity independently, managing its own affairs. It is a legal person and bears the responsibility following from its legal relations (section 5, paragraph 1). It is not answerable to the state, and the state—unless otherwise established by law—is not answerable to it (section 4, paragraph 1).

In its economic and social activity a state enterprise is obliged to protect as effectively as possible the human and natural environment from any harmful effects it may cause, and particularly to ensure that it does not endanger the health of citizens. It finances and implements measures directed at the

elimination of damage caused by its own activity (section 11, paragraph 1). It is also obliged to construct facilities for the protection of the human and natural environment, to operate these facilities, and to ensure their continuous and effective working.

Obligations of citizens and private entrepreneurs

Section 27 of Act of the Federal Assembly No. 105 of 1990 Sb. (on the Private Enterprise of Citizens) provides that citizens involved in entrepreneurial activities have obligations similar to those of state enterprises. An entrepreneur is, in his or her business, obliged to protect as effectively as possible the human and natural environment against harmful influences caused by the entrepreneurial activity, and particularly to ensure that the health of other citizens is not endangered. The entrepreneur finances and implements measures directed at the elimination of damage caused by the entrepreneurial activity (section 27, paragraph 1). The entrepreneur is obliged to construct facilities for the protection of the human and natural environment, to operate these facilities, and to ensure their continuous and effective working (paragraph 2).

Petty offences against administrative law

Act of the Czech National Council No. 200 of 1990 Sb. (on Petty Offences), Act of the Slovak National Council No. 372 of 1990 Sb. (on Petty Offences) and Act of the Federal Assembly No. 524 of 1990 Sb. all make provision for petty offences against administrative law in the sphere of protection of the environment. A 'petty offence' is guilty behaviour impairing or endangering the interest of society, unless it is an administrative offence, for which sanctions can be imposed according to specific regulations, or a criminal offence: the principle of *nullum crimen sine lege*. Negligence is sufficient unless otherwise specified. Only natural persons are subject to this legal regulation; in the case of a legal person, the natural person who acted at the behest of the legal person and the natural person who issued the order to act are subject.

If the detection of the petty offence itself is sufficient to reform the offender it is possible to refrain from imposing a sanction (sect. 11, para. 3, of the Acts). Section 12 of the Acts provides that, in determining sanctions, account should be taken of the gravity of the offence, particularly the method of perpetration and the consequences, the circumstances under which it was committed, the extent of guilt, and the motives and personality of the offender. Responsibility for a petty offence is extinguished if one year has elapsed since

the time of perpetration. Such an offence is also not punishable if it is covered by an amnesty of the President of the Republic (section 20 of the Acts).

For petty offences four types of sanctions can be generally imposed: a reprimand, a fine, a prohibition on the activity, and forfeiture of the thing (section 11, paragraph 1).

For petty offences against the environment only fines come into consideration—up to 3000 koruny and in specified cases up to 5000 koruny. A fine levied pursuant to section 13, paragraph 2, of Act of the Czech National Council No. 200 of 1990 becomes income either of the district or the local authority that decided the matter or of the state budget of the Czech Republic if the fine was levied by another administrative organ. In the Slovak Republic a fine becomes, pursuant to section 13, paragraph 3, of Act No. 372 of 1990, the income of the community if it is levied for specified petty offences (among them offences against the environment); in other cases it becomes income for the state budget of the Slovak Republic.

A prohibition on activity can be imposed with regard to the conditions specified in section 14, paragraph 1, of the Acts only for specific activities in agriculture, game-keeping and fisheries (pursuant to section 35, paragraph 1, of the Acts), when the offender intentionally interferes without authorisation with the exercise of the right of fishing or intentionally hunts or fishes in closed season. Section 11, paragraph 2, of the Acts provides that a reprimand cannot be imposed together with a fine. Section 15, paragraphs 1 and 2, of the Acts deals with forfeiture: the thing must belong to the offender; it must have been used or intended to be used to commit the offence; or it was gained through the perpetration of the offence or was acquired for the thing gained by the perpetration of the offence. The thing cannot be forfeited if its value is strikingly disproportionate to the nature of the offence. The state becomes the owner of the forfeited thing (section 15, paragraph 3).

The Acts also make explicit provision for petty offences against the environment (section 45, paragraph 1). Such an offence is committed by a person who, in violating the generally binding regulations on protection of the environment, causes the environment to deteriorate. The deterioration of the environment can be caused in two ways: by behaviour specified in sections 2 to 44 of the Acts or if the offence is committed under section 45.

This legal regulation is general, but in a certain respect also specific. There are other administrative crimes provided for by specific legal provisions.

General procedures for sanctioning petty offences against the environment

Section 51 of the Acts of both National Councils on Petty Offences provides that general regulations on administrative proceedings are applicable to petty offences, unless otherwise specified in these or other Acts. The fundamental principles of Czechoslovak administrative proceedings follow from Act No. 71 of 1967 Sb. (on Administrative Proceedings)—the Code of Administrative Procedure—when read with subsequent regulations and the Acts of both national Councils on Petty Offences.

The basic principle in administrative proceedings is that of legality: administrative organs must proceed in accordance with the law and other legal regulation; they are obliged to protect the interests of the state and of society, and the rights and interests of citizens and organisations; and they are obliged to require the consistent fulfilment of their obligations (section 3, paragraph 1, of the Code of Administrative Procedure). Their decisions must be made in accord with the principles of material (objective) truth and of the free assessment of evidence (section 3, paragraph 4). Administrative organs are obliged to handle the issue that is the object of the proceedings expeditiously, economically, and without unnecessary embarrassment of citizens and organisations (section 3, paragraph 3).

The organs competent to handle petty offences against the environment are, according to the Acts of both National Councils on Petty Offences, the local organs of state administration; namely, the district authorities and the communities (sections 52 and 53 of the Acts in connection with the provisions on the competence of communities and district authorities in relevant Acts).

In specified cases (section 58 of the Acts on Petty Offences), petty offences are investigated by the police: intentional interference with the right of game-keeping and with the exercise of the right of fishing. After investigation of the petty offence, the police either puts the case aside if there exists no suspicion of the offence or if it cannot be handled, refers the case to the competent organ, or reports to the administrative organ on the outcome of the investigation together with the evidence obtained.

For petty offences against the environment the 'principle of the official character' is exclusively valid. After the termination of the proceedings the administrative organ either refers the case to the prosecutor or police if it is evident that a criminal offence was committed, or to the administrative organ competent to handle a matter that is an administrative offence other than a

petty offence, or the proceedings are discontinued, or the accused is found guilty and the relevant sanction is imposed (provided it is not imposed pursuant to section 11, paragraph 3).

The accused can appeal against any decision on the petty offence (section 81, paragraph 1) and if the appeal is lodged in the specified time it cannot be eliminated (section 82). After exhaustion of ordinary legal remedies a person on whom a fine greater than 2000 koruny or a prohibition on activity of more than six months or forfeiture of a thing valued at more than 2000 koruny has been imposed can turn to the civil court and request that the decision be assessed according to civil proceedings.

A petty offence against the environment can also be handled by means of levying of a fine in so-called block proceedings, the essence of which involves reliable ascertainment of the facts and the willingness of the offender to pay a fine of up to 500 koruny (sections 13 and 84). Appeal is then impossible. Many less serious offences will be dealt with in this way. The so-called ordering proceedings (section 87), the essence of which is the issue of an order without the need for proceedings where the facts can be reliably ascertained, has a similar goal. Its sanction can be a fine of up to 200 koruny (section 13, paragraph 2) and the accused has the right to lodge an appeal (section 87, paragraph 4).

The effectiveness of sanctions imposed for petty offences against the environment—particularly in terms of altering the conduct of the offender and of obviating repeat offences—also influences the direct and legal compulsory execution of the sanctioning decision. Section 88 of the Acts enables the sale of certain possessions of the offender in proceedings carried out by the competent administrative organ according to the Code of Civil Procedure. Although there is no system of administrative justice as a special element of the judicial system in Czechoslovakia, there does exist a prosecutor's office, regulated by sections 14 to 19 of Act No. 60 of 1965 Sb. (on the Public Prosecutor). The prosecutor can, within the framework of the supervision of the consistent execution and observance of the laws and other legal regulations (among others, by the local organs of the state administration), interfere with the aforementioned proceedings so that after assessing the legality of procedures and decisions of such an organ he or she can lodge a protest. In doing this, the prosecutor can achieve the cancellation of an unlawful decision of the organ or, if this is not necessary, can point out the violation of a legal regulation and the causes of the violation and demand a remedy. Every citizen has the right to turn to the Prosecutor's Office, so the

Office is an important instrument for ensuring legality and the rights of citizens. Administrative law in the Czech and Slovak Federal Republic also regulates relations in the sphere of the environment, including sanctioning relations:

- on one hand, according to the individual components of the environment (in particular, water, air, farmland, mineral resources, forests and scattered verdure, nature, plants, animals living at large, and human health);
- on the other hand, according to the source of damage done to the environment (in particular, the management of wastes, and protection against noise, vibrations, and ionising and other radiation).

There is no uniform law on waste management. Some measures have been taken in relation to the water system. The draft Act on the Environment proceeds from the principle of deliberate management of natural resources, manifest, among other things, in the fact that, pursuant to section 29, those who pollute or damage the environment are economically disadvantaged by means of taxes, duties and other economic instruments. On the contrary, section 30 takes for granted the issue of special regulations economically advantaging those who exploit natural resources in harmony with the principle of sustainable development. Unfortunately, effective stimulation to the economy in natural resources and effective sanctions for violations in the exploitation of natural resources have as yet no legal basis in Czechoslovak law.

Water protection

Protection of the quantity and quality of water in the Czech and Slovak Federal Republic is regulated by the Water Act—Act No. 138 of 1974 Sb. (on Waters). The Act specifies obligations in relation to the care of water and makes provision for sanctions if these obligations are violated. Pursuant to section 47, paragraph 1, of the Act, the water system organs levy fines to the extent and under the conditions fixed by the Governments of both Republics if organisations violate the obligations fixed by the Act or the obligations fixed by the competent organ according to the Act or if those who use water in such a way that requires permission do so without this permission or do not observe the conditions of the permission. The water system organs also levy, under conditions fixed by the Governments of both Republics, fines on workers within organisations who are guilty of violating the its obligations, unless it is a matter of criminal offence. In the case of a worker within an

organisation, the maximum fine is treble the worker's average monthly earnings (section 47, paragraph 1, of the Water Act). The levying of a fine on an organisation has no impact on the criminal responsibility of its workers or on the responsibility of the organisation under the regulations on damages. If a fine is so levied on a worker within the organisation no fine can be levied on that worker under other regulations (section 47, paragraph 2, of the Water Act).

In the Czech Republic the system of water protection has been reorganised, such that the district authorities now have competence (Act of the Czech National Council No. 130 of 1974 Sb., on State Administration in the Water System, read with Acts of the Czech National Council Nos 49 of 1982 Sb. and 425 of 1990 Sb.). The district authorities decide in the first instance on the levying of a fine on the basis of the proposal of the Czech Inspectorate of Water Resources (section 4, paragraph 1, of Decree of the Ministry of Forestry and Water Resources of the Czech Republic No. 66 of 1987 Sb., on the Czech Inspectorate of Water Resources). This Inspectorate is the professional organ controlling water quality and water management (section 1, paragraph 1, of the Decree). It has a head office and individual inspectorates operating in fixed territorial units that are based on the natural distribution of waters. The Inspectorate is subordinate to the Ministry of the Environment of the Czech Republic.

In the Slovak Republic the Slovak Inspectorate of the Environment operates to directly impose sanctions (section 9, paragraph 1, of Act of the Slovak National Council No. 595 of 1990 Sb., on State Administration of the Environment). If this Inspectorate detects a violation of an obligation within one of its regional units it is competent in the first instance to levy a fine and its head office can decide on any appeal (section 2, paragraph 2, of the Act). In accordance with Act of the Slovak National Council No. 135 of 1974 Sb. (on State Administration of Water Resources), read with Act of the Slovak National Council No. 595 of 1990 Sb., in other cases of violation of obligations fixed by regulations governing the protection of waters a fine can also be imposed by the district office of the environment (section 5, paragraph 1, of the Act). If both the Inspectorate and the Office of the Environment wish to impose a fine and fail to agree on which one of them is most appropriate to do so, the Office of the Environment prevails (section 9, paragraph 3, of the Act). In the case of the procedure for levying a fine, the general regulations on administrative proceedings are valid unless the Act specifies otherwise (section 9, paragraph 4). Fines levied by the Inspectorate become the income of the state Fund of Water Resources (section 9, paragraph 5, of the Act).

In the Czech Republic the conditions for the levying of fines and their amounts are fixed by Decree No. 26 of 1975 Sb. (on Fines for the Violation of Obligations in Relation to the Water System). In the Slovak Republic, Decree No. 31 of 1975 Sb. (on Fines for the Violation of Obligations in Relation to the Water System) applies. Fines are graduated according to the character and gravity of the infringement, within the range of 500 000 to 1 000 000 koruny (sections 2 to 7 of the Decree). In the case of employees fined for a violation by their employer's organisation the maximum fine is treble their average monthly earnings, taking particular account of the extent of guilt and the damage done (section 9 of both the Czech and Slovak Decrees).

Pursuant to section 23, paragraph 2, of Act of the Czech National Council No. 130 of 1974 Sb. (on State Administration in the Water System) and section 9 of Decree of the Ministry of Forestry and Water Resources of the Czech Republic No. 99 of 1976 Sb. (on the Water Guard), the Water Guard can also levy fines in block proceedings under conditions and in accordance with the procedures fixed by special regulations. The Water Guard is appointed by the water system organs and has similar competence in the Slovak Republic, pursuant to Decree of the Ministry of Forestry and Water Resources of the Slovak Republic No. 158 of 1976 Sb. (on the Water Guard).

Legal regulation of the protection of waters proceeds also from the concept of economical and reasonable exploitation of surface water and groundwater (section 4 of the Water Act) and stimulates users of water to use the resource economically. Decree of the Government of the Czech and Slovak Federal Republic No. 35 of 1979 Sb. (on Payments in the Water System), read with Decree of the Government of the Czech and Slovak Federal Republic No. 91 of 1988 Sb., fixes payments for the use of water from streams and for the use of groundwater (sections 1 to 5), as well as payments for the discharge of waste water into surface waters (sections 8 to 11).⁴

Air protection

The fundamental obligations of citizens in relation to air pollution are prescribed by the Air Act—Act of the Federal Assembly No. 309 of 1991 Sb. (on the Protection of the Air against Pollutants), which replaces the obsolete Act No. 35 of 1967 Sb. The new Act, among other things, establishes emission limits recommended by the World Health Organisation and introduces a system for smog warning and regulation. It encourages operators that cause air pollution to minimise this menace by obliging them to pay air

pollution taxes according to the quantity and type of emissions. The amount of the taxes, their calculation and method of payment are set down by Acts of both the Czech National Council and the Slovak National Council. At the time of writing only the draft of the Act of the Czech National Council (on State Administration of Air Protection) had been adopted. According to the draft Act the organ competent to impose taxes is the Czech Technical Inspectorate of Air Protection and the taxes will become the income of the Fund for Air Protection.

The Air Act provides for two types of sanction: fines and orders to cease operations. Operators of a pollution-creating business, and the producers and importers of pollution-creating equipment, can be fined from 5000 to 10 000 000 koruny, depending on the size of the operation and the character of the pollution (section 18, paragraphs 1 to 8, of the Act). If a violation is repeated within a fixed time or the operator fails to fulfil within a fixed time the directives issued by the organ of air protection, another fine can be levied, up to double the aforementioned amounts, or the operation can be ordered to cease or limit its activity (section 18, paragraph 7). Fines levied by the organs of the community become the income of the community; at least, this is what is envisaged in the draft Act of the Czech National Council (on State Administration of Air Protection).

Pursuant to section 18, paragraph 8, of the Air Act, a fine can be levied within one year of detection of a violation and no longer than three years from the day of detection. In fixing the amount of the fine, the organ of air protection takes account of the quantity and nature of the emission and the gravity of the violation of obligations.

The organs of air protection also have the right to intervene in the operations of a polluter: they can issue an order to cease or limit operations if there is a serious and imminent threat to air quality, if damage has already been done, if emission limits have been exceeded, and if instructions issued by the air protection agencies have not been followed (section 18, paragraph 7, and section 12, paragraph 2, of the Air Act; section 4, paragraph 2, of the draft Act of the Czech National Council, on State Administration of Air Protection, and the analogous provision in the forthcoming Act of the Slovak National Council).

If the operator of an enterprise causing a small amount of pollution fails to fulfil the obligations imposed by the Air Act the organ of the community can order the cessation or limitation of operations (section 7, paragraph 2, of the draft Act of the Czech National Council, on State Administration of Air

Protection, and the analogous provision in the forthcoming Act of the Slovak National Council).

The character of the organs of air protection and their sanctioning competency differ between the two Republics. In the Czech Republic, pursuant to section 4, paragraph 2, of the draft Act of the Czech National Council (on State Administration of Air Protection) the Czech Technical Inspectorate of Air Protection should levy on the operators of pollution-creating enterprises, and on producers and importers of mobile sources, fines for violations of obligations fixed in the Air Act, unless such fines are levied by the organ of the community. In the first instance there is the District Inspectorate; appeals can be lodged with the Head Office of the Inspectorate.

In the Slovak Republic, pursuant to section 9, paragraph 1, of Act of the Slovak National Council No. 595 of 1990 Sb. (on State Administration of the Environment) fines are levied by the Slovak Inspectorate of the Environment in cases of violations of obligations fixed by a generally binding regulation. (In the first instance the District Inspectorate decides; appeals can be lodged with the Head Office of the Inspectorate). In other cases the district or local office of the environment decides on the levying of the fine. The concurrence of the Inspectorate and the district office is solved by section 9, paragraph 3, of the Act. The federal Air Act takes for granted that the Acts of both National Councils fix the competence of the organs of air protection. One can expect in the Slovak Republic more detailed regulation, going beyond the framework of the general Act on State Administration of the Environment.⁵

Protection of nature, including plants and animals living at large

The protection of nature, including plants and animals living at large, is at present regulated in the Czech and Slovak Federal Republic in an incomplete and exceedingly scattered manner. The prime instruments are the obsolete Act of the Czech National Council No. 40 of 1956 Sb. (on State Protection of Nature), read with later regulations, and an analogous Act valid for the territory of Slovakia—No. 1 of 1955 Sb. There are a number of more detailed legal norms, including the following:

- Decree No. 80 of 1968 Sb. (on the Protection of Animals Living at Large);
- Decree No. 142 of 1980 Sb. (on the Protection of Trees Growing Outside the Forest);
- Decree No. 54 of 1958 U1 (Official Gazette), specifying protected species of plants and the conditions of their protection;

- Decree No. 228 of 1959 U1 (on Record-keeping for Protected Parts of Nature and on Compensation for Property Loss Incurred Through that Protection);
- Decree No. 131 of 1957 U1 (on Voluntary Workers of the State Protection of Nature);
- Act No. 23 of 1962 Sb. (on Game-keeping).

On one hand, these norms express the general obligation to observe specified conditions for the protection of nature and, on the other hand, they explicitly prohibit behaviours that endanger the natural environment or the state of the protected parts of nature, that violate the principles of protection of selected plant species, or that interfere with the natural development of animals living at large or with their environment. They also specify obligations in relation to the protection of bees, fish and game when using pesticides (Decrees No. 35 of 1978 Sb. and No. 130 of 1982 Sb.).

Provision is made for sanctions in the Czech Republic by Act of the Czech National Council No. 65 of 1986 Sb., completing Act No. 40 of 1956 Sb. (on State Protection of Nature), and in the Slovak Republic by Act of the Slovak National Council No. 73 of 1986 Sb., completing Act of the Slovak National Council No. 1 of 1955 Sb. (on State Protection of Nature).

Pursuant to section 17a of the Czech Act on State Protection of Nature (and section 19a of the Slovak Act of the same name), a petty offence against nature can be sanctioned with a reprimand or a fine, which may amount to 1000 or 5000 koruny depending on the nature of the offence. Such behaviours as damaging parts of nature in protected areas, altering natural formations and protected natural monuments, illicit breeding of protected animals, and destroying protected plants attract the lesser fines; destroying parts of nature in protected territories, damaging and felling trees growing at large, and killing, hunting or illicitly exporting protected animals attract the greater fines.

Section 176 of the Czech Act and section 196 of the Slovak Act provide that fines of up to 100 000 koruny can be imposed on an organisation (legal person) for the lesser offences and up to 250 000 koruny for the greater offences. Failure to comply with a rehabilitation order can lead to the doubling of a fine. The gravity of the offence and the damage done or impending determines the amount of the fine within the two classes of offence. Two classes of offence also apply in the case of natural persons.

In the Czech Republic fines are imposed by the district authorities; in the Slovak Republic they are imposed by the District Offices of the Environment (see section 33 of Act of the Czech National Council No. 424 of 1990 Sb., on District Authorities, and section 5, paragraph 1, of Act of the Slovak National Council No. 595 of 1990 Sb., on State Administration of the Environment).

At the time of writing this report new Acts of both National Councils on the protection of nature were being prepared. The authors were permitted to examine the Act of the Czech National Council. The main principles, including the sanctioning strategy, are as follows:

- The objectives of the Act are to contribute to maintaining and restoring natural equilibrium and to cooperate in the rational and considerate management of natural resources, thus aiding the protection and enhancement of the environment.
- The Act specifies generally the targets and tasks of the protection of nature and the basic ecological concepts, particularly the concept of the territorial system of ecological stability.
- The Act specifies the organs with state administrative responsibility for the protection of nature—the Ministry of the Environment in the Czech Republic as the central authority, territorially competent local authorities with regional responsibilities, special regional agencies responsible for protected areas and national parks, the Czech Institute of the Protection of Nature as the organ of state administration (particularly in relation to national natural reserves), and community organisations.
- The Act sets down principles for the protection of trees and shrubs growing outside forests.
- The Act sets down procedures and conditions for proclamation of specially protected areas (particularly national parks and national reserves) and specially protected wild plants and animals.
- The Act establishes basic limitations and conditions for the expropriation of immovables and for the forced transfer of immovables for the purpose of protecting nature.
- The Act establishes the possibility of regulation of access to the landscape and makes it obligatory to conduct an environmental impact assessment for any proposal to invest in the landscape.
- The Act makes provision for agreements on the improvement of the natural environment between state authorities and the owners or users of the lands, and for agreements on the means of protection and the provision of contributions to cover expenses.

- The Act determines the basic forms of direct participation by communities and citizens in the protection of nature.
- For the control of the fulfilment of obligations, the Act assumes the operation of the so-called Guard of Nature, the members of which will be able to levy in block proceedings fines for petty offences and, in the case of imminent endangerment of protected interests, to order the cessation of the disturbing activity. (Such matters will, of course, be finally decided within 15 days by the competent organ of state protection of nature.)
- The Act assumes the validity of general regulations for administrative proceedings. Any specific requirements needed for environmental protection will be provided by the Act.
- The Act acknowledges the need for international cooperation in the protection of nature.
- The Act prescribes the general obligation to rectify authorised interference with nature, primarily by means of restitution to the original condition.
- The Act provides that natural persons committing petty offences can be fined up to 3000, 5000 and 10 000 koruny, depending on the gravity of the unlawful behaviour. For legal persons fines can be up to 250 000 or 500 000 koruny, depending on gravity. Fines can be doubled under specified conditions.⁶

Protection of forests

The basic obligations in the sector of forestry are set down by Act No. 61 of 1977 Sb. (on Forests), which deals primarily with keeping records of the forested lands available and their protection in territorial planning, and documenting construction, industrial activity, design and building activity, and geological and hydrogeological exploration (sections 3 and 5 to 8). It also sets down the general obligation of all people ensure that no damage is done to forested lands and the objects and facilities on them: if damage is done the perpetrator is obliged to restore the affected place to its original state or make good the loss sustained, or both (section 10, paragraphs 1 and 2). Obligations relating to the felling and transport of wood, use of the forest by citizens, and protection of the forest are set down by Act of the Czech National Council No. 96 of 1977 Sb. (on Management of Forests and State Administration of Forestry) and Act of the Slovak National Council No. 100 of 1970 Sb. (on Management of Forests and State Administration of Forestry).

All three Acts envisage fines as the principal form of sanction, for natural and legal persons. Pursuant to section 26 of the Act on Forests and section 34, paragraphs 1 and 2, of the identical Acts of both National

Councils, district authorities can fine an organisation up to 500 000 koruny for failure to fulfil obligations in forestry, for carrying out prohibited activities, and for failure to fulfil obligations for the protection of forests. Such a fine can be doubled if the organisation repeats the violation within a specified time or if it violates a decision issued.

Paragraph 3 of section 34 provides that a fine can also be levied on a worker within the organisation if that worker is guilty of violating an obligation (unless it is a criminal offence); the fine can be up to treble the worker's average monthly earnings. Fines levied in such a way become the income of the district authority (section 34, paragraph 7) in the Slovak Republic. Pursuant to section 3 of Act of the Slovak National Council No. 131 of 1991 Sb. (on the State Fund for the Improvement of the Forests of the Slovak Republic) fines levied on legal persons become the income of the Fund.

Fines can also be levied on citizens in block proceedings for petty offences under the conditions of Act of the Czech National Council No. 200 of 1991 Sb. (on Petty Offences) and Act of the Slovak National Council No. 372 of 1990 Sb. (on Petty Offences), read with Act of the Slovak National Council No. 524 of 1990 Sb., by the Forest Guard established by Decree of the Ministry of Forestry and Water Resources of the Czech Republic No. 98 of 1977 Sb. (on the Forest Guard). The Forest Guard are also inspectors of the Czech Inspectorate of the Environment. In the Slovak Republic the Forest Guard operates according to Decree of the Ministry of Forestry and Water Resources No. 102 of 1977 Sb. (on the Water Guard) under conditions analogous to those applying in the Czech Republic.

The Czech Inspectorate of the Environment, established by Act of the Czech National Council No. 182 of 1991 Sb. (on the Czech Inspectorate of the Environment and its Operation in the Protection of Forests), has recently been entrusted with sanctioning competence in relation to forest protection. The Slovak Republic operates a similar inspectorate, but it has not yet been provided with power in relation to forest protection.

The Czech Inspectorate of the Environment supervises observance of the provisions of legal regulations and decisions concerning the functions of forests as a part of the environment (section 2 of the Act). In the case of impending damage it can order the limitation and, if necessary, the cessation of production or some other activity until the cause of the impending damage is removed (section 3, paragraph 4). The Inspectorate can also levy fines of

up to 1 000 000 koruny on legal or natural persons who by their activity endanger or damage the forest environment. The amount of such fines must reflect the gravity, type, duration and consequences of the unlawful behaviour. In cases of a repeat offence the fine can be doubled.

The Inspectorate thus operates side by side with the state forestry agency. For the forestry agency the primary concern is protection of forests in the interest of their economic potential; for the Inspectorate the ecological aspects should be the primary concern. Fines levied by the Inspectorate become the income of the state budget. The Inspectorate is divided into a head office and regional inspectorates (section 1, paragraph 2) and its work is carried out by inspectors (section 7, paragraph 1).

Protection of farmland as one of the main components of the environment is administered by Act No. 53 of 1966 Sb. (on the Protection of the Farmland Available), promulgated under No. 124 of 1976 Sb., read with Act of the Czech National Council No. 137 of 1982 Sb. The Act sets down the obligations of individuals and the general principles of farmland protection—to damage as little as possible productive land, to protect the soil, to exclude from production only essential areas, to use the smallest possible area for building purposes, and so on (section 7)—and then makes specific provision for different human activities (territorial planning, extracting activity, construction, mining, building and industrial activity, and geological and hydrogeological exploration—sections 8 to 12). If the farmland must be taken out of agricultural production, it is the organ of protection of the farmland available that decides on this under fixed conditions and in accordance with fixed procedures (section 14). The Act further specifies economic instruments to encourage minimal exclusion of farmland from agricultural production.

Organisations that violate explicit obligations can be fined up to 500 000 koruny (section 27, paragraph 1). Violations include unauthorised occupation of farmland, unauthorised changes to the cultivation regime, insufficient cultivation or exploitation, and failure to fulfil obligations imposed by decision of the organ of the protection of the farmland available (section 27, paragraph 2). Sanctions are thus directed primarily at appropriate economic exploitation of farmland; of course, the ecological consequences of these measures are not to be ignored!

Fines can also be levied on workers within an organisation who are found guilty of violating their obligations: up to treble their average monthly earnings (section 27, paragraph 3). The levying of the fine does not affect the

contingent criminal liability of the workers or the responsibility of the organisation and the workers according to regulations on damages. In both Republics it is the district authorities that have power to impose the fines.

Mining

Fundamental regulation of the exploitation of mineral resources is provided by Act No. 44 of 1988 Sb. (on the Protection and Exploitation of Mineral Resources)—the Mining Act. In comparison with the previous Act, this Act takes greater account of the ecological aspects of the extraction of raw materials, by providing, among other things, that extraction operations should limit unfavourable impacts on the environment (section 23, paragraph 2). The extent of ecological damage in mining localities, particularly in North Bohemia, makes it very obvious that this requirement is generally ignored.

Pursuant to section 44 of Act of the Czech National Council No. 61 of 1988 Sb. (on Mining Activity, Explosives, and State Mining Administration) state mining authorities can fine an organisation up to 100 000 koruny; the fine can be doubled if restitution is not carried out in the specified time. A worker within an organisation can be fined up to 5000 koruny or in block proceedings up to 200 koruny. These sanctions are imposed solely for the purpose ensuring the safety of the mining activity—ecological goals are entirely passed over.⁷

In the Slovak Republic, in addition to the federal Mining Act, Act of the Slovak National Council No. 51 of 1988 Sb. (on Mining Activity, Explosives, and State Mining Administration) proceeds from the same principle.

Protection of human health

The health of the environment and its components (air, water and soil) is a prerequisite for a healthy population. The general obligations of individual subjects in this regard are expressed by Act No. 20 of 1966 Sb. (on the Care of the Health of the People), which no longer is sufficient for present-day requirements but is being amended in both Republics. The basic hygienic requirements for water, soil, air, land and residential areas are fixed by Decree of the Ministry of Health No. 45 of 1966 Sb. (on the Creation and Protection of Healthy Conditions of Life).

The sanctioning strategy relies on the Act on the Care of the Health of the People, Act of the Czech National Council No. 36 of 1975 Sb. (on Fines for the Violation of Legal Regulations on the Creation and Protection of Healthy

Conditions of Life), read with Act No. 137 of 1982 Sb., and the analogous Act of the Slovak National Council No. 53 of 1975 Sb. The sanctioning measures so fixed are applicable when the impairment or endangerment of the environment shows itself to have an unfavourable impact on human health. Fines can be imposed on organisations (section 2, paragraph 1, of the Acts of both National Councils) and on workers within an organisation, unless it is a matter of a criminal offence (paragraph 2). An organisation can be fined up to 100 000 koruny and a worker up to treble his or her average monthly earnings. (If an endangering act is committed by an individual outside the structure of an employing organisation a sanction can be imposed according to general regulations on petty offences in the sector of the protection of the environment. In fixing the amount of the fine account is taken particularly of the extent of the endangerment to healthy conditions of life, the extent of the harmful consequences, and whether such an offence has previously been committed by the perpetrator. A time limit for the removal of the source of endangerment is also fixed; failure to comply with it can lead to the imposition of a further fine, up to double the amount of the fine already levied (section 3, paragraphs 1 and 2). The district authorities are empowered to levy the fines (section 4, paragraph 1).

Management of wastes

The limitation of wastes, their harmless disposal, the maximal economic exploitation of secondary raw materials, and the sanctioning strategy for violation of obligations in this regard are set down in Act of the Federal Assembly No. 238 of 1991 Sb. (on Wastes). This Act does away with the incompleteness and deficiencies of previous legislation, which was inadequate in terms of environmental protection. It also accepts to the greatest extent possible the legal regulation of European communities and anticipates the ratification by the Czech and Slovak Federal Republic of the Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal (Basel 1989). The importance of this progressive norm is reinforced by the fact that the annual volume of solid wastes in the Czech and Slovak Federal Republic exceeds 160 million tonnes. The Act clarifies the rights and obligations of state authorities as well as legal and natural persons (section 1, paragraph 1). Unless special regulations fix otherwise, the Act is also applicable to specific types of waste (section 2, paragraph 2) such as waste water, air-polluting substances, wastes of precious metals and radioactive wastes.

Besides direct sanctioning, the Act also stimulates a reduction in waste generation by imposing taxes on the generators of the waste (section 10). It proceeds from the concept that any person or entity wishing to deposit wastes shall pay the operator of the waste-management facilities for the service rendered as well as paying the aforementioned tax. The monies gained become the income of the relevant Funds of the Environment.

The levying of fines is the principal form of sanction for both legal and natural persons (section 11). Fines are graded and can be classified into four groups:

- A fine of 10 000 to 300 000 koruny can be imposed for behaviours explicitly enumerated in section 11, paragraph 1, of the Act—for example, failure to define and carry out a program of waste management, failure to store waste in a safe, secure place, and failure to keep adequate records.
- A fine of 20 000 to 500 000 koruny can be imposed for behaviours explicitly enumerated in section 11, paragraph 2—refusal to allow authorities access to the waste, failure to present documentation or presentation of fake or incomplete documentation, and collecting, purchasing, treating or disposing of wastes without appropriate permission.
- A fine of 100 000 to 10 000 000 koruny can be imposed for behaviours explicitly enumerated in section 11, paragraph 3—violation of obligations relating to the import and export of wastes, failure to treat hazardous wastes according to specific regulations, failure to fulfil reporting obligations, and transportation of hazardous wastes contrary to or without the appropriate permission.
- A fine of 10 000 to 500 000 koruny can be levied on persons who violate the obligation to protect the health of the population and the environment, to create guidelines for the exploitation and disposal of waters, and to deposit wastes and to render them harmless only in places meant for this purpose (section 11, paragraph 4, and section 3, paragraphs 2 and 3).

A fine can be levied within one year from the day when the competent state authority learnt of the violation and not later than three years from the day the violation occurred (section 12, paragraph 1). The authority levying the fine specifies the conditions and the time limit for remedying the situation (section 12, paragraph 2). In fixing the amount of the fine account is taken particularly of the gravity of the endangerment of the health of the people and the environment or of the extent of impairment of that health, or both (section 12, paragraph 3). If within one year of the decision to levy a fine the

person again violates the same obligation a new fine is levied, up to double the amount specified by the Act for a single violation (section 12, paragraph 4).

A further sanction can be imposed on the originator of the waste-creating activity and on the operator of waste-disposal facilities. The appropriate state authority can prohibit the activity of a waste creator if the creator fails to fulfil explicitly enumerated obligations and a grave ecological detriment could result (section 9, paragraph 1). Similarly, if the operator of waste-disposal facilities fails to fulfil the obligations set down by the Act or by procedural regulation and if a grave ecological detriment could occur the competent state authority can prohibit the operation of the facilities (section 9, paragraph 2).

To administer the Act on Wastes the Czech National Council adopted the Act No. 311 of 1991 Sb. (on State Administration in the Management of Wastes), which establishes the division of competence among individual state authorities. Fines are levied on legal and natural persons found to have violated explicitly enumerated obligations (section 3, paragraph 2, of the Act of the Czech National Council and sections 11 and 12 of the Act on Wastes) by the Czech Inspectorate of the Environment, then by the district authority (section 7, paragraph 6, and section 4, paragraph 4, of the Act on Wastes). In specified cases fines of 10 000 to 300 000 koruny can also be levied by the organs of the community (section 9, paragraph 2, and section 11, paragraph 1, of the Act on Wastes). Appeals are provided (section 12, paragraph 2). These fines are in principle the income of the community or the district authority (section 12, paragraphs 4 and 5). Fifty per cent of the fines levied by the Inspectorate are the income of the state budget of the Republic and 50 per cent are the income of the community where the violation occurred (section 12, paragraph 3).⁸

Noise, vibrations, and ionising and other radiation

Noise, vibrations, and ionising and other radiation can affect the environment to such an extent that they endanger human health.

Protection against effects of noise and vibrations that endanger human health or reduce physical or mental ability is afforded by Decree of the Ministry of Health of the Czech Republic No. 13 of 1977 Sb. (on the Protection of Health Against the Unfavourable Effects of Noise and Vibrations) and by the analogous Decree of the Ministry of Health of the Slovak Republic, No. 14 of 1977 Sb. Both Decrees set down the general obligations of legal and natural persons in the reduction of noise and

vibrations (section 2) and then the special obligations of producer, supplier and import organisations (section 3). The Decree then makes provision for sanctions against noise (sections 5 to 12) and vibrations (section 15).

Sanctions for the violation of obligations fixed by the Decrees and of obligations imposed on their basis are set down by Act of the Czech National Council No. 36 of 1970 Sb. (on Fines for the Violation of Legal Regulations on the Formation and Protection of the Healthy Conditions of Life), read with later regulations, and the analogous Act of the Slovak National Council, No. 53 of 1975 Sb. Fines are levied both on organisations (section 2, paragraph 1, of the Acts) and on workers within organisations who cause the violation (section 2, paragraph 2). Fines imposed on an organisation can be up to 100 000 koruny and on a worker up to treble the amount of his or her average monthly earnings. Account is taken particularly of the extent of endangerment, the extent of harmful consequences, and whether the organisation has previously endangered the healthy conditions of life (section 3, paragraph 1). Fines are levied by district authorities (section 4, paragraph 1).

Protection against ionising radiation is afforded by Decree of the Ministry of Health of the Czech Republic No. 59 of 1970 Sb. (on the Protection of Health Against Ionising Radiation) and by the analogous Decree of the same ministry of the Slovak Republic, No. 65 of 1972 Sb. The protection is framed with regard to the requirements of the protection of human health and the Decrees specify obligations for organisations and workers using sources of radiation (sections 4 and 5), requirements for equipment and the operation of workplaces using sources of radiation (section 8), requirements for the transportation and removal of sources of radiation (section 13), and conditions for the issue of licences for producing, taking and using sources of radiation (sections 14 to 17) and for importing them (section 19). The Decrees provide for the special regulation of the Act on Wastes in the case of removal of radioactive materials and wastes (section 13).

Fines can be levied in accordance with the conditions specified in Acts of both National Councils, No. 36 of 1975 Sb. and No. 53 of 1975 Sb. In addition, the authorities administering hygienic services supervise compliance with measures fixed for protection against ionising radiation and can issue binding instructions for the removal of ascertained defects, including prohibition of activity and the order to render a source of radiation or radioactive waste harmless (section 20, paragraph 1, of the Decrees).

Obligations in relation to nuclear safety are established by Decree of the Czechoslovak Commission for Atomic Energy No. 28 of 1977 Sb. (on Record-keeping and Control of Nuclear Materials) and Act No. 28 of 1984 Sb. (on Strict Supervision of the Safety of Nuclear Facilities). The latter Act explicitly seeks to prevent the endangering of the environment (section 1). State supervision of nuclear safety is the responsibility of the Czechoslovak Commission for Atomic Energy (section 3, paragraph 1) which can in specified circumstances impose sanctions. It can impose on an organisation fines of up to 1 000 000 koruny for violations cited in section 17, paragraph 1, of the Act: endangering or impairing safety through failure to fulfil the conditions of the consent given by the Commission; failure to take timely measures to remove ascertained shortcomings and defects; or violation of the procedure for putting nuclear facilities into operation, the approved emission limits or the generally binding regulations. Pursuant to section 17, paragraph 1, of the Act, an organisation can be fined up to 100 000 koruny, for example, for concealing information or for failure to report important information. Workers responsible within the framework of the organisation (if it is not a criminal matter) can be fined up to 10 000 koruny for the behaviours listed in section 17, paragraph 2: if the safety of the facilities is endangered or impaired because they violated specific regulations, if they conceal important information, or if they do not cooperate with the employees of the Commission. Pursuant to section 13, the Chairman of the Commission (the Chief Inspector) can, in addition, take other measures, including the reduction or cessation of the operations of the nuclear facility. Special obligations in relation to the manipulation of radioactive wastes are set down by Decree of the Czechoslovak Commission for Atomic Energy No. 67 of 1987 Sb. (on Ensuring Nuclear Safety in the Manipulation of Radioactive Wastes), which is *lex specialis* to the Act on Wastes.

The legal system also has regard to protection of the environment and human health against other kinds of radiation by specifying obligations of individuals. This is usually a matter of lesser legal force (decrees) dealing with the unfavourable public health effects of electromagnetic radiation and the limitation of radiation from radon and radionuclides.

Building activity

Interference with the natural state and development of the land by means of building and other like activity can pose a threat to the environment. The Building Act—Act of the Federal Assembly No. 50 of 1976 Sb. (on Land Planning and the Building Code)—read with Act of the Czech National

Council No. 137 of 1982 Sb. and Act of the Slovak National Council No. 139 of 1982 Sb., regulates land planning by establishing prerequisites to ensure the harmony of all natural, historic and cultural values, particularly with regard to care of the environment and protection of its main components, soil, water and the air (section 1, paragraph 2, of the Building Act).

Land planning is conceived as activity that deals comprehensively with the exploitation of land, specifies the principles of its organisation, and coordinates construction and other activities influencing the development of the land (section 1, paragraph 1). It is possible to site buildings, to change the exploitation of the land, and to protect important interests in the land only on the basis of a decision of the Building Office (section 32), which considers land-use proposals principally from the point of view of care of the environment (section 37, paragraph 2). Having made a decision, the Office then specifies the land to be used for the proposed purpose and fixes conditions to safeguard the interests of society and the environment (section 39). In considering construction proposals, the Office investigates, among other things, whether the submitted plans meet the requirements that will safeguard the interests of society and the environment (section 62, paragraph 1). In issuing a building licence the Office fixes binding conditions for the construction and use of the building, ensuring, among other things, that any negative environmental effects of the building and its use are minimised (section 66, paragraph 1). The completed building can be used only after a 'decision of approval' has been issued (section 76, paragraph 1); before issuing such an approval the Building Office must determine whether the actual construction of the building or its use will endanger the interests of society and the environment (section 81, paragraph 1).

The interests of society and the environment are thus safeguarded in two ways: by land planning and by the building-approval procedures. Violations of obligations following from the Building Act are subject to sanctions—fines levied on both natural and legal persons. The fines for natural persons who commit petty offences are determined according to the nature of the violation:

- A fine of up to 2000 koruny will be levied on a person who carries out land adaptations, works and facilities without the permission of the Building Office or contrary to that permission (section 105, paragraph 1).
- A fine of up to 5000 koruny will be levied on a person who alters a building without a licence or uses a building contrary to the decision of approval or the building licence (section 105, paragraph 2).

- A fine of up to 10 000 koruny will be levied on a person who constructs a building without a building licence or contrary to the licence or uses a building without the decision of approval (section 105, paragraph 3).
- A fine of up to 200 000 koruny will be levied on a person who constructs a building without a building licence in localities enjoying special ecological protection (section 105, paragraph 4).

Fines levied on legal persons are also determined according to the nature of the violation:

- A fine of up to 200 000 koruny will be levied on an organisation that carries out adaptations, works and facilities without permission (section 106, paragraph 1).
- A fine of up to 500 000 koruny will be levied on an organisation that carries out a change of construction without or contrary to a building licence (section 106, paragraph 2).
- A fine of up to 1 000 000 koruny will be levied on an organisation that constructs a building without or contrary to a building licence or uses a building without or contrary to a decision of approval (section 106, paragraph 3).

A fine should be levied within one year of the day that the authority competent to levy the fine learnt that the organisation had violated or failed to fulfil its obligation and, at the latest, within three years of the day when the violation or the non-fulfilment of the obligation occurred (section 107, paragraph 1). Fines become the income of the state budget of the federation or of the Republics, according to the province of the administrative authority that levied the fine.

Protection of the individual components of the environment is also ensured by the provisions of section 126, paragraph 1, of the Building Act. Pursuant to it, the Building Office decides questions concerning components of the environment only with the consent of the state authority operating within that component; the authority can apply conditions to its consent, in accordance with special legal regulations.

The organs levying fines are the building offices: in both Republics the district authorities (section 33, paragraph 1, of the Act of the Czech National Council on District Authorities and section 5, paragraph of the Act of the Slovak National Council on State Administration of the Environment).

The impacts of building activity on the environment are at present much discussed in the Czech and Slovak Federal Republic. The Ministry of the

Environment of the Czech Republic has developed a draft Bill on the evaluation of the impact of construction and planned activities on the environment, which will be submitted to the Czech National Council. An analogous Bill can be expected for the Slovak Republic. It is possible to assume that the adoption of the Bills will influence the sanctioning strategy by tightening up the imposed sanctions and applying them to a greater range of behaviours impairing the environment.

2.2 Specific criminal law provisions regarding environmental protection

The protection of the environment by means of criminal law (principally through the imposition of specified penalties by the criminal courts) was explicitly regulated for the first time by Act of the Federal Assembly No. 159 of 1989 Sb., which changes and completes the Criminal Law, the Act on Offences and the Code of Criminal Procedure. Until 1989 endangering or impairing the environment could be prosecuted within the framework of behaviours of an ecological nature fulfilling the facts of other criminal offences.

Act No. 159 of 1989 Sb. established endangering of the environment as a criminal offence pursuant to sections 181a and 181b of the Criminal Code. Section 181a, paragraph 1, provides that a person who seriously endangers the environment by violating special regulations on the protection of animals and plants or the manipulation of nuclear, radioactive, toxic or dangerous biological materials can be punished with imprisonment for up to three years, with the obligation to take remedial action, or with a prohibition on the harmful activity. If the detriment to the environment is significant a prison term of from three to eight years can be imposed (section 181a, paragraph 3). The endangerment under this provision must be intentional.

A person who seriously endangers the environment through negligence can be punished with imprisonment for up to one year, with the obligation to take remedial action, with a prohibition on the harmful activity, or with a fine (section 181b, paragraph 1). An offender can be punished with imprisonment for up to three years, with the obligation to take remedial action or with a prohibition on the harmful activity if the endangerment results from violating an important obligation arising from his or her occupation, position or function or an obligation imposed according to the law, or has caused detriment to the environment (section 181b, paragraph 2). Significant detriment to the environment is punishable by imprisonment for between one year and five years (section 181b, paragraph 3).

The subject of the criminal offence

According to Czechoslovak Criminal Code, a person who at the time of perpetration of a criminal act has attained 16 years of age can be criminally liable (section 11).⁹ This seemingly commonplace statement confirms the principle that nobody can be responsible for somebody else's guilt. Czechoslovak Criminal Code is thus based on the principle of individual responsibility. It makes no provision for collective or corporate responsibility. In the case of a legal person, the natural person who acted on its behalf is criminally responsible.

Besides age requirements, the Criminal Code makes sanity a prerequisite of criminal liability: a person who, because of a mental derangement at the time of perpetration of an act, could not distinguish the act's dangerousness for society or control his or her behaviour and is thus insane is not criminally responsible for the act (section 12, paragraph 1).

These general provisions form the principles for the application of concrete provisions to ecological crime. In addition to the criminal liability of the offender, another condition must be met: whether the offender endangered the environment by violating an important obligation arising from his or her occupation, position or function or an obligation imposed according to the law (section 181b, as discussed). The Criminal Code does not directly explain such an obligation and its importance; in practice, it will be understood as an obligation imposed not only by law but also by other generally binding regulations and as a concrete order issued on the basis of the law and introduced by it. (In the case of environmental protection, such violations of obligations by natural persons can thus establish responsibility for an administrative petty offence or another administrative crime, or, in the formal and material respect, they can establish criminal liability.) Of importance, then, is only responsibility related to the environment, violation of which means to increase the risk (danger) to the environment; that is, its endangering or impairment or damage to one of its components.

Guilt (subjective aspect of the criminal offence)

The form of guilt leads to the division of the facts of the criminal offence of the endangering of the environment into two provisions: sections 181a and 181b of the Criminal Code.

In the case of section 181a intention is required; that is, that the offender wanted, in the way stated in the Act, to infringe upon or endanger the interest protected by the Act (direct intention) or that the offender knew that he or she

could cause such infringement or endangerment and agreed to do so (section 4 of the Criminal Code: 'contingent intention'). In the case of section 181b, negligence arises when the offender either knows that he or she can, in the way stated in the Act, infringe upon or endanger the interest protected by the Act but is unjustifiably confident that such infringement or endangerment will not result (section 5 of the Criminal Code: 'conscious negligence'), or does not know that the infringement or endangerment will result, although he or she should or could know, taking into account the circumstances and the offender's personal situation (section 5 of the Criminal Code: 'unconscious negligence').

Investigation and proof of guilt will be exacting. Proof of the subjective relation of the offender to the endangering of the environment or to the specified detriment will be one of the obstacles that can cause the minimum sanction to be applied within the criminal law.

Other characteristic features

In order to be criminally responsible pursuant to sections 181a and 181b of the Criminal Code an offender's behaviour must objectively consist in the endangering the environment. The Criminal Code has accepted, in the case of intentional damage or threat to the environment, the concept of liability for the mere exposure of the environment to danger of being damaged and, in the case of negligent behaviour, of causing the danger. This then is an endangering offence. The concept of the environment must therefore be interpreted broadly, to include practically all its typical components—water, air, soil, forest, plants, animals, nature in general. It can be expected that in the long run attitudes towards this concept will be clarified by supreme courts.

Another condition is that the endangering of the environment was caused by violating regulations on the protection of the environment or regulations on the management of natural resources. The Criminal Code is not explicit about these regulations, nor does it specify their legal force. The regulations that will apply in practice can be illustrated by referring to the regulations of administrative law, which establish the general and specific obligations of natural persons in relation to the protection of the environment and the management of natural resources and provide for sanctions. Of course, if the endangerment or impairment is grave and also fulfils the formal features of the facts of a criminal offence pursuant to sections 181a and 181b of the Criminal Code it is prosecuted as a criminal offence. (This prosecution and punishment then naturally eliminates any contingent administrative

sanction—the principle of *ne bis in idem*.) This norm is reasonable because it allows for the inclusion of all Acts and other legal regulations adopted in future. It is also progressive in that it enables prosecution of cases involving serious waste of resources, provided the management of those resources is subject to legal regulation.

More severe punishments are inflicted for behaviour actually damaging the environment, rather than threatening to damage it. The Criminal Code formulates this interference as 'considerable detriment to the environment' (section 181a, paragraph 2; section 181b, paragraph 2) or as 'grave detriment to the environment' (section 181a, paragraph 3; section 181b, paragraph 3). It does not elaborate on these concepts and thus far there has been no requirement to do so. It is, however, certain that it is not a matter of property damage only, but also of damage conceived more broadly, including non-property ecological disturbance and disturbance to individual components of the environment. Further, 'considerable detriment' can be interpreted in connection with the concepts of 'considerable damage' and 'grave damage' (section 89, paragraph 14, of the Criminal Code). Considerable damage is understood to amount to at least 50 times the lowest monthly wage fixed by generally binding legal regulations; grave damage is understood to amount to at least 250 times such a wage. (Decree of the Government of the Czech and Slovak Federal Republic No. 99 of 1991 Sb. fixed the minimum monthly wage at 2000 koruny.)

Protected interests

The criminal regulation of sanctioning responsibility for endangering the environment does not specify individual protected interests. The object of protection is thus the interest in the trouble-free functioning of all components of the environment, without preference for one component over another and without imposing more severe sanctions on specific forms of endangerment or damage.

Type and nature of sanctions

For intentional endangerment of the environment pursuant to section 181a of the Criminal Code, an offender can be punished with imprisonment for up to three years or with an order to cease the offending activity (paragraph 1), with imprisonment for from one year to six years if a considerable detriment to the environment results (paragraph 2), and with imprisonment for from three to eight years if a grave detriment to the environment results (paragraph 3).

For criminal offences involving negligent endangerment of the environment pursuant to section 181b of the Criminal Code, an offender can be punished with imprisonment for up to one year, with an order to cease the offending activity or with a fine (paragraph 1). If the offender violates at the same time a specified important obligation or causes considerable detriment he or she can be punished with imprisonment for up to three years, with an order to cease the offending activity (paragraph 2) or, if grave detriment results, with imprisonment for from one year to five years.

For prison sentences the maximum limit is always fixed according to the specifications of the criminal conduct. In some cases the minimum is also fixed; in other cases (section 181a, paragraph 1; section 181b, paragraphs 1 and 2) the minimum is not fixed. A prison sentence not exceeding two years can be suspended by the court under the provisions of section 58, paragraph 1, of the Criminal Code, which relate to the offender's previous good character and the likelihood of reform under the tutelage of a guarantor. In these circumstances, and pursuant to section 59, paragraph 1, of the Criminal Code the court sets a probationary period of from one year to five years. If necessary, pursuant to paragraph 2, it can also establish restrictions on the offender's *modus vivendi*. As a rule, it should also order that the offender attempts to report the losses resulting from the offence.

An order to cease activity can be imposed by the court for from one year to ten years if the offender committed the criminal offence in connection with an illegal activity (section 49, paragraph 1, of the Criminal Code). Its essence is that the offender is prohibited, when serving his or her term, from performing a specific occupation, profession or function or such activity as requires a special licence. A higher frequency of imposition of such penalties can be expected for persons who have failed professionally in the care of the environment.

A monetary penalty of between 2000 and 1 000 000 koruny is imposed, pursuant to section 53, paragraph 1, of the Criminal Code. Such a penalty is usually appropriate when another type of penalty is not necessary, taking into account the nature of the criminal offence committed and the possibility of the reform of the offender. Should the fine not be paid the court can inflict the substitute punishment of imprisonment for up to one year (section 54, paragraph 3, of the Criminal Code).

The Criminal Code does not contain special conditions for refraining from punishment in relation to environmental crime but such conditions are

included in the general part of the Criminal Code as binding. Pursuant to section 24, paragraph 1, one can refrain from punishing an offender posing minimal social danger and who repents and shows the will to reform, if it can be reasonably expected that the hearing of the case before a court is sufficient to induce reform or if the court accepts a guarantee of the reform of the offender and concludes that a penalty is unnecessary.

Proceedings on environmental crime

The legal norms regulating general criminal proceedings—that is, the Code of Criminal Procedure (Act No. 141 of 1961 Sb., on Criminal Proceedings in Court)—apply to environmental crime. Pursuant to section 2, paragraphs 1 to 4, of the Code, the following are the fundamental principles:

- the presumption of lawfulness—prosecution only for legal reasons and in a way specified by the Criminal Code;
- the presumption of innocence—so long as, in the verdict of the court, guilt is not pronounced the defendant cannot be regarded as guilty;
- the principle of legality—the prosecutor is obliged to prosecute all the criminal offences of which he or she has heard;
- the principle of officiality—those bringing the proceedings must act in accordance with their official mandate and handle criminal matters as quickly as possible, having full respect for the civil rights guaranteed by the Constitution.

In relation to evidence, those bringing the criminal proceedings (the police, the prosecutor, the courts) are obliged to take steps so as to detect the actual state of affairs and in making decisions proceed from there. Evidence both for and against the accused should receive the same care. A confession by the accused does not relieve the criminal justice agencies of their duty to check and verify to the fullest extent possible all the circumstances of the case (section 2, paragraph 5, of the Criminal Code). The evidence should be evaluated in light of all the circumstances of the case, in isolation as well as in combination (section 2, paragraph 6, Code of Criminal Procedure).

Evidence from experts in environmental protection will be required in addition to normal evidentiary requirements. Pursuant to section 105, paragraph 1, of the Code of Criminal Procedure, an expert is called upon when professional knowledge is needed to clarify facts relevant to the proceedings, although in straightforward cases it is permissible to rely on the expert opinion of the competent authority. If, however, it is a question of clarifying an especially important fact, two experts should be called upon

(section 105, paragraph 2); and in exceptionally difficult cases requiring special scientific assessment one can ask the state authority to submit an expert opinion or verify the opinion of an expert (section 110, paragraph 1).

Evidence is presented, under the supervision of the prosecutor, by the police. Pursuant to sections 181a and 181b of the Criminal Code, the offence of endangering the environment is among the criminal offences explicitly listed in section 168, paragraph 1, of the Code of Criminal Procedure that are subject to a 'search', which must take place before the prosecutor decides to file a charge or to terminate proceedings. A search differs from an 'investigation' in having fewer formal requirements, and particularly because it is the prosecutor who decides on the matter, not the police.

In the field of civil responsibility the issue of liability for damages according to the Civil Code and the Economic Code is of note. Particularly important in this regard are section 420 of the Civil Code (on the Citizen's Liability for Damages) and section 421 of the Civil Code (on the Liability of Organisations). These two sections provide a general codification of liability for damages. In the case of compensation for environmental damage, section 432 of the Civil Code is also significant: it provides that liability for damage caused by a particularly dangerous operation lies with the operator. Pursuant to section 427, the operator of a means of transport is liable, regardless of guilt and regardless of whether he or she has violated any regulation. The condition of the liability is that the damage has been the result of the special character of the operation.

The Economic Code was amended by Act No. 103 of 1990 CoL, introducing provisions for damage caused by the operation of an organisation (section 145a) and damage caused by a thing or object (section 145b). The provisions of section 145a, paragraphs 2 and 3, are particularly important: an organisation is liable for the damage caused by its operations, the cause being deemed to have been the result of those operations. The damage thus caused is deemed to include damage to the components of the environment—air pollution, loss or pollution of water or agricultural or forest land, and damage to or destruction of protected lands and species of plants and animals. The organisation may be relieved of liability in the case of an unavoidable event or an accident that originated neither in the operations of the organisation nor in the actions of the damaged party.

Experience with the application of this liability system has been limited. It is assumed that its effectiveness can be assessed only after completion of the

privatisation of the Czechoslovak economy. While the state remains the principal proprietor of industry and agriculture and while economic arbitration is carried out by an organ of state administration rather than commercial courts, no significant results can be expected.

Apart from the Civil and Economic Codes, liability for damages primarily caused in forests and on land is codified by a plethora of administrative regulations: that the damage has been caused by the exercise of a right granted by the law; for example, in the course of maintenance of overhead power lines, gas pipelines, railways, and so on. In these cases compensation is typically decided by an administrative authority. This involves particularly Act No. 79 of 1956 CoL, Act No. 110 of 1964 CoL of the Czech National Council, and Act No. 27 of 1989 CoL of the Slovak National Council. These statutes will probably soon be replaced since they determine the state monopoly over certain activities.

2.3 Environmental protection according to civil law

Civil law offers several instruments for environmental protection. First is the codification of liability for damages, which is discussed in Section 2.2. There are two other instruments, which can be called preventive: the settlement of neighbourhood disputes in accordance with the Civil Code; and civil law objections in the building procedure in accordance with the Building Act (No. 50 of 1976 CoL).

Pursuant to section 137, paragraph 1, of the Building Act a building authority engaging in building activity in accordance with the Act must always try to achieve the agreement of those who have objections arising from property or other rights to land and buildings when such matters exceed the competence of the building authority and cooperating organs of state administration. If agreement between the parties is not obtained (and if disagreement would prevent the implementation of the required measure or would enable its implementation in a substantially different form) the building authority must refer the proponent or other party, according to the nature of the dispute, to the court or some other appropriate agency and must suspend the procedure (section 137, paragraph 2).

Civil law objections according to section 137, paragraph 1, of the Building Act may be classified into two types:

- objections about the right to use the land in question (see section 58, paragraph 2, of the Act);

- objections relating to possible adverse impacts on adjoining land or buildings—for example, the danger of future emissions.

This classification has been the subject of considerable debate. On one hand, it has been argued that the range of objections in accordance with section 137, paragraph 1, of the Building Act, leading to the suspension of the procedure, should be limited and that the objection should go to the heart of the matter; that is, disputes about property rights, land boundaries, and co-proprietorship. Similarly, in the view of some, the building authority is bound to suspend the procedure only if the objection is exclusively of civil character and not simultaneously of civil and administrative character (because emissions give rise not only to civil law relations but also to administrative law relations). Thus, the building authority should not suspend the procedure in the case of objections about future emissions but should consider the matter and decide itself because such objections are within the scope of its competence. That would mean, however, that only the second class of objection (and not those involving property rights, and so on) could be considered under civil law.

On the other hand, it is noteworthy that in civil procedure the courts settle cases based on civil law relations, unless these cases are discussed and settled by other authorities (section 7 of the Code of Civil Judicial Procedure). The interdiction of emissions represents a restriction of the application of the property right, or the right of use; this is always a matter arising from civil law relations in the meaning of section 7 of the Code of Civil Judicial Procedure. In matters arising from civil law relations the courts are not competent only if the matters are dealt with and settled, according to the law, by other authorities. In civil law disputes in accordance with section 137 of the Building Act, however, there are only two such cases. First, according to paragraph 3 of section 137, the building authority shall specify the time within which it must be proved that a proposal for the decision in the disputed matter has been filed with the court. If the proposal is not submitted within the specified time, the building authority may decide the dispute at its own discretion. Second, if the building authority orders a measure in accordance with the Building Act in the interest of society and there is danger of delay, it shall consider the dispute in which no agreement has been reached—it is not an exception to the provisions of section 137, paragraph 1, but only to the provisions of section 137, paragraph 2, of the Building Act—and shall decide the matter at its own discretion. In these cases the law has established the

competence of the building authority, which means that the court cannot decide on the matter.

Given this, it would seem inaccurate to say that competence to decide disputes about future emissions lies with the building authority and not with the court. If a participant demands protection against possible future emissions, the proposal must be refused, unless it concerns civil law objections in accordance with section 137 of the Building Act. Apart from this procedure it is impossible to use any other legal means to demand protection against future, and consequently only possible, emissions. The suspension of the procedure by the building authority and the referral of the participant to the court, if the participant has submitted the objection concerning the future negative impact of the intended measure (that is, future emissions), consequently influences the success of the proposal and is one of the prerequisites of a successful proposal in which the participant in the building procedure demands protection against future possible emissions even though this is not a prerequisite of the procedure.

Thus, civil law disputes in accordance with section 137 of the Building Act must include all objections raised by the proprietors or users of adjoining real estate on the basis of their property right or right of use (including, consequently, the right arising from the provisions of sections 130a or 203a of the Civil Code).

According to section 130a, paragraph 1, of the Civil Code, the owner of a thing must refrain from any action that would inconvenience another person beyond a reasonable extent or that would seriously threaten the exercise of that person's rights. According to section 203a of the Civil Code, the provisions of section 130 of the Code apply also to the rights and duties of the user and to his or her protection. Conflict with the owners or users of adjoining land or buildings in the procedure in accordance with the Building Act, however, is often due to the danger of adverse effects on neighbours' real estate; that is, possible future emissions. It is a circumstance in which the prospective builder has not (yet) interfered illegally in the sphere of another person—and interference that has never taken place cannot be forbidden. This results in the conclusion that application of section 130a of the Civil Code is not appropriate when it is simply a matter of whether to permit the construction.

In these circumstances, though, the very meaning of the provisions of the Civil Code would become debatable. When deciding whether the proprietor of a piece of land should refrain from a particular activity—that is, whether and

to what extent the proprietor should be restricted in the exercise of his or her property right or right of use—it is necessary to ascertain the extent to which the exercise of that right is in accordance with the relevant regulations (primarily building regulations). For instance, in reporting on decisions relating to neighbourhood relations (Report No. 67 of 84 of the Supreme Court of the Slovak Republic, published under No. 37 of 1985 of the Collection of Judicial Decisions and Standpoints), the Supreme Court of the Slovak Republic concluded that, if the disputed exercise of property or use rights is supported by a permission issued by the appropriate authority and if no change of conditions has taken place since its issue, the exercise of the property right or the right of use should be considered justified. Should a change of conditions have occurred since the issue of the permission, it is necessary to obtain a remedy primarily before the administrative authority. In other words, even the procedure for deciding about prohibiting interference must be based on the decision of the building authority. The proposal must be dealt with even if the proponent is a former participant in the building activity.

If, however, a building permit has taken the effect of the project into account, the proposal must be rejected. If section 137a of the Civil Code is not applied in the procedure concerning civil law objections according to section 137, paragraph 1, of the Building Act, it would afford only illusory protection. It is therefore necessary to assess possible future emissions in accordance with the provisions of the Building Act and in accordance with the section 130a of the Civil Code.

The solving of disputes about emissions is, as stated, currently governed primarily by the provisions of section 130a of the Civil Code. In its application the Czechoslovak courts must consider the principles of civil law specified in Articles VI and VIII of the Code. When interference with the property or use right does not exceed socially feasible limits, as determined by the rules of civil coexistence, the interference cannot be considered unauthorised in the meaning of the Civil Code, so it is impossible to successfully claim judicial protection. No one may be restricted in the exercise of his or her property right or the right of use if that right is not at variance with the interest of society or the rules of civil coexistence, even in decisions involving disputes in accordance with the Building Code.

In conclusion, application of the provisions of section 130a of the Civil Code has an irreplaceable position in judicial decisions concerning civil law disputes according to section 137 of the Building Act. It is the criterion

according to which it is necessary to assess future emissions, to determine whether they constitute wrongful interference.

2.4 Organisation of public control and its significance in the field of environmental criminality

The events of November 1989 led to fundamental changes in the system of environmental protection in the Czech and Slovak Federal Republic. Before November 1989 individual components of the environment were administered by individual state agencies—air, water and forests by the Ministry of Forests and Water Management, soil by the Ministry of Agriculture and Food, nature and monuments by the Ministry of Culture, public health by the Ministry of Health and Social Affairs, solid refuse and by the Ministry of the Interior, and so on—with identical ministries in both Republics. After November 1989 the competencies were concentrated.

At the federal level the Federal Environmental Committee was created, with principal responsibility for international cooperation and the federal concept of environmental protection. In the Czech Republic the central organ of state administration is the Ministry of the Environment of the Czech Republic; in the Slovak Republic the equivalent is the Slovak Commission for the Environment, headed by a chairperson, who is a Minister of the Government of the Slovak Republic. At the local level in the Czech Republic there are the Department of the Environment and the district authorities; in the Slovak Republic the district environmental authorities act to administer environmental protection.

The Ministry of the Environment of the Czech Republic controls the Czech Technical Inspectorate of Air Protection and the Czech Water Management Inspectorate. In the Slovak Republic the Slovak Environmental Inspectorate is the controlling authority.

Powers of the police, the Public Prosecutor and the criminal courts

Section 2.2 discusses the role of the police in collecting evidence, of the Public Prosecutor's Offices in supervising the gathering of evidence and bringing an indictment to the court, and of the criminal courts in deciding criminal matters on the basis of the indictment.

It is of note, too, that the Czechoslovak criminal process is also governed by the principle of publicity (Article 2, paragraph 10, of the Criminal Proceedings Code). This means that a trial is in principle public, the public being excluded only in cases explicitly fixed by the Criminal Proceedings

Code. This affords the public the opportunity of acquiring information about environmental criminality. Although the preparatory criminal proceedings (the stage of the criminal process before indictment is brought) is not public, the Criminal Proceedings Code establishes the duty to provide information on the criminal process (Article 8a of the Code). Information can, however, be refused on several grounds: to prevent confusion about facts relevant to the case; if the information sought is not relevant to the case; if the information sought is about persons involved in the criminal proceedings; and if the information sought might contravene the principle that a person is innocent until proven guilty by the court.

The press and the informal ecological movements (the 'Brontosaurus' movement, the so-called Green Telephone, Ecopatrol in Prague, and so on) do therefore have access to information in all but very exceptional circumstances. It is also possible to obtain information from other state authorities involved with environmental protection.

Pursuant to Articles 181a and 181b of the Criminal Code, ecological crime comes generally within the purview of the lowest level of the Prosecutor's Offices and the courts (Article 16 of the Criminal Proceedings Code). This is not because environmental crime is being ignored; rather, it is a result of need to obtain complete, high-quality evidence at the level closest to where the infringement occurred. Further, environmental crime is dealt with by prosecutors and judges who are specialised and regularly involved in environmental protection policy making. (Special criminal authorities dealing with environmental criminality have not been established and there is no need for them: proceedings relating to environmental crime are exactly the same as those for other criminal activity.) The local competence of the courts, and also of the Prosecutor's Offices, is determined by where the criminal act was committed (Article 18, paragraph 1, of the Criminal Proceedings Code).

Powers of administrative authorities and administrative criminal courts

There are no administrative criminal courts in the Czech and Slovak Federal Republic. Pursuant to section 53, paragraph 5, of Act of the Czech National Council No. 200 of 1991 CoL, district authorities and municipalities may establish three-member panels to deal with misdemeanours. The chairperson of a panel must have a legal qualification. Proceedings before the panel are oral; they may take place in the absence of the accused only if the accused refuses to appear or fails to appear without proper apology.

Procedures for imposing fines on organisations and their employees in accordance with specific regulations do not require oral hearings; decisions are made on the basis of submitted documents, local inspection, and so on, and are issued either by the head of the relevant department of the district authority or of the District Environmental Authority in the Czech Republic or by the District Environmental Authority in the Slovak Republic.

With one exception, administrative authorities may impose only fines. In accordance with section 10 of the Forest Act (No. 61 of 1977 CoL) the administrative authority may order restoration to the original state, and, for misdemeanours, a sanction may be imposed as well as a fine. The sanction may be an order to cease the offending activity or forfeiture of the thing. A reprimand may not be imposed jointly with a fine. An order to cease the offending activity may be imposed for as long as two years in certain circumstances.

Apart from sanctions, protective measures may be imposed; these can involve requisition of the thing if the misdemeanour has been committed by means of a thing that does not belong to the perpetrator or if the thing cannot be forfeited because the perpetrator cannot be punished for the misdemeanour (primarily for being under age or not being sane).¹⁰

3 PROPOSED REFORMS

Since the adoption of the Wastes Act (No. 238 of 1991 CoL), which has for years been repeatedly drafted without success, the primary need has been to adjust the system of legal rules in force in the field of the environment to accommodate social change, in particular in the case of property relations.

It is also necessary to adopt at least a blanket Act on the Environment, to codify some basic principles of environmental protection. This federal Act should codify definitions of such terms as 'environment' and 'ecological equilibrium' and it should also codify the citizen's right to a healthy environment. The Bill of Basic Rights and Freedoms adopted by Constitutional Act No. 23 of 1991 CoL granted this right to citizens, but only within the limits defined by a specific Act. Such an Act has not yet been adopted, and obviously the Act on the Environment should elaborate on the conditions under which citizens may demand their right to a healthy environment in court. This Act should also codify the basic principles of environmental impact assessment. On the other hand, environmental impact assessment could be the subject of a specific Act or it could be incorporated in a revised Building Act.

The last field to be codified by the Act on the Environment is that of compensation for environmental damage, which, according to some, is damage caused to society as a whole through the loss of the ecological functions of the damaged thing (land, watercourses, and so on). The Act on the Environment should be submitted to the Federal Assembly at the turn of 1991-92. Although it will contain provisions on environmental crime, it is not expected to contain any provisions on sanctions.

The adoption of a new 'Nature Protection Act' is envisaged to replace the obsolete Acts No. 40 of 1956 CoL, in force in the Czech Republic, and No. 1 of 1955 CoL, in force in the Slovak Republic. No changes to the existing sanctions in these Acts are envisaged. The new Act would, among other things, codify the competencies of administrative authorities and change the categories of protected territories in accordance with international experience.

In relation to sanctions, with the exception of the codification of liability for damages (that is, civil responsibility), no major changes are expected at present. The Czech and Slovak Federal Republic is currently ratifying a number of international agreements that will necessitate the modification of both criminal legislation and administrative sanctions. The drafts of these measures are elaborated in the process of adoption of every international treaty and convention relating to the environment. The national codification of new criminal administrative offences will, however, probably be adopted step by step within the framework of work on the new Criminal Code and work on new regulations codifying the legal regime of individual components of the environment. Work has been completed on protection against air pollution and wastes, but even in these areas some changes can be expected.¹¹

Legal norms regulating environmental protection in the Czech and Slovak Federal Republic contain conflicting provisions. For example, according to the Nature and Landscape Conservation Act (Act of the Czech National Council No. 114 of 1992 CoL) no tree can be felled without permission, yet according to the Water Act (Act No. 138 of 1973 CoL) watercourse managers can fell trees around watercourses without any licence.

Since 1992 the Act on the Environment requires that its provisions be applied to any other legal norms. Earlier norms will be changed by degrees.

The Federal Committee for the Environment is drafting a Bill on environmental impact assessment (the Act on the Environment contains only common principles of environmental impact assessment, without any details)

and a Bill to enforce the provisions of international treaties applying to ozone layer protection (the Act on Factors Damaging the Ozone Layer).

4 ENFORCEMENT

4.1 Empirical data

Since the revolution in November 1989 there has been growing public interest in environmental problems. The waves of environmental-related demonstrations that had occurred before November 1989 and been suppressed by the police paved the way for the so-called Velvet Revolution.

Early in November 1989 the catastrophic state of the air in Northern Bohemia led to a number of demonstrations that were brutally put down by the police. The official propaganda described the uprisings as the raging of gangs of criminals, punks and drug addicts. Radio Free Europe reported, however, that on 15 November a demonstration by about 800 to 1000 'ordinary citizens' of Teplice had taken place; these people were simply demanding their right to live in a healthy environment.

Other ecological demonstrations followed; for example, the students' strike in Northern Bohemia in the spring of 1991. And the ecological movement began to gain support from abroad (especially from Greenpeace, which has become involved in a number of matters in Czechoslovakia).

Survey results

In September 1990 the Institute of Public Affairs published a report on public opinions about various problems connected with the environment. It had conducted a survey using a representative sample of 1087 people aged over 15 years, 99 per cent of whom said they were competent to evaluate the issues.

When asked about the quality of the environment in which they live, almost half of the respondents from the Czech Republic and one-third of the respondents from the Slovak Republic said the environment was bad (very bad). If one compares this subjective evaluation with the objective state of the environment at that time, it would seem that the people believe their environment is in a worse state than it in fact is.

This critical assessment of the environment varies according to where people live, and the component of the environment most frequently cited as the major problem is the air. Fifty-seven per cent of respondents said they

would not move to another, less healthy locality even if they received a higher income there.

The majority of respondents agreed that they and their compatriots should make a greater effort to improve the environment and that the best way to do this would be to limit car use and the use of chemicals in homes, in industry and in agriculture. Respondents cited the following as the main factors influencing the unsatisfactory state of the environment: inappropriate production methods; high consumption of raw materials in industry; and the technical state of machines and equipment. The most harmful aspects of economic life were said to be industrial production, energy production, transport and agriculture.

The majority of people acknowledged that the state of the environment is a reflection of their own activities. They placed little blame on institutions of environmental protection (special-interest associations of hunters and anglers, fishermen, voluntary nature protection organisations, the local administrative authorities, and political parties and movements).

When it came to priorities for redressing the damage to components of the environment, the air, water and soil were most prominent; the problem of noise was seen to be less pressing. Generally, however, respondents expressed the belief that all aspects of their environment were catastrophically degraded. (The researchers came to the conclusion that, in the opinion of the public, the environment is so degraded that among its nine decisive elements—air, water, soil, landscape, plants and animals, radiation, solid waste, dust and noise—only noise was not in urgent need of attention.)

In the first week of February 1991 the Institute of Public Affairs conducted another survey, this time with 1070 respondents. Overall, 92 per cent of respondents stated that the need to redress environmental problems was urgent, with the result that these problems came third on a scale of crucial issues, after the need for economic reform and the need to combat crime. Interestingly, in the Czech and Slovak Federal Republic priorities differ markedly: the need to redress environmental problems takes first place in the Czech Republic, while in the Slovak Republic it takes fifth place.

Popular movements

Since the revolution of November 1989 various changes have begun to occur in the environmental movement. Some associations of citizens have been constituted and the Greens Party has begun to operate officially as a

political power (it was illegal before November 1989 but managed to put forward candidates in the parliamentary election of 1990).¹²

Other political parties—although not ecologically oriented—included environmental matters in their platforms for the 1990 election. The same can be expected in the future, in the context of competition and regular parliamentary elections.

At the same time, since 1989 many significant legislative measures have gradually been adopted in relation to the environment, its protection and sanctioning strategies. The proposed Act on the Environment should bring much of this to fruition. Priorities for and ways of solving environmental problems were conceptualised for the entire federation by the State Program of the Care of the Environment, adopted by resolution of the Federal Government in April 1991.

4.2 Perceived effectiveness of sanctions for petty offences and other administrative offences

To assess the effectiveness of sanctions imposed for petty offences relating to the environment, in accordance with Law of the Czech National Council No. 200 of 1990 Sb. (on Petty Offences) and Law of the Slovak National Council No. 372 of 1990 Sb. (on Petty Offences), as amended by Law No. 524 of 1990 Sb., the authors conducted several interviews with representatives of the district (administrative) offices in Prague, and of the Ministries of the Environment and the Interior of the Czech Republic. It was stated that this sphere of state administration has been comprehensively reorganised in light of the fundamental political and organisational changes to the system of state administration and the basic change in the professional competence of the individual elements of state administration. The changes have been taking place since the second half of 1990.

Given the brief period (about ten months) that has elapsed since this reorganisation, it is not possible to give an assessment of its impacts. Suffice to say that all the functions the competent authorities will perform in relation to the environment are not yet fully clarified and nor are the sanctioning strategies and the duties of administrative personnel. It is thus impossible to assess the effectiveness of specific sanctions.

Water protection

As noted, the only sanction that can be imposed for offences involving water is a fine. In the Czech Republic fines are imposed according to Order of

the Government of the Czech Republic No. 26 of 1975 Sb. (on Penalties in the Water Economy). Most of the fines imposed in this way are proposed by the Czech Water Inspectorate and then imposed by the district administrative offices, which can also propose the imposition of a fine on the basis of their own investigations.

According to the Czech Water Inspectorate, there are two predominant offences committed by organisations (enterprises) in relation to water:

- illegal discharge of water (for example, without permission from the competent state authority or in contravention of the norm regulating drainage);
- illegal use of materials affecting the purity of water (for example, chemicals, agricultural wastes, fertilisers and industrial wastes).

Table 1 documents the increase in the number and amount of penalties imposed in 1990.

Table 1: Number and amount of penalties imposed, 1975-90

Year	Imposed by district administrative offices		Proposed by Inspectorate (%)	
	Total of all penalties Number	Amount ('000 koruny)	Number	Amount
1975	578	14 726	73.9	92.8
1980	677	22 967	75.9	99.3
1985	723	22 901	80.4	98.6
1990	1 309	54 443	59.7	74.3

Table 2 shows penalties imposed in 1990 in specific regions of the Czech Republic. According to the Czech Water Inspectorate the greatest polluters are the food industry, the chemical industry, agricultural enterprises, paper and newsprint producers and the timber industry. The same situation in the Slovak Republic can be expected.

The authors held discussions with officers of the Czech Water Inspectorate to ascertain the effectiveness of the sanctions imposed. Several conclusions emerged:

- The sanctions are virtually ineffective. Testimony to this is the catastrophic quality (and in some areas also quantity) of water in the Czech Republic. Nevertheless, attention was drawn to the fact that this situation will change when, among other things, new technologies and techniques for minimising waste are in operation, when less damaging fertiliser can be applied, and when equipment for processing both industrial and domestic waste water is installed. Of course, all this awaits adequate financial resources.
- The division of competence in imposing sanctions between the Inspectorate and the local administrative authorities seems unworkable. The local authorities with competence to decide about proposals for the Inspectorate often have views substantially different from those of the Inspectorate and tend to reduce the penalties. Officers of the Inspectorate opined that as a consequence both the power of the Inspectorate and the quality of the environment diminish. Further, it is often cheaper for enterprises to pay the penalties than to install expensive technology or make fundamental technical and organisational changes. This situation can be solved either by giving sanctioning competence directly to the Inspectorate or by fusing the Inspectorate with the newly established Czech Inspectorate of the Environment.
- The penalties would be more potent if they were deducted from the profits of state enterprises; that is, if they were not regarded as indirect or sundry operating costs. Legislation has now partially solved this problem—it will be fully solved when privatisation is complete.

Table 2: Penalties imposed: Czech Republic, 1990

Region		Penalties imposed on enterprises for water pollution		Other penalties imposed on enterprises		Penalties imposed on employees of enterprises	
		Number	Amount ('000 koruny)	Number	Amount ('000 koruny)	Number	Amount ('000 koruny)
Prague		53	1 448	17	147	9	2.6
Bohemia	Central	134	4 491	18	418	24	14.6
	Southern	212	4 834	21	184	22	7.4
	Western	157	7 588	23	178	18	12.1
	Northern	167	11 184	16	395	20	14.1
	Eastern	176	6 507	24	446	37	8.8
Moravia	Southern	228	7 966	34	654	38	22.6
	Northern	182	10 425	28	973	60	31.4
Total		1 309	54 443	181	3 395	228	113.6

The report prepared for the authors by the Slovak Water Inspectorate shows that, in 1990, 494 penalties amounting to 35 825 985 koruny were imposed on organisations, 184 penalties amounting to 173 200 koruny were imposed on employees, and 241 penalties of non-financial character were imposed to secure the redress of defects.

The division of competence between the Slovak Water Inspectorate and the local administrative authorities was, as in the Czech Republic, seen as a cause for concern. In 1990 the local authorities refused 6.1 per cent of Inspectorate proposals for penalties to be imposed on organisations, 12.2 per cent of proposals for the sanctioning of employees, and 11.4 per cent of proposals to remedy defects. In comparison with past years, however, the situation would appear to be improving in the case of proposals for penalising employees: in 1988 the local administrative authorities refused 13.8 per cent of proposals. When it comes to penalties to be imposed on organisations and proposals to remedy defects, though, the situation would appear to have deteriorated: in 1988, 1.5 per cent of penalties proposed for organisations and 5.7 per cent of proposals for remedial measures were refused. The amount of the imposed penalties in comparison with the proposals of the Inspectorate is even less encouraging: the amount of penalties imposed on employees constitutes only 84.0 per cent of what was proposed; for organisations the figure is 70.2 per cent.

Officers of the Slovak Water Inspectorate stated, as did their Czech counterparts, that the carrying out of Inspectorate proposals by local administrative authorities had been insufficient to secure the necessary level of control. Since then, though, the competence of the Water Inspectorate has come within the Slovak Inspectorate of the Environment, so the problem has been solved.

Air protection

As noted, in 1991 a new Law on the Air was passed by the Federal Assembly; it came into effect on 10 October of that year. Given the brief period during which the Law has been in force, it has not been possible to accumulate reliable data on the effectiveness of the sanctions imposed under it. Nevertheless, it is possible to set out some data from the reports of the Czech Technical Inspectorate of Air Protection and the State Technical Inspectorate of Air Protection of the Slovak Republic. (Note that, according to the latest proposal of the Law of the Czech National Council, the original air protection authorities—the Inspectorate and the local administrative

authorities—continue to exercise their powers, whereas in the Slovak Republic since 29 December 1990 the competence of the Air Inspectorate has come within the Slovak Inspectorate of the Environment.)

In 1990 the Czech Technical Inspectorate of Air Protection (that is, the eight inspectorates proposed in 1990 to the local administrative authorities of that time) imposed a total of 172 sanctions amounting to 21 480 koruny on organisations and a total of 235 sanctions amounting to 220 440 koruny on employees for inadequate operation or maintenance of air protection equipment or failure to take measures ordered by the Inspectorate or the hygiene agencies.

This situation was an expression of the severe approach of the Inspectorate to its control activity, in accordance with the demands of the Ministry of the Environment of the Czech Republic and the Czechoslovak public as a whole. In comparison with 1989, in 1990 the Inspectorate imposed 78 more penalties, amounting to a further 13 000 000 koruny. The same increase is evident for penalties imposed on individuals: 93 more penalties and an extra 96 000 koruny approximately. The majority of penalties were proposed for failure to apply appropriate techniques for eliminating foreign materials from the air.

The most notable air polluters in the Czech Republic are chemical factories and thermal and hydroelectric power stations. The most frequent offenders against the norms for air protection are coke-producing enterprises, which at times release coke gas into the air, even though they have been subject to severe penalties a number of times.

The officers of the Inspectorate had a number of points to make about the effectiveness of the sanctioning strategy:

- The penalties are the only sanctioning means that can be used to raise the level of technology discipline and to encourage better maintenance of equipment designed to reduce air pollution. But their effectiveness is limited, especially by the length of the administrative procedures and the fact that cases are often decided by clerks who may be totally ignorant of environmental protection issues (at least, this is the opinion of some officers of the Inspectorate). In the past the local administrative authorities often imposed lesser penalties than those proposed by the Inspectorate, or did not impose a penalty at all; according to officers of the Inspectorate, the situation has, however, since improved somewhat. These officers suggested that the situation could be resolved if the proposed new Law on

the Air and its executing legal norm clearly identified the agency with power to impose sanctions.

- There are many problems associated with imposing sanctions on the employees of enterprises, especially in relation to evidence of personal liability. This situation cannot be solved by legislative means; it is largely a result of the structural changes in the Czechoslovak economy.
- The officers of the Inspectorate intend to continue their evaluation of the effectiveness of sanctions aimed at preventing air pollution, even though they acknowledge that sanctions are only a secondary means of effecting a change in attitudes. Sanctions are reactive: there must also be a proactive approach.
- As for evaluation of the effectiveness of the sanctions imposed for violations of air protection standards, the Inspectorate officers drew attention to the catastrophic state of the air in the Czech Republic (and doubtless in the entire Czech and Slovak Federal Republic), especially in regions with high concentrations of industry. Sanctions themselves cannot be effective without a sound financial basis and the adoption of techniques and technologies such as are used in the more developed European nations.
- The officers noted the necessity for sanctions imposed on state enterprises (which still dominate the Czechoslovak economy) to be deducted directly from profits; that is, there must not be any possibility of including them in production expenses. Only in such a way will they affect the future activity of the subject that caused the air pollution. (The problem must be solved legislatively.)
- In relation to the transfer of competence from the original national committees to the local administrative authorities, Inspectorate officers stated that too little time had elapsed to allow for proper evaluation. Administrative procedures remain complex and time-consuming, and the local authorities continue to reduce, or even fail to impose, penalties proposed by the Inspectorate.

In 1990 the State Technical Inspectorate of Air Protection in the Slovak Republic proposed to the national committees (which were competent then) 55 penalties amounting to 7 739 266 koruny to be imposed on organisations and 77 penalties amounting to 48 500 koruny to be imposed on responsible employees. Of these proposals, 43.6 per cent were submitted for failure to comply with a decision of the Inspectorate, 51.0 per cent were for defects in maintenance and servicing of air protection equipment, and the remainder were for a combination of the two types of infringement. The local authorities imposed 38 penalties amounting to 1 207 276 koruny on organisations and

38 penalties amounting to 17 800 koruny on responsible employees. The remainder of the proposals were at the time of preparation of this report either being heard or on appeal. As previously, the local authorities generally reduced the penalties proposed by the Inspectorate, especially the penalties proposed for responsible employees. In one case the penalty imposed by the administrative authority on an organisation was higher than the original proposal. (The problem of divided sanctioning competence in relation to air protection has since been solved by new legislation.)

Waste management

Evaluating the effectiveness of sanctions imposed in accordance with the Law on Wastes passed by the Federal Assembly is hampered by the same problem that applies to evaluating the effectiveness of sanctions aimed at air protection: too little time has elapsed since the Law on Wastes became effective on 1 April 1991. Further, at the time of writing the legal norm regulating the system and functioning of state administration of waste management had been passed only in the form of Law of the Czech National Council No. 311 of 1991 Sb., legally effective from 9 August of that year. In the Slovak Republic no such legislative measure existed.

In the Czech Republic the system of state administration of waste management was reorganised and some sanctioning powers were devolved to the Czech Inspectorate of the Environment. The new Law on Wastes adopted a different concept of waste management and a different range of penalties that can be imposed but there are no data on the penalties imposed or their effectiveness. It can be stated, however, that the sanctioning strategy has not solved the waste management problem and that progress will not be made until new techniques and technologies for waste management are adopted.

The effectiveness of criminal sanctions

The criminal offence of endangering the environment according to Articles 181a and 181b of the Criminal Code was established in the Czechoslovak criminal law system by Law of the Federal Assembly No. 159 of 1989 Sb., legally effective since 1 February 1990. In the following months there emerged some fundamental problems with the application of the Law's provisions, which seriously complicated the interpretation of Articles 181a and 181b. The most recent legal regulation came into force on 1 July 1990. The time of applying these provisions is relatively short. This has influenced the number of cases prosecuted and the application of the new provisions.

Nevertheless, the authors sought information from the Czechoslovak prosecutor's offices. The prosecutor's offices supervise the pre-trial procedure, but they also represent the subject of the criminal process, submitting, on behalf of the state, an indictment after examining all the relevant facts according to criminal law. For this reason the offices seemed the most suitable source of information. Further, the organisational structure of the prosecutor's offices has been relatively stable in spite of the legislative changes to material and procedural law. It must be said, though, that the increase in crime and the changes in the nature of crimes have turned the offices' attention away from environmental crime.

On 20 May 1991 district prosecutor's offices in the Czech and Slovak Federal Republic were sent questionnaires seeking information principally about the means of the criminal law with regard to the newly constituted material substance of the criminal offence (according to Articles 181a and 181b of the Criminal Code) and the means of so-called common supervision of the prosecutors.

For the area of the capital city of the Czech and Slovak Federal Republic (and of the Czech Republic), Prague, 10 district prosecutor's offices function; six of these offices furnished information. For Middle Bohemia 7 of the 12 district prosecutor's offices responded. For Southern Bohemia five of the eight district prosecutor's offices responded. In Western Bohemia there are 10 district prosecutor's offices and one city prosecutor's office (in Plzen); seven responded. For Northern Bohemia six of the 10 district prosecutor's offices responded. For Eastern Bohemia eight of the 11 district prosecutor's offices responded. In Southern Moravia there are 13 district prosecutor's offices and one city prosecutor's office (in Brno); 11 responded. For Northern Moravia six of the 10 district prosecutor's offices responded.

For the area of the capital city of the Slovak Republic, Bratislava, four district prosecutor's offices function; one of these offices furnished information. For Western Slovakia five of the 11 district prosecutor's offices responded. In Eastern Slovakia there are 12 district prosecutor's offices and one city prosecutor's office (in Kosice); 10 responded. For Middle Slovakia nine of the 13 district prosecutor's offices responded.

Prague

The six responding offices stated that, during the period of legal force of the contemporary provisions of Articles 181a and 181b of the Criminal Code, no prosecutions had taken place in their jurisdictions. (In one district a

prosecution for negligent endangering of the environment—Article 181b—had been initiated but the offender could not be identified so the proceedings had to be interrupted, according to the relevant provisions of the Criminal Proceedings Code.)

Although the area of the capital is one of the most seriously degraded (especially in terms of air pollution) criminal sanctions are not being put into effect. According to the respondents one reason for this is inadequate staffing and another is alleged deficiencies in the legal norms pertaining to non-criminal protection of the environment. Further, and perhaps most importantly, the prosecutor's offices are often unaware of environmental crimes because the police are overburdened by tasks connected with the general increase in crime and because the environmental awareness of the people—and it is they who will alert the authorities to environmental pollution incidents—is very limited.

Middle Bohemia

In Middle Bohemia, as in the Prague area, prosecution in accordance with Articles 181a and 181b was minimal: in only two cases was prosecution initiated. In one of them (the pollution of drinking water in a well) the offender was not identified; in the other the offender, who caused liquids from a heating system to flow into a stormwater canal, killing about 7000 koruny worth of fish, was found guilty and sentenced to 18 months' deprivation of liberty, conditionally suspended for one year. Several cases of illegal tree felling were investigated in various localities but none resulted in initiation of criminal prosecution according to the Criminal Proceedings Code.

In this region, again as in the Prague area, the sanctioning strategy is not being put into effect. In addition to the aforementioned reasons, respondents noted the lack of experience in prosecuting and punishing environmental crimes, the unclear definition of these criminal offences in the Criminal Code, and deficiencies and imperfections in the non-criminal legal norms pertaining to protection of the environment.

Southern Bohemia

In Southern Bohemia there have been several cases of the application of criminal law provisions to environmental matters. The offences involved, among other things, the illegal felling of a tree, negligent release of chemicals into the soil, the release of heating oil from a paper-producing factory into a river, and the release of a large quantity of chlorine into drinking water.

Respondents were generally in agreement that it is difficult to establish ecological detriment, expert evidence is hard to obtain, and when expert advice is sought from administrative authorities it is not always provided in time.

Western Bohemia

Although some parts of Western Bohemia are relatively free of environmental degradation, the locality of Sokolovsko (surrounding the city of Sokolovo) is a 'moonscape', where the state of the air and nature in particular can be described as calamitous. In spite of this, the respondents stated that there have been no cases of criminal prosecution for environmental crime. Some cases of damage to the environment were investigated and resolved in different ways. For instance, one case of pollution of household wells was handed over, according to the relevant provisions of the Criminal Proceedings Code, to the local administrative authority to be decided as an administrative petty offence. In another case, in which a great number of trees had been felled, the damage was fixed at over 1 000 000 koruny by the Institute for the Protection of Nature of the Czech Republic but the question of whether this interference with nature can be interpreted as endangering the environment can only be answered by further investigation. Another case, concerning the transporting of volatile poisons to the public dump in contravention of the relevant legal norms, ended with the cessation of the prosecution because the poisons were not objectively able to endanger human health. Yet another case, of felling trees, led to the cessation of the prosecution because it was deemed that the felling was necessary since the trees had been damaged by a whirlwind.

The respondents were of the opinion that criminal repression ought to be only a supplement to the proper functioning of the state administrative authorities in the field of environmental protection. They also drew attention to the fact that repressive intervention is often problematic, especially in the case of significant effects that can only be proved after a long time. Further, much environmental damage occurs as a result of administrative decisions taken previously by authorities ignorant of the consequences of certain interventions in the environment. Evidence of environmental crime is very difficult to substantiate, the effects of such crime are often not visible until some considerable time has elapsed, when it may no longer be possible to determine who committed the offence. The people seem to be inured to the pollution of the environment: they do not see it as a detriment and therefore do not notify the competent authorities.

Northern Bohemia

Northern Bohemia is one of the most environmentally degraded regions in the Czech and Slovak Federal Republic but criminal sanctions are used absolutely minimally. Respondents noted a number of cases of environmental damage that came to nothing for various reasons. For example, the negligent violation of duties by a man servicing the sulphur operation in a chemical factory is relevant according to Article 181b, paragraph 1, but it is a very complicated matter: an expert's account from the Ministry of the Environment of the Czech Republic is required and the prosecution is not led against the individual. Two cases of felling of trees were suspended according to the relevant provisions of the Criminal Proceedings Code because they cannot be designated criminal offences with regard to the circumstances. A doctor who drew attention to the negative influence of a large chemicals factory on the health of the inhabitants of the area and asked that the head of the enterprise be subject to criminal proceedings failed because all the necessary conditions for criminal responsibility were not fulfilled.

Some respondents commented on the seeming paradox created by a situation of disastrous pollution and the fact that no physical person is held responsible. The reason must be found in the fact that the objective damage to the environment is the result of the technology of production and this cannot be the responsibility of an individual. Furthermore, the situation has been unchanged for several decades, experience in the application of this criminal norm, especially by the police, is limited, and the prosecutor's obligations are complex, time-consuming and expensive.

Eastern Bohemia

In Eastern Bohemia since the new provisions of the Criminal Code concerning environmental crime came into force criminal sanctions have seldom been applied.

An employee of a bus transport enterprise has been prosecuted for a criminal offence according to Article 181b because he negligently released oil into surface waters, thus polluting them; the request for an expert's report by the Ministry of the Environment of the Czech Republic has not yet been met. Two people were prosecuted for killing over 8000 koruny worth of fish by putting an excessive amount of chemicals into the water of a swimming pool and then releasing the water into a brook. An expert determined that this did not lead to serious damage to the environment, so the case was handed over,

according to the relevant provisions of the Criminal Proceedings Code, to the competent local authority.

In another case an employee of a forest production enterprise, without obtaining the necessary permission from the competent administrative authorities, cleared a large area of land to build a skiing facility. The clearing and general disturbance to the land endangered the drinking water of the neighbourhood, which was in a protected area. The prosecution of this offender and his two accomplices is not yet complete because an expert's appraisal of direct and subsequent damages has been sought.

Yet another case involved the negligent pollution of a stream by organic waste from an agricultural enterprise, resulting in the death of more than 23 000 koruny worth of fish. The expert brought in did not find that the environment had been endangered so the case was suspended according to the relevant provisions of the Criminal Proceedings Code because the activity of the offender could not be held as a criminal offence.

A number of respondents noted the need for cooperation with the Ministry of the Environment in complicated cases needing an expert's opinion and for qualified experts in the evaluation of threats to the environment and the extent of environmental damage. Further, they believed that lack of professional knowledge on the part of prosecutors hampered the application of criminal law provisions. There is also an absence of specific criteria for the evaluation of the social danger of the concrete act; under Czechoslovak criminal law a high level of danger to society must be proved and only then can the act be judged a criminal offence.

Respondents also stated that if the power of the prosecutor's offices is diminished by legislative change then an important repository of knowledge will be lost.

Southern Moravia

Although in general southern Moravia has not suffered extensive environmental degradation, its prosecutor's offices have been quite active in pursuing environmental matters.

One case of the dumping of organic waste from an agricultural enterprise was investigated but prosecution was not initiated because it was found that there was no indication of a criminal offence. The same thing happened with an investigation into the filling up of a pond with soil. Another case, involving the storage of large quantities of cyanide in a chemical factory, which, in the

opinion of health authorities, could lead to endangerment of the environment, is being investigated. It is, however, already apparent that, since this situation is a consequence of negligent response to such problems in the past, the offender will probably not be prosecuted and the matter will be handed to the relevant administrative authority to be handled as an administrative petty offence.

The death of crayfish in a river through negligence on the part of the employees of an agricultural enterprise was investigated; an expert was called in and it was determined that there was no resultant serious ecological detriment so the case was handed over to the local administrative authority to be dealt with as an administrative petty offence. In the case of release of organic waste into a public canal, the prosecutor found that the employees responsible had committed a petty offence and so handed the matter over to the relevant administrative authority.

Criminal prosecution was initiated in four cases; release of wastes into surface waters, resulting in the pollution of the waters and the death of fish; an individual who, after a car accident, failed to prevent the motor oil from flowing into a trench dug for water pipes; the release of 3000 litres of oil into a river, gross environmental damage being prevented only by the construction of a temporary wall; and the extensive application of mineral fertilisers in a state reserve in contravention of the relevant legal norms. This last case is in the pre-trial stage: the expert's review awaits completion and the extent of damage to the protected plants must be accurately established.

Again, respondents stressed the need for cooperation between their offices and the Ministry of the Environment. They also noted that the preventive function of criminal repression cannot be overvalued and that enterprises must be persuaded to incorporate environmental interests in their business philosophy. Concurrently, evaluation and decision making within the framework of the state administration must take place from an ecological standpoint. Lack of the financial means to solve these problems was also stressed.

There is, too, a need to clarify the criteria on which to base decisions about criminal responsibility. The police and the prosecutor's offices frequently find themselves in difficulty in this regard, particularly in relation to the responsibilities of legal and natural persons and the complexity of the non-criminal norms and decisions of the administrative authorities.

Northern Moravia

Some parts of Northern Moravia, such as Ostrava and surrounds, are very seriously environmentally degraded; other parts are little affected. In spite of this no fundamental differences in the environment-related activity of the prosecutor's offices in the two areas were found.

Two cases of unsuitably located and inadequately sealed dumps were investigated; the proceedings will probably come to the suspension of the matter because the acts of the responsible persons may not amount to criminal offences. Three cases of endangering the environment—incorrect mixing of fodder, release of organic matter in waste water, and improper storage of chemicals—were investigated; all cases were suspended according to the relevant provisions of the Criminal Proceedings Code because the actions of the responsible persons did not amount to criminal offences. Two cases of the felling of timber in contravention of legal norms (that is, without the necessary permission) were investigated; both were handed over to the administrative authorities to be dealt with as administrative petty offences. Finally, four cases of the felling of trees are being investigated before the initiation of prosecution.

Prosecution was initiated under Article 181b, paragraph 1, in the case of a person who released calcareous liquid into a canal and caused the death of fish. The prosecution was, however, suspended according to the relevant provisions of the Criminal Proceedings Code because the guilt of the offender could not be established and nor could negligence. The release of a large quantity of chemicals into a canal, causing damage exceeding 14 000 koruny to an industrial enterprise led to the initiation of prosecution under Article 181b, paragraph 1, but proceedings came to a halt because the offender could not be identified. Another prosecution under Article 181b for releasing organic waste was halted when it was found that the environment had not been endangered. Two cases are being investigated, one involving illegal felling of timber worth more than 27 000 koruny and the other involving fish deaths caused by the release of lime into a water body. Another case of the felling of trees came to a halt after the prosecution had been initiated: it was handed over to the competent local administrative authority to be dealt with as a petty offence according to the relevant legal norms.

Generally, the respondents noted the probability of a large amount of environmental crime that goes unprosecuted for several reasons: the police are overburdened by the enormous increase in crime in general; there is a lack of

qualified personnel and of equipment; and the monitoring activity of the specialised administrative authorities is inadequate. The effectiveness of the means that the prosecutor's offices have at their disposal cannot be overestimated. The opinion was also expressed that the prosecutor's offices should interfere with the protection of the environment only when protection cannot be afforded through administrative law; of course, the conditions of criminal material and procedural law must be completely fulfilled. Instructions for interpretation of the law with the aim of unifying legal practice were also seen as necessary.

Bratislava

Respondents provided no data on environmental crime in the area of Bratislava, capital of the Slovak Republic.

Western Slovakia

The environment in Western Slovakia is moderately degraded in comparison with other parts of the country but the criminal law is seldom used to prosecute environmental crime. Some cases have been investigated before the initiation of proceedings. One such, involving the illegal felling of trees causing damage amounting to 232 500 koruny, was suspended because expert opinion was that the felling was justified by the condition of the trees and so the offender's actions could not be defined as criminal. The results of the investigation of two other cases—one involving the felling of 27 trees and the other involving the release of oil into a waste water drain, thus polluting a river—have not yet been presented to the prosecutor's office.

Prosecution was initiated under Article 181b for an offence of bringing contaminated soil into a market gardening area. In the opinion of an expert, although the soil was hygienically defective and of no use to the plants, it posed no danger to the environment through the penetration of chemicals into surface or ground waters. The prosecution was brought to a halt because the offender's action did not amount to a criminal offence. Another prosecution, involving the chemical contamination of a stream and the consequent death of fish, was terminated because the offender could not be identified.

Respondents failed to provide data on the application of criminal law provisions in the interest of environmental protection in Western Slovakia.

Middle Slovakia

In Middle Slovakia there are some areas where the environment is little degraded and other areas, where there are high concentrations of industry,

that are very seriously affected, especially in terms of air quality. The environment-related intervention of the prosecutor's offices has been sporadic.

An employee of a rail transport enterprise was convicted under Article 181b, paragraph 1(a), of the Criminal Code of negligently releasing more than 20 000 koruny worth of oil, thus polluting the surrounding soil and water: he was sentenced to 12 months' deprivation of liberty, conditionally suspended for two years. The prosecution of two cases involving the release of chemicals was aborted, one because the offender could not be identified and the other because it was established that the breakdown that led to the chemical release was not caused by the employee in question.

A prosecution under Article 181, paragraphs 1 and 2(a), of the Criminal Code was brought against a worker who negligently released chemicals into the waste water system of a stone quarry, destroying more than 33 000 koruny worth of fish and causing consequent expenses amounting to almost 18 000 koruny. The investigation could not, however, establish the guilt of the worker so prosecution was dropped according to the relevant provisions of the Criminal Proceedings Code.

Five other cases were noted by respondents as being under investigation: three of them are in progress; the other two were suspended. Another case, involving a release of oil, was investigated by the police and then passed to the local administrative authority to be dealt with as an administrative petty offence.

Generally, the respondents stressed the need for potential polluters of the environment to be forced to take measures to reduce the risk of environmental damage. Opportunities for the prosecutor's offices to support this aim are limited since their principal task should be supervision of the administrative authorities, especially in relation to sanctions.

Respondents also drew attention to the complicated situation that has arisen since the reconstruction of the local administrative system for the care of the environment: the organisational structure of the new administrative authorities does not match the organisational structure of the prosecutor's offices. Further, the respondents noted a loss of quality in the decision making of the offices of the environment, probably caused by changes in personnel. Problems of the efficiency of legal regulation in relation to environmental protection and of the divisions between monitoring and control activity and sanctioning competence were also discussed. Reservations were expressed

about the central State Fund for Environmental Protection, which in the respondents' opinion, does not meet regional needs.

Eastern Slovakia

Eastern Slovakia, like Middle Slovakia, contains areas in which the environment is seriously degraded (for example, the city of Kosice and its surroundings) and areas that are only slightly degraded. The use of criminal law provisions to deal with environmental offences is extremely sporadic.

A prosecution was initiated for pollution of privately owned drinking water sources by the release of oil, probably from the reservoirs or pipes of the state bus transport enterprise. The act was determined a criminal offence according to Article 181b, paragraph 1, committed by an unknown offender; the case is still being investigated. Two cases of the release of oil from the state oil production enterprise were investigated but it was ascertained that suspicion of criminal offences did not arise so the cases were suspended. Another case, involving the deposition of organic waste on land owned by an agricultural enterprise, was investigated; because the waste did not contaminate the water and the responsible employee had acted in contravention of the norms concerning the handling of such waste, the case was handed over to the competent local administrative authority to be dealt with as a petty offence.

Respondents generally agreed that the police and the prosecutor's offices interfere in matters involving protection of the environment only when grave violations of the duties required for criminal responsibility occur. The prosecutors anticipate the support of the newly created administrative offices of the environment, especially in relation to notification of the knowledge necessary for the intervention of prosecutors through the criminal law.

Prosecutions before Articles 181a and 181b of the Criminal Code came into force

As noted, environmental crime was explicitly incorporated in the Czechoslovak Criminal Code on 1 February 1990. But this does not mean that before that date environmental crimes were not punished under criminal law. The General Prosecutor's Office provided the authors of this report with information about the activities of the prosecutor's offices in relation to environmental protection for 1988, 1989 and the first half of 1990.

Cases of pollution of water, soil and air were prosecuted as criminal offences under Article 130 of the Criminal Code as it existed then (negligent dereliction of duty in accordance with the economic activity of the socialist

organisation), under Article 137 (negligent damage to state-owned property), and as a variety of lesser offences of social endangerment according to Law No. 150 of 1969 Sb. The killing of fish—one of the most common environmental offences—was prosecuted according to Article 129 of the Criminal Code as it existed then (dereliction of duty in accordance with the economic activity of the socialist organisation), under Article 130 of the Criminal Code (as stated), under Article 136 (intentional damage to state-owned property), under Article 137 (as stated), under Article 180, and as a variety of less offences of social endangerment.

The supervisory role of the prosecutor's offices

Law No. 60 of 1965 Sb. (on the Prosecutor's Offices), read with later legal norms, provides that the prosecutor's offices of the Czech and Slovak Federal Republic have a 'guard of legality' in relation to the state and society. This means that the offices have not only responsibility as public accuser representing the state, but that they also have certain rights in civil law relations and exercise so-called common supervision. In the environmental field the offices do not have sanctioning power but within the framework of common supervision they are authorised to review—that is, to examine the proceedings and decisions of almost all state administrative authorities—and to ensure concordance between the measures proposed and the legal norms governing the common interest. The offices are thus very important in the development and carrying out of sanctioning strategies. They can influence sanctioning proceedings in three ways: by issuing a 'notification'; by issuing a 'protest'; and by reviewing the activity of the administrative authority involved.

When issuing a notification the prosecutor's office declares that the administrative authority is contravening the relevant legal norm or norms and specifies how this has occurred. A protest is issued with similar intent but, unlike a notification, it results in invalidation of the administrative decision. The carrying out of a review is a very useful function since it provides information to enable the prosecutor's office to supervise the activities of the administrative authority and to perform its functions as the authority in criminal proceedings. It can stimulate improvements in decision making and prevent a recurrence of defective decisions.

The information provided by the prosecutor's offices that responded to the authors' questionnaire revealed great differences in the quantity and quality of activities directed at protection of the environment. It is of interest that in the

areas of most serious environmental degradation the prosecutor's officers are no more active than the offices in areas that are less affected: in both cases intervention is limited. This situation may be a consequence of three main factors:

- Environmental damage that has built up over a long period and is preventable or reversible only with the use of new techniques and technologies (in industry and agriculture, for example) cannot be dealt with by the prosecutor's offices.
- In view of the dramatic increase in crime in general, the resources, both human and material, of the prosecutor's offices are inadequate, and are directed at classic criminal activity.
- The deficiencies in legal regulation and its lack of stability prevent the consistent application of the law to environmental offences.

This discussion of the data provided by the district prosecutor's offices provides a detailed illustration of the matters at the heart of this report. For completeness' sake, it is necessary to add that in view of the fundamental legislative changes that have taken place in the Czech and Slovak Federal Republic this report cannot be compared with the recent situation. Nevertheless, it can be seen that in the past only isolated cases of ecological crime were prosecuted.

4.3 Recent developments

Since 1991 there has been considerable economic change in the Czech and Slovak Federal Republic. The first stage of the so-called coupon privatisation, enabling the transfer of state property to private ownership, is coming to a conclusion. Further privatisation is occurring, including the privatisation of industrial and other enterprises, and property is being returned to people who were dispossessed of it after the Communist takeover of 1948. This economic transformation has been accompanied by increasing social unrest, growing unemployment (which is unevenly dispersed throughout the various regions) and political instability.

Recent research by the Institute for Research into Public Opinion suggests that public concern about protection of the environment is very limited. The Green Party, after its electoral failure in 1990, has formed a coalition with two political parties (the Czechoslovak entrepreneurs' party and the Czechoslovak agriculturalists' party), whose programs do have some connection with the environment. Nevertheless, it is seldom now that environmental matters come within the platforms of the larger political

parties, movements and coalitions. Only in the most seriously degraded regions, such as Northern Bohemia and Northern Moravia, is the environment a matter for frequent discussion. In general, though, since November 1989 the level of attention given to the environment has declined.

The Parliament that functioned after the democratic elections in 1990 could be regarded as relatively successful in legislating for the environment, although there are significant differences between the two Republics. There is, however, concern about future directions, especially in relation to the following:

- Environmental awareness is becoming victim to economic pressures. This conclusion can be illustrated by the recently discussed problem of the nuclear power station in Temelin: the environmental impacts of the station are not even being assessed, only the economic impacts.
- The economic recession precludes investment of sufficient funds in environmental programs and the offering of tax incentives for business enterprises that pursue environmentally sensitive policies.
- The number of environmental offences may well increase, or at least will not diminish, and if sanctions are applied at all they will be of limited effectiveness because they will not be accompanied by appropriate technical and organisational measures. Further sanctions will have little preventive effect—they will simply be regarded as unfair detriment.

Experts from the Ministry of the Environment of the Czech Republic and the Commission of the Environment of the Czech and Slovak Federal Republic were very sceptical in their opinions not only of the effectiveness of specific administrative sanctions, but also of the effectiveness of administrative sanctions imposed with a view to prevention. Individual polluters may respond to preventive measures, but it is the big polluters (large enterprises, and so on), with their repeated and multiple offences and in spite of the repeated imposition of sanctions, that provide compelling evidence of the ineffectiveness of the sanctions.

The experts did agree that individuals and small businesses in particular do not have the financial means to adopt new pollution-reducing techniques and technologies and that in these circumstances the imposition of the sanctions could be seen as unnecessary repression.

Nevertheless, in the Czech Republic the progressive transfer of sanctioning competence to the Czech Inspectorate of the Environment is regarded as very positive for the protection of forests, the air, the landscape and nature, and

waste management. The experts anticipate that this centralisation of inspection activity will result in united action and the strengthening of sanctioning power. They hope that water protection will soon also come within the competence of the Inspectorate. If in the Czech Republic the transfer of environmental protection responsibility to the specialised agencies directed by the Ministry of the Environment (the district and municipal offices) is successfully managed, as it has been in the Slovak Republic, the outcome will be even better. Evidence of the success of such organs in Slovakia is generally positive.

In the case of empirical data on sanctions imposed and their effectiveness, only sanctions imposed under sections 181a and 181b of the Criminal Code provide sufficient information for evaluation. The Centre of Information within the General Public Prosecutor's Office of the Czech and Slovak Federal Republic provided data for 1991 and the first four months of 1992 for the entire Republic.

In 1991 prosecution for a criminal offence according to section 181a of the Criminal Code (intentional endangering of the environment) was initiated in 16 matters and for a criminal offence according to section 181b of the Code (negligent endangering of the environment) in 42 matters. The proportion of offences under sections 181a and 181b in comparison with all other criminal offences prosecuted is very small indeed: less than 0.1 per cent.

Of the matters for which prosecution was initiated under section 181a, six were dropped because the offender could not be identified. Of the 42 matters for which prosecution was initiated under section 181b, 26 were dropped because the offender could not be identified. Of the 10 offenders prosecuted under section 181a, seven were indicted; of the 16 offenders prosecuted under section 181b, seven were indicted.

From January until April 1992 prosecutions under section 181a of the Criminal Code were initiated in two cases: for one of them the offender was indicted and for the other the case was dropped because the offender could not be identified. For the same period seven prosecutions were brought under section 181b; five offenders were indicted, in one case the prosecution continues, and one case was dropped because the offender could not be identified.

It would appear that the pattern of sanctioning environmental criminality is little changed.

5 CONCLUSIONS

The Czech and Slovak Federal Republic is a nation in which virtually all components of the environment are seriously degraded. There is a consequent need for the development and implementation of an effective sanctioning strategy both on a political level and from the standpoint of legal implementation. Nevertheless, even a perfect sanctioning strategy will not yield the desired results if it has insufficient financial backing (aimed at improved technology and production methods) and if environmental awareness and the need to balance economic and ecological interests to the benefit of the environment are not engendered within society (particularly among the newly emerging private entrepreneurs).

Such a dramatic change cannot be effected within a short period. Funds are lacking and people are conservative and resistant to radical change.

In relation to administrative sanctions there are several pressing needs:

- The amount of fines must be adjusted to reflect the actual market value of the Czechoslovak currency—many of the regulations stipulating sanctions are now quite old and do not take into account increases in prices and values.
- Codification must be comprehensive, covering all environmental components and all sources of threat or damage to the environment.
- The codification must be integrated and must reflect the seriousness of any action's consequences for the environment, with reference to damage to individual components or to the importance of the source of the damage to the environment. This will involve in particular sanctions against pollution of air and water, uneconomic use of land, and defects in waste disposal.

In relation to criminal sanctions the codification of the specific facts of the environmental criminal offence can be considered a success, albeit somewhat belated given the state of the environment in the Republic. Within the framework of recodification of the Czechoslovak substantive and adjective criminal law, it will be necessary to consider the following fundamental problems of environmental criminal offences:

- the shift from conventional criminal repression (imprisonment of the individual) to financial sanctions (including administrative penalties);
- the specification of consequences threatening individual components of the environment and the sources of threat or damage (the strictest sanctions

should be aimed at air and water pollution, uneconomic use of land, and violation of duties in the field of waste disposal);

- alternative imposition of conventional criminal sanctions, whether imprisonment or of a financial nature, and economic responsibilities on the part of the perpetrator—that is, elimination of criminal responsibility if the perpetrator ensures restitution in full or to the extent required, based on the principle of the primary significance of the environment and the secondary significance of the imposition of criminal sanctions;
- the possibility of waiving criminal sanctions in cases of long-term cumulative processes, when the perpetrator cannot be identified or when the actions of individual offenders are generally of minor significance and only their accumulation results in serious impacts;
- the possibility of prosecution for an action that has caused irreversible damage to an ecological value when the penalty should not be merely retaliation but should stimulate the perpetrator to remedy the situation and to act preventively;
- the determination of concrete limits of action, the exceeding of which gives rise to criminal responsibility—in Czechoslovak criminal law the material viewpoint is often used (the degree of social 'dangerousness' of the act) as well as the formal criterion (fulfilment of the stipulated characteristics of the criminal act formulated in the special and in general parts of the Criminal Code);
- procedural problems, taking into account the complexity of proving an environmental criminal offence—Czechoslovak criminal law will probably not resign on proving the perpetrator's guilt to facilitate proceedings (that is, to stipulate objective criminal responsibility) or transfer the burden of proof in proving the innocence of the perpetrator. On the contrary, it will consider extension of the discretionary rights of the organs of criminal procedure (particularly the Public Prosecutor) to assess the sum of all circumstances of the case and the possibility of procedural and factual decisions terminating the case.

Further, the criminal responsibility of legal entities will certainly not be incorporated in criminal law since Czechoslovak criminal law is based traditionally and consistently on the principle of individual responsibility of a natural person and deals with this responsibility by stricter punishment of the employees of legal entities who have perpetrated an offence through violating their duties as employees.

The types of penalties will be re-assessed and the tendency towards positive action (for example, publicly beneficial work) will be accentuated.

Classic criminal repression should represent the *ultima ratio* and should be used only in cases of grave damage to the environment (non-renewable damage to ecosystems and natural resources or deaths or threats to a large proportion of the population). Consequently, it is necessary to coordinate criminal and administrative sanctions and to accept international law conventions and possibly international ideological and theoretical (scientific) concepts.

REFERENCES AND NOTES

1. *The Environment of the Czech Republic: development and state until the end of 1989*, Prague, May 1990. The *Blue Book*, as it is known, contains chapters dealing with the following subjects: elements of the environment; human activities and environmental contamination; regional environmental problems in the Czech Republic; and suggestions for solving environmental problems and developing an ecological policy. The leader of the ecological movement before the revolution of 1989, Mr Bedrich Moldan, subsequently became Minister of the Environment in the Czech Republic. It was he who, with his ministry, developed the suggestions for solving environmental problems, and these 'ways out' remain applicable.
2. The Constitution of the Czech and Slovak Federal Republic (Constitutional Act No. 100 of 1960 CoL) contains no provisions applying to the protection of the environment. Article 15, paragraph 2, notes only that 'the state takes care of nature', without any details or special provisions. 'Environment' was not used in the Constitution (protection of the environment was dealt by the Act No. 4 of 1952 CoL, which refers to protection of the environment). Nor does the present text of the Constitution (Constitutional Act No. 100 of 1990 Sb. CoL) make any provision for protection of the environment. A human's right to 'a blameless, irreproachable environment' is regulated at present by the Charter of Basic Human Rights and Freedoms (Constitutional Act No. 23 of 1991 CoL). But the enforcement of this right is regulated by special laws, without the application of which the right cannot be enforced. According to the Constitutional Act on Czechoslovak Federation (Constitutional Act No. 143 of 1968 CoL; present text No. 103 of 1991 CoL), only basic legislation is within the competence of the federation; to legislate against environmental pollution in any other than a basic case is within the competence of the Czech and Slovak Republics.
3. By May 1992 the organisational structure of the environmental protection authorities hnt (Act of the Czech National Council No. 282 of 1991 Sb., on the Czech Inspectorate of the Environment and its Competence in the Protection of Forests). Originally the Inspectorate had competence (including sanctioning powers) only in relation to protection of forests; subsequently, on the basis of Article 1, paragraph 4, of the Act, it gained other powers through Act of the Czech National Council No. 311 of 1991 Sb. (on State Administration in the Waste Management) and Act No. 389 of 1991 Sb. (on State Ad311 of 1991 Sb. (on State Administration in the Waste Management) and Act No. 389 of 1991 Sb. (on State Administration of Air Protection and Fees Paid for Air Pollution). It will gain further power through Act of the Czech National Council No. 114 of 1992 Sb. (on the Protection of Nature and the Landscape). The Inspectorate is subordinate to

the Ministry of the Environment of the Czech Republic and is made up of a head office and regional inspectors' offices.

On 5 December 1991 the Federal Assembly adopted Act No. 17 of 1991 Sb. (on the Environment). This legal norm essentially arose from the proposals of the Federal Committee for the Environment and became effective on 16 January 1992. Sanctions for damaging the environment (Article 28) have been created in the form of graduated penalties: up to 1 000 000 koruny for a legal or physical person who causes an ecological detriment by infringing legal norms; up to 500 000 koruny for a legal or physical person who fails to take restorative measures or who fails to call the state administrative authority's attention to the fact that environmental damage is imminent;

The penalty can be imposed one year after the environmental agency has detected the infringement, with a maximum of three years from the detection date. Imposition of the penalty does not affect the general norms concerning compensation for damage. According to the specific legal norms on environmental protection, penalties or other measures imposed for infringements do not affect consequent criminal responsibility and compensation for damages.

These sanctions are complemented by other instruments such as economic instruments (taxes, fees, and other payments determined by the special norms for the pollution of the environment) and 'environmental funds' (Act of the Slovak National Council No. 128 of 1991 Sb., on the State Environmental Fund of the Slovak Republic, and Act of the Czech National Council No. 338 of 1991 Sb., on the State Environmental Fund).

4. In the Czech Republic limits of allowable pollution of water have recently been established, by Decree of the Government of the Czech Republic No. 171 of 1992 Sb.
5. By Article 1 of Act of the Czech National Council No. 389 of 1991 Sb. (on State Administration of Air Protection and on Fees Paid for its Polluting) those administering matters of air pollution in the Czech Republic have been redefined, as follows: the Ministry of the Environment of the Czech Republic; the Czech Inspectorate of the Environment (established by Act of the Czech Inspectorate of the Environment imposes penalties for infringement of obligations determined by Act No. 309 of 1991 Sb. (on the Protection of Air against Polluting Substances)—the Air Act—when such penalties are not imposed by the organ of the municipality. The Act came into force on 4 October 1991. In the Slovak Republic new legislation on air protection has been promulgated: Act of the Slovak National Council No. 134 of 1992 Sb. (on State Administration of Protection of the Environment), effective from 1 April 1992. Pursuant to Article 1, the administrative organs are as follows: the Slovak Commission for the Environment; the Slovak Inspectorate of the Environment; the Offices of the Environment; the organs of the municipalities. Sanctioning competence resides with the Inspectorate of the Environment (Article 3 of the Act, in connection with Article 18 of the Air Act), the District Office of the Environment (Article 5, paragraph 2, dealing with petty offences), and the municipal authority (Article 6, in connection with Article 12, paragraph 1, of the Air Act).
6. On 1 June 1992 Act of the Czech National Council No. 114 of 1992 Sb. (on the Protection of Nature and Landscapes) was adopted. It is a voluminous Act, and its passage through the Czech Parliament was stormy, reflecting the pressures of environmentalists and those more interested in the exploitation of natural resources. The following agencies; the administrations of national parks and protected regions; the Czech Inspectorate of the Environment; and the Ministry of the Environment. Sanctioning competence is conferred on the following: the municipal authorities

(Article 76, paragraph 2); the district offices (Article 47, paragraph 2); the administrations of national parks and protected regions (Article 78, paragraph 2); and the Czech Inspectorate of the Environment (Article 80, paragraph 3).

According to the Act, the Guard of Nature is empowered to impose and collect block penalties for petty offences. The limits of penalties imposed on natural persons have been augmented and in some circumstances can be doubled. The limits of penalties for legal persons and natural persons engaging in business activity have also been increased.

7. In both Republics work on the drafting of legal regulations for the ecological supervision of mining activity is in progress.
8. The Act of the Slovak National Council on State Administration in the Management of Wastes was adopted as Act No. 494 of 1991 Sb. and has been in force since 11 December of that year. Article 1 of the Act specifies the state authorities responsible for administration in the management of wastes: the Slovak Commission for the Environment, the Slovak Inspectorate of the Environment, and the Offices of the Environment. The Act springs from the concept of divided competence vis-a-vis the federal Act on Wastes. The Slovak Inspectorate of the Environment imposes penalties for infraction of the duties determined by the Act on Wastes, by the cited Act of the Slovak National Council, and by decisions made on their basis, when it has detected such infraction through its own activity (Article 3, paragraph 2). The district Office of the Environment also imposes penalties according to the Act on Wastes and to the cited Act of the Slovak National Council and deals with petty offences according to the Act of the Slovak National Council on Petty Offences.

Besides sanctions, the Act on Wastes provides for an economic stimulus to minimise damage to the environment by creating fees for the deposition of wastes: the Czech National Council has adopted Act No. 62 of 1992 Sb. (on Fees Paid for the Deposition of Wastes). The Slovak Republic adopted an analogous Act in April 1992 but its official text had not been published at the time of writing.

9. Persons aged from 16 to 18 years are 'juveniles' according section 74 of the Criminal Law. For these persons criminal liability and prosecution are regulated in a special way. Full criminal liability is acquired once a person exceeds the age of 18 years.
10. The system of administrative courts has been reinstituted since November 1989, within the framework of the reconstruction of the court system. Nevertheless, the involvement of administrative courts in environmental protection is still rare.
11. Since 1991, when this report was first prepared as 'environment', 'sustainable development', 'ecological damage' and 'ecological system' are defined. The Act regulates basic principles of environmental protection and everyone preparing any new legal norm is obliged to uphold these principles. The Act also regulates common principles of environmental impact assessment and environmental damage and permits the possibility of imposing fines for misdemeanours not covered by other norms.
12. The Greens Party platform maintains that every organisational unit ought to adapt to local conditions. It gives highest priority to the protection of the environment and changing of lifestyles, together with respect for life, truth, liberty and morality. The Greens' target is to redress the catastrophic situation in the environment by taking steps to restore ecological balance. They want to guarantee the basic human right to live in a healthy environment and they hold taking part in political life and sharing political power not as their final aim but only as a means of a taking part in political life and sharing political power not as their final aim but only as a means of achieving their main mission.

CHINA
*Zou Jing**
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INTRODUCTION

This report provides a general description of environmental legislation and enforcement in China, with particular reference to criminal law and other environmental laws. It also discusses trends in the development and improvement of environmental protection laws.

Between 1949, when the People's Republic of China was established, and the early 1970s, environmental protection was not a major feature of the national development program. It began to be viewed strategically only when China took part in the Stockholm Conference on the Human Environment in 1972. China drew lessons from the developed countries and realised that, when undertaking economic development, great attention must be paid to environmental protection and the relationship between development and the environment.

In 1973 China held its first national conference on environmental protection; at this conference the basis of the national environmental protection policy was determined. In 1974 the State Council established the Leading Group of Environmental Protection and its Office to deal with national environmental protection issues. In 1979 China promulgated its first Environmental Protection Law (for trial implementation) and a new stage in the work of Chinese environmental protection began. Since then China has made great progress in legislating for environmental protection. The formal Environmental Protection Law was promulgated in 1989. Several specific laws on environmental protection—such as the Air Pollution Prevention and Control Law, the Water Pollution Prevention and Control Law and the Marine Environmental Protection Law—and a number of administrative laws and regulations have also been put into effect. The Chinese system of environmental protection laws now has the Constitution as its basis and the Environmental Protection Law as its main body.

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1 FRAMEWORK AND REVIEW OF CHINESE ENVIRONMENTAL PROTECTION LEGISLATION

1.1 Social framework

The People's Republic of China is a socialist country with the working class as its leading class and the alliance of workers and peasants as its foundation. The national economy is based on public ownership, and all powers in the country belong to the people.

The Government's responsibility for environmental protection

Article 26 of the Constitution of the People's Republic of China stipulates, 'The state has the obligation to protect and improve the living environment and the ecological environment and to prevent and eliminate pollution and other hazards to the public.' This describes the Government's area of responsibility. Article 6 of the Environmental Protection Law of the People's Republic of China stipulates, 'Every unit or individual has the obligation to protect the environment and the right to accuse and bring a complaint before the court against a unit or an individual that or who has caused pollution and damage to the environment.' This describes the responsibility of units and individuals.

The National Environmental Protection Agency is a comprehensive, professional organisation with the following major responsibilities:

- to formulate laws, decrees, rules and regulations for environmental protection;
- to draft the regulations and measures of environmental management;
- to define the program of environmental protection;
- to formulate environmental standards;
- to supervise the work of environmental pollution prevention and control;
- to encourage education in environmental protection science;
- to promote research and development in the technology of environmental protection;
- to organise national and international cooperation in relation to environmental protection.

The organisation of environmental protection

Directly under the State Council, the Commission of Environmental Protection researches and formulates the guiding principles and policies for national environmental protection; it also develops environmental plans and requirements and supervises and coordinates the work of environmental

protection for the entire nation. The National Environmental Protection Agency is the administrative body of the Commission of Environmental Protection. Administrative departments for environmental protection are established in local people's governments. In villages and towns there are part-time and full-time assistants responsible for environmental protection.

The importance of environmental protection

Environmental issues have come to feature prominently on the agenda of the Chinese Communist Party and the people's governments. On behalf of the State Council, Premier Li Peng declared environmental protection to be a National Basic Policy at the Second National Conference on Environmental Protection in 1983.

Environmental supervision

A system of environmental supervision as the basic guarantee of enforcement of environment protection laws has been established. This involves administrative supervision, supervision by the People's Congress, and supervision by the people.

The administrative departments responsible for environmental supervision and their areas of responsibility are determined in Article 7 of the Environmental Protection Law of the People's Republic of China. According to this Article, departments responsible for environmental protection at all levels of government, and other administrative organisations that exercise the power of environmental supervision on the basis of the law, can investigate any illegal environmental activities within their jurisdiction and use administrative sanctions to redress the situation. This system has been on trial in a number of cities since 1985. The city governments appoint highly qualified environmental management staff to exercise the power of supervision on behalf of the Government.

The People's Congress supervises the Government's work of environmental protection by examining plans of development and discussing important social and economic problems. It also organises inspection parties to supervise the enforcement of environmental protection laws and ensures implementation of environmental laws by supervising the judiciary.

Supervision by the people is important in ensuring the implementation of environmental laws. Public organisations and networks of environmental supervisors have been established in a number of cities.

1.2 Legal framework

System of environmental laws

The Constitution of the People's Republic of China is the basis for Chinese environmental laws and the legal foundation of all laws. The Environmental Protection Law of the People's Republic of China is the basic law for environmental protection and the legal foundation for all other environmental laws. Figure 1 shows the system of Chinese environmental protection laws.

Criminal law and environmental protection

Chinese criminal law makes no special provision for environmental crimes. Determination of sanctions is made on the basis of articles that relate to the environment in the criminal law, such as crimes endangering public safety, sabotaging the socialist economy, violating property, violating social order, and negligence.

Clear provision is provided for the punishment of environmental offences in most current environmental laws. Article 43 of the Environmental Protection Law of the People's Republic of China provides as follows:

Should any violation of this law give rise to a serious environmental pollution accident leading to any grave consequence of heavy public or private property losses, or serious injury or death, the persons holding direct liability shall be prosecuted in accordance with the Criminal Law.

Article 44 of the Environmental Protection Law provides that,

Should any violation of this law cause damage to natural resources such as land, forests, grassland, water, minerals, fisheries and wild animals and plants, the persons holding direct liability shall be subject to legal liabilities specified by the relevant laws.

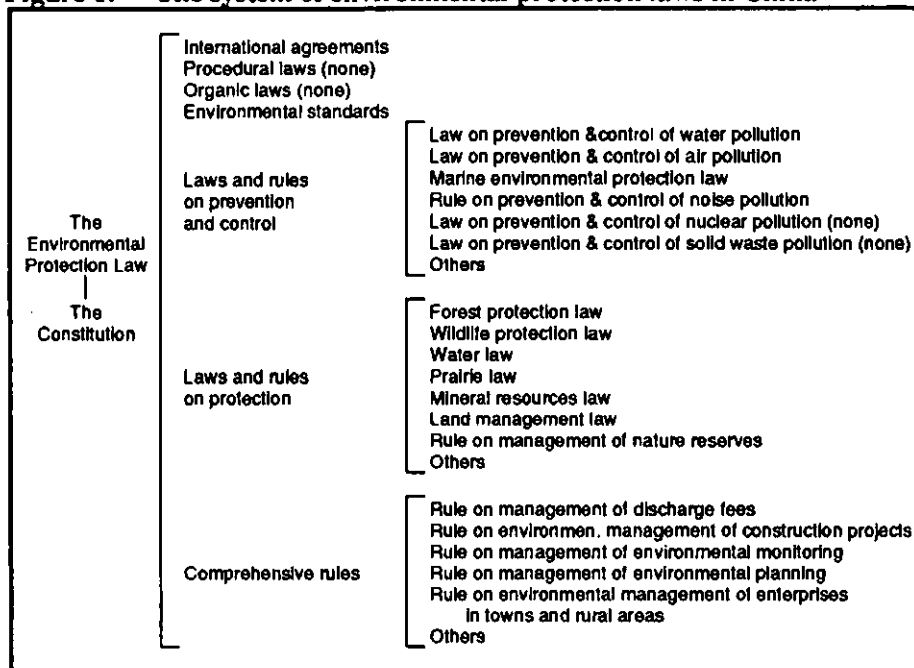
And Article 45 provides that,

If environmental protection supervisory and administrative persons abuse their power, neglect their duty and bend the law for private gain, they shall be subject to disciplinary sanctions. If they have committed crimes, they shall be prosecuted according to the Criminal Law.

Clearer stipulations for the punishment of environmental crimes are provided in laws specifically dealing with environmental protection, such as those dealing with the prevention and control of air and water pollution. Punishment is determined chiefly in light of Articles 115 and 187 of the Criminal Law. Article 115 provides as follows

If anyone violates the regulations on the control of explosive, inflammable, radioactive, poisonous or corrosive materials and thereby causes a serious accident during the production, storage, transportation or use of those materials, and serious consequences result, he shall be sentenced to fixed-term imprisonment of not more than three years or criminal detention. If the consequences are especially serious he shall be sentenced to fixed-term imprisonment of not less than three years and not more than seven years.

Figure 1: The system of environmental protection laws in China



Article 187 provides,

Any state functionary who, because of neglect of duty, causes public property or the interests of the state and the people to suffer heavy losses shall be sentenced to fixed-term imprisonment of not more than five years or criminal detention.

No information about proposals for amendments to environmental legislation was available at the time of preparation of this report. It is, however, commonly held that environmental crimes and their sanctions should be defined in environmental legislation and that an independent chapter on

environmental crimes should be added to the existing Criminal Law. It appears that the first option is unlikely because the basic law and most special environmental protection laws have already been established. It is said that the Legislation Committee of the People's Congress is considering amending the Criminal Law and plans to add a specific article on environmental crimes.

Although the practice of environmental courts is now being trialled, in most regions environmental cases are still heard by civil, administrative and criminal courts. Government departments responsible for environmental protection impose administrative sanctions for environmental offences and resolve environmental disputes. The civil courts also hear cases of environmental disputes, while administrative courts hear cases involving environmental administrative disputes. There is no procedural law relating to environmental protection in China.

1.3 Environmental problems

In general, China's environmental problems arise from urban pollution and agricultural pollution in rural areas.

Urban pollution

Urban pollution mainly involves water, air, solid waste, and noise pollution.

Most urban surface water is polluted, and ground water in some regions is polluted to various degrees. The pollution is mainly caused by emissions from paper mills, printing and dyeing factories, and the chemical industry; household sewage is also a prominent contributor. The pollution is mainly organic.

Urban air quality does not in general reach the standards set by the state. Pollution in the north is more serious than in the south, and the rate of increase in pollution in medium-sized and small cities is more rapid than in large cities. Urban air pollution is mainly the result of coal burning by industry and power stations, and domestic cooking and heating. The pollutants are mainly dust and sulphur dioxide.

The quantity of solid waste generated in urban areas is increasing year by year but treatment capacity and opportunities for alternative uses of solid waste are very limited. Consequently, solid waste occupies more land and causes serious continuing pollution. The major contributors are industrial solid waste (coal ash, tailings, and so on) and domestic garbage.

Urban noise pollution is also very serious. The main contributors are traffic, industrial activity, and daily domestic life. Noise levels exceed national standards in most urban areas and the situation is deteriorating.

Agricultural pollution

The use of pesticides and chemical fertilisers is increasing day by day, resulting in very serious pollution of water. Soil erosion and desertification are emerging as serious problems in many parts of China as a result of deforestation, creating farmland by filling up lakes and seas, and the destruction of mountain vegetation and grasslands during the 1960s and 1970s. In recent years, the development of industry in towns and rural areas has brought with it further serious problems.

1.4 Public awareness

The increase in the number and severity of environmental problems—especially global environmental problems—has strengthened public awareness of the environment. The public's criticism of polluting activities is growing and the media are reflecting this. The public is also being encouraged to participate in environment protection. A number of potentially polluting projects have been abandoned because of public awareness and opposition.

2 SANCTIONING STRATEGIES

Law enforcement for environmental protection began in China in 1979, after promulgation of the first Environmental Protection Law. There are two basic approaches to enforcement. First, the party can take an environmental offender to the People's Court and the People's Court determines the sanction according to the law. Second, the party can ask the National Environmental Protection Agency to take legal action against the offender. The National Environmental Protection Agency can also act on its own initiative.

Environmental law enforcement has been strengthened by the gradual improvement of environmental legislation, which is a result of growing government and public awareness of the importance of environmental protection. Sanctions for environmental offences can be administrative, civil or criminal. In practice, administrative sanctions predominate. Table 1 shows enforcement results for a city in Sichuan Province from 1986 to 1989. It can be seen that both the number of cases and the length of time taken are decreasing.

Table 1: Enforcement results for a city in Sichuan Province, 1986-1989

Year	No. of cases settled		No. of cases unsettled		Average no. of days per case settled	
	Administrative organisation	Court	Administrative organisation	Court	Administrative organisation	Court
1986	13	8	11	6	180	47
1987	14	10	12	7	134	41
1988	20	5	7	3	88	33
1989	19	4	5	1	63	27

In general, public knowledge of environmental laws is deficient. This results in, on the one hand, many environmental offences going unreported and unprosecuted, and, on the other hand, extreme retaliatory measures being taken (such as damaging the equipment of an enterprise causing pollution). Lax enforcement is also common.

The scope of protection provided by environmental law is very broad. No matter who it is that pollutes or damages the environment, he or she will become the defendant according to the Environmental Protection Law. In the process of enforcement, three kinds of environmental lawsuits are used: administrative, civil and criminal.

Administrative lawsuits are used by individuals, legal persons or organisations when they believe the activities of environmental administrative organisations have violated their rights. The administrative department responsible for environmental protection is the defendant in these cases. Such suits are becoming increasingly common. Civil lawsuits are used by the victims of environmental pollution when their environmental rights are being or may be violated. Cases of this kind are treated according to civil procedure. Criminal lawsuits can be brought by the People's Procurator against environmental offenders. Cases of this kind are treated according to criminal procedure.

Each region formulates its own by-laws, in keeping with its regional characteristics and in accordance with national punishment policies. Similarly, each region uses national standards as the basis for determining regional emission standards on which administrative punishments are based. Sanctioning strategies differ in response to differing regional needs.

Administrative sanctions include warnings, the circulation of criticism, fines, closure of the workplace, cessation of production, and relocating the enterprise. Administrative sanctions may be imposed on responsible persons

and legal persons. Civil sanctions include cessation of the infringing activity, removing the offending obstacle, eliminating the danger, restoration, rehabilitation and payment of compensation. Criminal sanctions include detention and fines.

2.1 Relevant national (administrative, civil and criminal) sanctions

Protection of water quality

Articles 37, 38 and 39 in the Law of the People's Republic of China on the Prevention and Control of Water Pollution provide for sanctions including warnings, fines, treating the pollution within a specified time, closure of the workplace, and disciplinary action for the persons responsible. Environmental protection departments by themselves can administer sanctions such as fines and warnings; orders to treat pollution within a specified time and for closure of the workplace are usually issued by local government. Disciplinary action is carried out by higher level administrative organs or the unit of the interested persons. Article 41 of the Law prescribes civil sanctioning terms and describes the procedure for settling disputes. It also makes provision for exemption. Article 43 states,

Any person who violates this law, causing serious water pollution and great loss to public and private property, or injuries and deaths, will be investigated for criminal responsibility according to Article 115 or 187 of the Criminal Law.

Additionally, Articles 41 and 42 of the Law of the People's Republic of China on the Protection of the Marine Environment prescribe administrative and civil sanctions for marine pollution. Article 44 provides for criminal punishment in the following terms:

Any person directly responsible for the violation of this law by polluting and damaging the marine environment, resulting in great official and private property loss, or injuries and deaths, will be under criminal sanction by judicial departments.

Control of air and noise pollution

Articles 31, 32 and 33 of the Law of the People's Republic of China on the Prevention and Control of Air Pollution make provisions for administrative sanctions in relation to air pollution that are similar to those in the Water Pollution Prevention and Control Law. Article 36 provides civil sanctions, Article 37 provides for exemption, and Article 38 prescribes criminal sanctions: 'Any person directly responsible for any serious air pollution that leads to great official and private property loss, or personal injuries and

deaths, will be convicted according to Article 115 or 187 of the Criminal Law.'

Articles 36, 37, 38, 39 and 40 of the Regulations of the People's Republic of China on the Prevention and Control of Noise Pollution provide for administrative sanctions; Article 38 stipulates that the sanctions are to be enforced by police departments. Article 43 provides for civil sanctions while Articles 41 and 44 provide for criminal sanctions. The terms are similar to those prescribed in the Water Pollution Prevention and Control Law.

Waste disposal

China has no specific law relating to the prevention and control of solid waste. In practice, some articles in the Environmental Protection Law of the People's Republic of China have been referred to in dealing with these cases. The Managing Regulations of the People's Republic of China on Marine Waste Dumping make detailed provision for sanctioning offences involving marine waste dumping. For example, Article 17 stipulates,

Any person who violates these Regulations, causing marine environmental pollution will be ordered to treat the pollution within a specified time, to pay the cost of removal, to compensate any aggrieved party for losses caused by the pollution, and will be given a warning or be subject to a fine of 100 000 yuan or less, according to the circumstances and the degree of the damage.

Article 21 stipulates that the person directly responsible for violating the Regulations, causing pollution and damage to the marine environment, which results in property loss, or injuries and deaths, will be subject to criminal sanctions by judicial departments.

The protection of flora and fauna

Many laws specifically dealing with the protection of flora and fauna have been promulgated; for example, the Law of Forests and the Law of Grasslands. Detailed sanctions are also prescribed, although under the Environmental Protection Law only Article 44 makes prescriptions.

2.2 Specific criminal law provisions regarding environmental protection

The environmental rights of the citizens of the People's Republic of China are enshrined in legislation; for example, Article 1 of the Environmental Protection Law and Article 98 of the General Rules of the Civil Law. The environment is humankind's property, to be shared by all generations. Administrative and civil laws are very important in securing the right but they do not suffice. The criminal law must also be used.

Environmental pollution and ecological damage can be regarded as crimes, since they have the potential to cause great damage to society. In the absence of appropriate criminal laws, environmental crime will continue, seriously compromising the rights of the citizenry.

The deterrent force of the criminal law and its social effects cannot be matched by administrative and civil laws, which are usually applicable to general illegal activities and are insufficient for serious crime. Indeed, it was to punish these serious crimes of all kinds that the criminal law was created. The field of environmental protection is no different.

Basic patterns of environmental protection under criminal law

In essence, the general elements of environmental crime are the same as those of other crimes. According to criminal and environmental protection laws, the 'crime subject' generally means a natural person, but a legal person can also become the crime subject under the Law on the Protection of Wild Animals. In terms of the subjective elements of environmental crime, activities causing damage to the environment are mostly deliberate; activities causing environmental pollution are mostly unpremeditated.

As far as the object of environmental crime is concerned, since the rights of property ownership and personal and environmental rights are infringed upon by environmental damage, it presents complex characteristics.

The objective elements of environmental crime refer to the pollution and damage of the environment and their harmful social effects. In China, environmental offences that cause a heavy loss to public or private property and endanger public safety are regarded as environmental crimes; they are not treated as crimes unless special provisions are provided by the law.

In China, no explicit terms exist yet that distinguish between illegal environmental activities and environmental crimes. From the point of view of environmental legislation, the principle of analogy is usually adopted in defining environmental crimes. In the practice of law enforcement the harmful consequences of the illegal environmental activities are used as a criterion for judgement. The consequences usually refer to the direct ones. As to what kind of consequence can determine the criminal aspect of the case, the legislation simply states that those illegal activities that result in personal injuries and death or in great loss to public and private property should be investigated to ascertain the criminal responsibility of the offender.

Both intentional and negligent offences exist among illegal environmental activities. Whether or not it is intentional, the offence must be punished under criminal law if its consequence is serious and constitutes a crime.

No provisions on attempted crime are given in Chinese environmental legislation. In the practice of law enforcement, attempted crimes will receive mitigated punishment, according to article 20 of the Criminal Law.

In China, environmental crime usually occurs in the form of pollution incidents, so the causality is evident. Legal responsibility for dealing with incidents other than pollution is largely a civil matter, and the principle of cause and effect is used in law enforcement for such cases.

Possible exemptions from punishment

Article 13 of the Criminal Law stipulates that harm resulting from irresistible or unpredictable causes cannot be treated as a crime. The Environmental Protection Law makes similar provision; for example, Article 41 stipulates, 'If environmental pollution results entirely from irresistible natural disasters and cannot be averted even after reasonable measures have been promptly taken, the party concerned shall be exempted from liability.'

Additionally, sentence mitigation and exemption from punishment may occur on the basis of practicalities, such as the degree of damage or the lawbreaker's attitude. Generally, even if the pollution is serious but does not cause obvious damage, the party concerned might be exempted from criminal liability but must be investigated for administrative responsibility. Pollution caused by discharges exceeding national discharge standards is generally exempted from administrative liability but will be subject to civil liability. A person who commits a crime but sincerely admits his or her guilt may receive a mitigated sentence. A person who, under urgent circumstances and in the interest of the state or of self-protection or the protection of others from danger, takes emergency measures that cause environmental damage will be exempted from criminal liability.

Criminal punishment

In the absence of appropriate provisions in the Environmental Protection Law, sanctions for environmental crimes are based on criminal law where both principals and accessories may be liable. In the Criminal Law the article on environmental protection stipulates three main criminal punishments: criminal detention, the levying of fines, and imprisonment.

Article 115 of the Criminal Law applies to environmental crimes. It provides for criminal detention or from one to three years' imprisonment. In serious cases three to seven years' imprisonment can be imposed, although the authors found no evidence of this having occurred. Under Article 187 of the Criminal Law one to five years' imprisonment or criminal detention can be imposed.

Persons who hinder, by violence or menace, public officers when those officers are carrying out their duties will be sentenced to three years' imprisonment or less, or be detained, fined or deprived of their political rights, according to Article 157 of the Criminal Law. There is no legislation dealing specifically with continuing crime, recidivism, and environmental crime. In practice, sanctions can only be prescribed according to criminal law.

Administrative law and regulations make provision for a variety of sanctions, such as payment of compensation, increased fees for excessive charges, fines, closure of the workplace, cancellation of licences, and disciplinary measures against legal and directly responsible persons.

Sanctioning difficulties

The object of sanctions can be an enterprise, an institution, an individual (natural person) or a legal person. All can be the subject of administrative sanctions; enterprises, institutions and individuals can be the subject of civil sanctions; and individuals can be the subject of criminal sanctions. The question of whether legal persons can be subject to criminal sanctions is a matter for dispute, although the Law on the Protection of Wild Animals provides that legal persons can bear criminal liability.

In cases of infringement by management personnel responsible for environmental monitoring, the legislation makes clear provisions. For instance, Article 39 of the Environmental Protection Law provides, 'Administrative personnel responsible for environmental monitoring who abuse their powers and neglect their duty will be given disciplinary sanction; those committing a crime will be investigated for criminal responsibility according to the law.' The authors found evidence of several such administrative cases, but no evidence for the use of criminal sanctions.

Additionally, if foreign citizens commit environmental offences in China they can be punished according to international standards and Chinese legislation.

2.3 Environmental protection under criminal law as related to administrative and civil law

Environmental protection under administrative law and regulations

Article 7 of the Environmental Protection Law regulates environmental protection organisations: 'The State Council's administrative department in charge of environmental protection supervises and manages the entire country's environmental protection affairs in an integrated manner.'

In addition to the National Environmental Protection Agency, environmental management offices have been established in other ministries, departments and institutions. Article 7 of the Environmental Protection Law also stipulates,

The national administrative department for marine management, harbour superintendency administration, environmental protection departments in the armed forces, and the administration of public security, communications, railway traffic and civil aviation can also supervise the control and treatment of environmental pollution on the basis of relevant laws.

Both the National Agency and local administrative departments for environmental protection monitor environmental pollution and ecological destruction in light of the national Environmental Protection Law and associated regulations, standards and rules. At present, local environmental monitoring offices play the main role in local monitoring and enforcement. Their principal task is to ensure that national and local environmental protection laws, regulations, policies and rules are adhered to, and to monitor and inspect and, when necessary, take action against illegal activities.

Other ministries and commissions under the State Council—such as the Chemical Industry Ministry, the Metallurgy Ministry, the Water Conservation Ministry and the Forest and Agriculture Ministry—also monitor and enforce environmental protection standards within their own jurisdictions.

The environmental administrative law and regulations are made in accordance with the national Constitution and environmental protection laws such as the Environmental Protection Law, the Air Pollution Prevention and Control Law, the Water Pollution Prevention and Control Law and the Marine Environmental Protection Law. As well as establishing the regulatory framework, such legislation and regulations create standards with general binding force. The administrative laws and regulations for environmental protection are made and revised by the State Council; administrative rules are set by the administrative organs under the State Council (such as the National

Environmental Protection Agency); local laws and regulations are set by provinces, the capital cities of provinces, or the People's Congress or its Standing Committee in some bigger cities approved by the State Council. These local laws and regulations must not conflict with the national Constitution, administrative and other laws and regulations, and are applicable only within local administrative areas.

With administrative laws and regulations, legal liability is usually limited to administrative responsibility (such as a warning or an administrative fine) and civil responsibility (such as the payment of compensation or eliminating the harm). There are fewer regulations involving criminal responsibility.

The People's Court judges environmental cases mainly according to the laws issued by the National People's Congress or its Standing Committee, the administrative laws and regulations issued by the State Council, and the local laws and regulations issued by the People's Congress or its Standing Committee in large cities approved by the State Council, or by the provinces or the capital cities of provinces.

Because China has no special criminal law relating to environmental protection, criminal sanctions for environmental offences are mainly determined by analogy. The result is that the criterion for identifying criminal acts can only be the criminal law. Definition of the boundary between administrative offences and criminal offences awaits resolution in environmental legislation. There is, however, one guiding criterion: activities that violate administrative laws and regulations and result in serious pollution accidents, losses to public property, and injuries and deaths can be adjudged criminal offences.

Administrative permissions and exemptions

In administrative law enforcement, permissions and exemptions can be issued. There are many prescriptions for this in current administrative laws and regulations on environmental protection. For example, Article 22 in the Enforcement By-laws of the People's Republic of China on the Prevention and Control of Water Pollution stipulates, 'When ships in harbour wish to dispose of waste, application must be made in advance to the navigational administration. Upon receipt of permission, such disposal can be carried out within an assigned area.'

The permission of administrative organs approximates the legalisation of polluting and damaging behaviour: activities that are harmful to the

environment can become legal if the law enforcement organs give their permission. Without such permission, however, they will be illegal.

The complexity of pollution activities (for example, their cumulative nature) means that the granting of administrative permission is incapable of ensuring that discharging activities do not harm the environment. Take, for example, a steelworks in Guangxi Autonomous Region. The waste water discharged from the steelworks conformed with the national standard but obviously polluted a local river. As a result, the local environmental protection bureau levied on the steelworks a fine of 100 000 yuan, as an administrative penalty. The steelworks refused to pay the fine and took the matter to court. The court confirmed the original decision on the basis of the consequences of the pollution.

Environmental protection under civil law

Article 124 of the General Rules on Civil Law of the People's Republic of China stipulates, 'Any person who violates the national regulations for the protection of the environment against pollution, causing environmental pollution and injuries and deaths, shall be liable to civil responsibility according to law.' Article 41 of the Environmental Protection Law of the People's Republic of China provides, 'Any person who has caused an environmental pollution hazard has the responsibility to eliminate it and to compensate the unit or individual that suffered direct losses.' Clear regulations about civil liability for environmental pollution are also provided in other environmental laws concerning water and the sea.

Two kinds of civil liability are applicable to the treatment of environmental cases. One is removing the impairment, including stopping the infringement, eliminating the pollution, and restoring the damaged environment; another is paying compensation for losses incurred. The particularity and complexity of environmental issues affect civil liability procedures in a number of important ways, as follows.

Liability without fault

Many environmental regulations deal with the concept of liability without fault. It is also widely used in judicial practice. Statistics for Chongqing City in 1988 reveal that 21 cases were treated as matters of liability without fault, which is 67.8 per cent of all the civil cases involving environmental pollution.

Inference of causality

There are no clear stipulations about inference of causality in environmental laws, but the concept is widely applied in judicial practice. For example, the symptoms of lead poisoning became apparent in the suburbs of a particular city. After ruling out the possibility of excesses of lead in the soil and in food, it was discovered that the lead concentration in the air was seven times greater than the national standard and that the cause was waste gas being emitted from a lead-smelting plant. It was inferred that a causality existed between the waste gas and the poisoning, and the court ordered that the plant pay compensation.

Shifting the burden of proof

The concept of shifting the burden of proof is used in environmental legislation and by the courts in China. An examination of the results of 124 civil cases of environmental damage shows that 83 are emergent pollution cases with clear evidence and facts and allowing for straightforward proof, while the other 41 cases involved prolonged and cumulative effects, which necessitated shifting the burden of proof to the defendant.

Exemptions

The law contains articles providing for exemption from civil liability in the following circumstances:

- an act of war;
- irresistible forces (such as a natural disaster);
- the fault of a third person;
- a victim's own fault.

The system of liability without fault does not apply in these cases.

Lawsuit prescriptions for civil cases

The General Rules on Civil Law of the People's Republic of China provide for two kinds of civil lawsuit prescriptions: the general prescription (two years) and the special one (from one year to 20 years). In accordance with the complexity of environmental pollution damage, Article 42 of the Environmental Protection Law of the People's Republic of China stipulates, 'The lawsuit prescription for cases of environmental pollution damage is a period of three years from the time when the party knows or should know that he or she suffered from the pollution.'

2.4 Organisation of public control and its significance in the field of environmental criminality

Procuratorial and public security organisation

Procuratorial and public security organisations mainly participate in criminal lawsuits and do not become involved in civil and administrative suits. Since China has no specific criminal law on the environment and there are no specific articles dealing with environmental protection in the criminal law, procuratorial and public security organisations treat environmental criminal cases largely according to Chinese criminal law and criminal procedure law. Cases of this kind are, however, few and, of them, cases of damaging natural resources are the most prominent.

Group litigation

Group litigation is not provided for in current environmental legislation, although it is being experimented with in judicial practice.

Administrative courts

The complexity of environmental pollution and the limits of science and technology make it difficult for administrative departments responsible for the environment to be reasonable and moderate in determining sanctions. As a consequence there have been many appeals against administrative sanctions. For example, a brewery polluted a nearby vegetable garden in November 1990 and the environmental protection department imposed the following sanctions: 33 735 yuan to be paid in compensation by the brewery; a 5000 yuan fine on the brewery; a 100 yuan fine on the legal person, and an obligation on the brewery to treat the pollution within a specified time. The brewery took the matter to court; it was accepted and tried according to administrative procedures, and the court decided to uphold the first and second sanctions but to overturn the third and fourth. According to Chinese environmental law, only higher level organisations have the right to impose disciplinary sanctions such as fines on legal persons, and an order of treatment within a specific time can only be issued by the higher level People's Governments—environmental protection departments do not have this authority.

3 ENVIRONMENTAL CRIMINALITY UNDER INTERNATIONAL CRIMINAL LAW

3.1 Scope of protection provided by the law of environmental offences

The increase in the number of cases of cross-border environmental pollution, and the growing importance of global environmental issues, mean that domestic environmental legislation is insufficient to prevent pollution and protect the environment. Global cooperation is more necessary and desirable than ever before. International cooperation must be strengthened by making bilateral, multilateral and even global environmental protection laws and agreements. At present China has agreements with other countries in five areas:

- the protection of water sources and the prevention of cross-border contamination of rivers and lakes;
- the impacts of cross-border air pollution;
- conservation of living and natural resources;
- protection of the marine environment;
- global environmental issues.

Legal cooperation with other countries

China is located in eastern Asia. Because of its geography and climate and its traditional distribution of industry, no disputes have arisen about cross-border pollution and other serious environmental issues. As a result China has not signed any bilateral or multilateral agreements on the control of air, land and water pollution, but it is a party to many agreements on marine environment protection and global environmental issues; for example, the International Convention on Civil Liability for Oil Pollution Damage (Brussels 1969, as amended London 1976), the Protocol of 1978 relating to the International Convention on the Prevention of Marine Pollution from Ships (MARPOL) (with the exception of several annexes thereto), the United Nations Convention on the Law of the Sea (Montego Bay 1982) and the Antarctic Treaty (Washington 1959).

3.2 Principles of jurisdiction under environmental law

Cases concerning foreign countries and foreign nationals

Most of China's environmental protection laws stipulate that any offence, within the limits of those laws, by any organisations or individuals, foreign or domestic, must be penalised. In keeping with international practice, the second article of the Marine Environmental Protection Law provides as follows:

This law is also applicable to cases of the emission of harmful substances and the dumping of wastes outside the territorial waters of the People's Republic of China that cause pollution within China's territorial waters.

For instance, a Hong Kong-based oil tanker had a collision in international waters with a Dutch oil tanker and a large quantity of oil leaked out, heavily polluting Chinese territorial waters. The Chinese Government took legal action against the polluters and they were obliged to pay compensation for the damage.

The authors found no evidence of cases of criminal sanctions being imposed for environmental offences of international relevance.

Polluting behaviours by Chinese citizens and organisations in international waters are subject to sanctions under the relevant international conventions. In this situation the jurisdictional practice of the nation in question will generally be followed.

3.2 Cases of border-crossing water contamination and air pollution

China is not a signatory to any agreements concerning cross-border water contamination and air pollution, and no cases of such disputes have yet arisen.

3.3 Relevant international agreements

On 2 October 1983 China became a party to the Protocol of 1978 relating to the International Convention on the Prevention of Marine Pollution from Ships but signed only Annexes 1 and 2.

China has also ratified the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London, Mexico City, Moscow, Washington 1972) but is not a party to the Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircrafts (Oslo 1972) and the Convention on the Conservation of the Living Resources of the South-east Atlantic (Rome 1969).

3.4 Bilateral agreements

China has signed two bilateral agreements, the Agreement Between the People's Republic of China and Japan Regarding the Protection of Migratory Birds and their Habitats and the Protocol on Cooperation in Environmental Protection Sciences and Technology between the People's Republic of China and the United States of America.

China has not signed any bilateral agreements relating to environmental legal cooperation, although it has organised academic exchanges in this field, such as the Sino-American Academic Exchange Conference on Environmental Law, held in Beijing in 1982, and the Sino-Japanese Academic Exchange Conference on Environmental Law.

4 ENFORCEMENT

4.1 Empirical data

The authors obtained from environmental protection agencies, justice departments and the media information about 1217 cases of environmental pollution. These cases involve 21 provinces, autonomous regions or municipalities, covering 70 per cent of the total area of China. All coastal provinces and cities are included. Of these cases, 322 were analysed in detail; 40 of the 322 cases are cited in Attachment A as being typical examples of administrative, civil and criminal cases. Most environmental offences in China can be placed in one of four categories:

1. environmental offences committed during development and construction, such as pollution and damage caused by abuse of natural resources and production activities at environmentally sensitive sites.
2. environmental offences committed in the process of materials storage, transportation, production and management, such as excessive discharge of pollutants, pollution accidents, and polluting behaviours in marine production, communication and transport;
3. environmental offences relating to the public environment and the conservation of resources, including the destruction of places of historical and cultural interest and of rare and endangered species;
4. offences of non-compliance with the administrative sanctions imposed by environmental protection agencies, such as failure to comply with the system of environmental impact assessment and refusing to pay discharge fees or fines.

Details on the 4 categories described above are provided in Table 2.

Environmental offences in category 2 cover 66.8 per cent of all the offences under analysis. This means that environmental offences mainly occur during the process of materials storage, transportation, production and management. For category 3 there are 35 criminal cases, or 60 per cent of the cases in this category. These criminal cases are mainly offences of damaging

places of historical interest and rare species. In the classification on the basis of environmental elements, there are 228 cases of air, water and solid waste pollution, of which 72 per cent are administrative cases, 25 per cent are civil cases, and only 3 per cent are criminal cases.

Table 2 Classification of and statistics for cases examined, by category and environmental component

Classification	Administrative	Civil	Criminal	Total	% of all cases
Category 1	13	0	0	13	4.0
Category 2	146	61	8	215	66.8
Category 3	23	0	35	58	18.0
Category 4	36	0	0	36	11.2
Total	218	61	43	322	100.0
Environmental component					
Air	48	15	2	65	20.2
Water	101	38	5	144	44.7
Solid waste	15	3	1	19	5.9
Noise	9	5	0	14	4.4
Other	45	0	35	80	24.8
Total	218	61	43	322	100.0

Although the analysis reveals a low percentage of criminal cases, criminal sanctions play an important role in environmental protection. Criminal sanctions are a necessary means of protection of the environment because they allow for effective punishment of wilful polluters who have done great damage to the environment, causing heavy losses of life and property. Criminal sanctions are also a supporting measure because they are mainly applicable to serious environmental offences, while most environmental offences are general matters of administrative and civil liability. The criminal sanction alone is not enough to settle all environmental offences.

Offences of international relevance

Cases including foreign organisations and nationals are rare in China's juridical experience relating to environmental protection. Among the 322 cases analysed, only six involved foreign organisations or nationals: four of these took place at sea and the other two involved the production activities of a foreign organisation and a foreign investment enterprise. Since the offences

were committed within the effective scope of Chinese law, sanctions were imposed under that law. One such offence involved marine environment pollution that occurred in international waters but polluted Chinese territorial waters: this matter was dealt with under the Marine Environmental Protection Law. In some cases of oil pollution at sea, judgments referred to relevant international agreements to which China is a party.

Trends in public prosecution of environmental offences

Once polluted or damaged, the environment is rarely capable of total restoration, and so prevention of environmental offences is very important. Further, technical problems associated with environmental sciences make it difficult to estimate precisely the extent of damage, the future impacts of damage, and so on. These two factors, and the requirements of environmental law and the specific national characteristics of China, are giving rise to a number of trends in the public prosecution of environmental offences.

Generally, in proceedings against non-environmental offences, only those directly involved in a case are entitled to bring administrative and civil lawsuits. The environment, however, is what one might call 'public property', rather than the property of any individual. Thus environmental laws will not provide effective protection for the environment if standing for bringing suit is strictly limited, as in traditional proceedings against non-environmental offences. As a consequence, Article 6 in China's Environmental Protection Law stipulates, 'Every individual and institution has a duty to protect the environment and the right to report and charge any environmentally polluting and damaging behaviours by any person or any institution.' This principle is widely adopted in judicial practice in China. The authors found many cases of this type. For example, a chemical factory in Hunan Province discharged pollutants into a river and a citizen brought a suit against the factory. Although this citizen was not the owner of the river, the case was nevertheless prosecuted.

In recent years, group prosecution has become popular, in keeping with the extension of standing. Although there is no legislation dealing with group prosecution of environmental offences, it is accepted in judicial practice. For instance, an optical instruments factory made great noise and emitted large quantities of acid fog, seriously polluting the surrounding environment. About 100 residents of the area took a group action against the factory. The intermediate People's Court accepted the case and ordered the factory to relocate within a specified time.

The Environmental Protection Law makes several provisions in relation to double and multiple sanctions. For example, Article 38 stipulates that, in addition to sanctions on responsible enterprises and institutions, those people in the positions of greatest responsibility must also be sanctioned. In judicial practice, the more popular type of sanction is multiple sanctions, simultaneously imposed on the enterprise, the responsible person or persons, and the legal person of the enterprise. Many examples of this are provided in Attachment A.

4.2 Perceived effectiveness of sanctions

Conciliation versus punishment

The conciliation system originated in China: non-government conciliation can be traced back to the Zhou Dynasty (about the eleventh century BC). Since the founding of the new China in 1949, the conciliation system has developed rapidly. The total number of professional conciliators has reached 5 million, and these conciliators settled 32 510 000 civil disputes between 1981 and 1985.

In recent years the conciliation system has been widely used for dealing with environmental disputes. The authors found that 75.4 per cent of environmental disputes were settled through various kinds of conciliation. The wide use of conciliation in dealing with environmental disputes stems from a variety of factors.

First, the complexity of environmental issues (the prolonged and potential impacts of pollution and environmental degradation, and the impossibility of assessing the real loss) results in a complexity in the settlement of disputes. The judicial system is strictly controlled by many procedures, such as evidence taking, loss assessment, and the measurement of sanctions, so it becomes very difficult to make precise and appropriate judgments. Conciliation is different. It is based on meeting the needs of both sides through conciliation and mutual understanding, and in doing this it obviates some of the problems caused by inappropriate judicial decisions.

Second, a sound judicial system requires precise and detailed legal backing. China's existing legislation for environmental protection is incomplete and there is no procedural law. This makes the advantages of and necessity for conciliation more obvious.

Third, monitoring and analysis techniques are inadequate. Environmental damage reveals itself in many different ways—immediate impacts, prolonged

impacts, direct impacts and indirect impacts—but usually only the immediate and direct impacts can be assessed. Many environmental disputes should therefore not be dealt with by means of a rigid judicial system. If conciliation is used the two sides to the dispute can be brought together for consultations, and this may mean that some of the problems caused by inadequate techniques of monitoring and analysis can be resolved.

Finally, the feasibility of using conciliation in China is supported by mass participation in environmental protection and in the task of conciliation. Furthermore, most environmental offences are administrative and civil matters, rather than criminal matters, and are thus more amenable to conciliation.

Compared with the judicial system, the advantages of conciliation in environmental matters are several.

First, environmental conflicts between enterprises and residents can be settled more effectively in less time. If treated through the judicial system, an environmental case generally takes several months before judgment, not only because environmental issues are complex but also because legal procedure is time-consuming. The authors found that in one particular city it took an average of five months and six days to settle an environmental matter. In contrast, statistics show that 143 000 environmental disputes were settled by local conciliation committees in 1984.

Second, conciliation encourages the fair and reasonable settlement of environmental disputes. The courts have absolute deterrent power, but they may not be absolutely fair and satisfactory to the public. In consequence victims might retaliate against the polluters. This behaviour may be regarded in law as extremist and it could be tried as a crime of sabotaging production. A good example is the well-known 'Case of the Three Mr Wus'. Mr Wu Yujun, Mr Wu Zongqui and Mr Wu Yujia were farmers living in a mining area. The mines heavily polluted the nearby farmland with solid wastes and waste water. Having made many fruitless representations to the mine authorities the Three Mr Wus organised the local farmers to retaliate by cutting off the mines' power supply and sabotaging the roads and bridges that gave access to the mines. The Three Mr Wus were sentenced to three to five years' imprisonment. The local community was angered by this, and concern was widely expressed in the media. The court was forced to change its verdict to one of 'not guilty'. The mines subsequently agreed to compensate the farmers for pollution damage.

Third, conciliation is so widely applied that it plays a very important role in spreading knowledge of the environmental legal system and improving public environmental awareness. Sometimes, through the conciliation of one dispute many people can learn a valuable lesson.

In terms of the types of polluters, conciliation and judicial punishment differ. Conciliation is mainly applicable to local environmental disputes, especially disputes between enterprises and the local residents. The polluters in such cases are mainly enterprises and the type of pollution is generally long-term, such as excessive discharge of waste. Judicial punishment is mainly applicable to serious pollution accidents, which may be caused by enterprises or may occur in the process of transport and storage of goods. Such accidents can cause direct, heavy losses and should be heard in court instead of being settled through conciliation.

Trends in conciliation

In order to further improve the conciliation system in environmental protection, efforts will be made to augment the conciliation force and strengthen its organisation, to provide conciliators with further training in environmental science and law, and to enhance the legislation pertaining to conciliation in environmental protection.

The effectiveness of levying fines

Levying fines is the most popular sanction used against environmental offenders in China. The total amount collected for polluting behaviours in 1990 was 12 060 000 yuan. Of the 322 typical cases analysed for this project there were 218 administrative cases, 172 of which resulted in the levying of fines. This is about 79 per cent of all the administrative cases. If we consider the administrative cases dealing with pollution by waste gas, waste water and solid wastes, we see that fines were applied to 152 cases, or almost 93 per cent of all such cases (see Table 3). It is thus evident that the use of fines is important in dealing with administrative cases of environmental protection. As far as civil cases are concerned, it is civil liability, not fines, that is mainly considered. Fines are also rarely applied in criminal cases of air, water and solid waste pollution.

Much pollution and environmental degradation occurs because enterprises fail to strike a balance between economic development and environmental protection. They aim at economic benefit and ignore the environment. Levying fines is the most direct punishment for such behaviour and it is a potent deterrent. The authors followed up 56 pollution cases where fines had been

imposed. Of these, only 8.9 per cent of the polluters continued to pollute; over 90 per cent of those fined took action to control or treat their pollution.

Furthermore, fines can serve as a special deterrent and as a deterrent for other polluters, particularly potential ones. Enterprises and the general public will consequently enhance their understanding of environmental issues and of the legal system. Nearly all the environmental legislation in China provides for the imposition of fines.

Table 3: Results of the follow-up survey of the cases of levying fines for pollution

Polluters' behaviour after sanction	Continuing pollution	Lightly reducing pollution	Discharging within the fixed limit	Having complete production or control	Stopping moving away
No. of cases in each type	5	7	30	8	6
% of all cases surveyed	8.9%	12.5%	53.6%	14.3%	10.7%

The effectiveness of criminal sanctions

Although most offences against the environment are not criminal offences and cannot be the subject of criminal sanctions, wilful polluters who do serious damage to the environment and cause heavy losses in property and lives are best dealt with by criminal sanctions. No other type of punishment can replace the special function of criminal law in the protection of the environment in China.

When the second case listed in Table A.3 (see Attachment A) went to public trial in the People's Court over 700 people attended. Similarly, over 500 people attended the trial of the first case. Both trials had significant repercussions among the public because the power of criminal sanctions was made evident. To impose criminal sanctions on serious environmental offenders is to educate the public, to reduce environmental crime and to protect the environment.

5 PROPOSED REFORMS

Although in a little more than a decade China has made much progress and has established a basic system of environmental legislation, the nation's rapid

economic and social development is creating greater demands for protection of the environment and further control of environmental pollution and degradation. The existing laws are no longer sufficient. In order to meet this challenge, efforts are constantly being made to improve and perfect environmental legislation in China.

In addition to the existing environmental laws, it is planned to enact the following laws:

- the Solid Waste Management Law
- the Nuclear Pollution Control and Prevention Law
- the Noise Control Law.

No independent provisions were made to define legal responsibilities in early environmental legislation in China and this made it very difficult to take legal action against many environmental offenders. In subsequent legislation such as the Law of Environmental Protection and the Law of Water Pollution Control and Prevention, efforts have been made to clarify legal responsibilities but the system remains inadequate. Further efforts will be made to define and specify legal responsibilities in environmental laws.

In early environmental legislation the definitions of criminal responsibility were often too general. Only in the legislation of recent years is it made clear that the criminal law should be referred to for the trial of environmental crimes. For example, Article 43 of the Water Pollution Prevention and Control Law and Article 38 of the Air Pollution Prevention and Control Law require that criminal responsibility be investigated in light of Article 115 or Article 187 of the Criminal Law. This new legislation has removed some procedural impediments but offers no possibility of considering the relevant characteristics of the environmental issue in question when imposing sanctions. The sanctions are often too lenient. There is an urgent need to strengthen and improve the criminal law for the punishment of environmental crimes in China. Indeed, the Law Committee of the People's Congress is considering amendments to the existing criminal law and plans to make provision for the crime of endangering the environment.

Environmental protection is regarded as a basic policy of China and is highly valued by both the Government and the people. The Chinese people's awareness of the environment is increasing. Since 1973 three national conferences on environmental protection and two conferences on urban environmental protection have been held.

Environmental protection has become an important criterion with which to evaluate the work of governments at different levels and, of course, is placed high on the work agenda of those governments. Protection of the environment by strengthening environmental management and improving the environmental legal system is becoming a prominent intention. It is evident that without an effective legal system it is impossible to protect the environment effectively.

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ATTACHMENT A

TYPICAL CASES OF ADMINISTRATIVE, CIVIL AND CRIMINAL SANCTIONS FOR ENVIRONMENTAL OFFENCES

Table A.1: Typical cases of administrative sanctions

No.	Classification	Case description	Sanctions and their legal bases
1	Air pollution	About 450 hectares of farmland were polluted by waste gases containing chlorine that were discharged by a smelter.	Article 32 of the Environmental Protection Law The polluter was fined 100 000 yuan and made to pay compensation of 300 000 yuan and an administrative criticism was issued.
2	Air pollution	About 20 hectares of farmland were polluted by sulphur dioxide that was discharged by a phosphorous manure factory.	'Rules for discharge: fees, fines and levying' (of a local government) The polluter was fined 5000 yuan and made to pay compensation of 4326 yuan.
3	Air pollution	Sulphur trioxide was discharged for 3.5 hours by an acid factory owing to an accident. About 30 000 persons were injured.	Article 19 of the Environmental Protection Law—'All smoke discharge devices must have effective measures to control smoke and dust, and the discharge of harmful gases shall be in compliance with the standards issued by the state. Article 32 of the Environmental Protection Law The polluter was fined 50 000 yuan.
4	Air pollution	A perfumery violated the regulation of environmental impact assessment and discharged gases of chlorine and hydrochloric acid, causing environmental pollution and endangering public health.	Article 6 of the Environmental Protection Law—stipulation about environmental impact assessment Article 17 of the Environmental Protection Law—'Enterprises that cause pollution of environment shall not be established in residential areas.' The factory was ordered to relocate.
5	Air pollution	A foreign movie production unit burnt leather and rubber in densely inhabited areas, causing serious air pollution.	Article 32 of the Environmental Protection Law Article 28 of the Law on Prevention and Control Of Air Pollution—'In densely inhabited areas, the burning of asphalt, asphalt felt, rubber and leather is prohibited.' A fine of 50 000 yuan was imposed on the polluter.
6	Air pollution	Gases containing nitric acid were discharged by a chemical company and serious air pollution was caused.	Article 32 of the Environmental Protection Law The company was fined 5000 yuan. The month's bonus and 5 per cent of wages were deducted from the company manager and deputy manager responsible for environmental protection.
7	Air pollution	A chemical factory discharged more than 100 kilograms of sulphur dioxide, poisoning more than 70 persons and damaging many crops.	Articles 18 and 32 of the Environmental Protection Law A fine of 50 000 yuan was imposed on the factory. The factory director was fined 40 yuan.

Table A.1 (cont'd)

No.	Classification	Case description	Sanctions and their legal bases
8	Water pollution	A large amount of toxic waste water was discharged by a chemical plant in the process of equipment maintenance. The drinking water source for 20 000 persons was polluted seriously.	Articles 19 and 20 of the Law on Prevention and Control of Water Pollution—'No new waste water outfalls shall be set up around drinking water sources. In case of pollution emergency measures must be taken.' The factory was fined 30 000 yuan and was ordered to cease production and treat the pollution.
9	Water pollution	A paper mill discharged black liquid in an accident. 108 kilometres of a river were seriously polluted.	Art. 32 of the Environmental Protection Law The paper mill was fined 50 000 yuan and made to pay compensation of 120 00 yuan.
10	Water pollution	Because of the discharge of organic waste liquid by a factory, a large amount of crops died and the direct economic losses amounted to 560 000 yuan.	Art. 32 of the Environmental Protection Law Article 37 of the Law on Prevention and Control of Water Pollution. The polluter was fined 50 000 yuan and made to pay 560 000 yuan as compensation.
11	Water pollution	Having taken no measures to prevent and control the pollution, a company had discharged waste water into an important lake for a long time, causing heavy metal pollution and seriously damaging the local aquatic product industry and agriculture.	Art. 32 of the Environmental Protection Law A fine of 2 000 000 yuan was imposed on the company.
12	Water pollution	A chemical factory discharged waste water containing yellow phosphorous and 153 kilometres of a river were polluted.	Art. 32 of the Environmental Protection Law The factory was closed down to treat the pollution and made to pay 200 00 yuan for the losses in the aquatic industry.
13	Water pollution	42 oxen and sheep were killed by waste water containing cyanide, which was discharged by a smelter.	Art. 32 of the Environmental Protection Law The factory was fined 50 000 yuan, was closed down to treat the pollution, and was made to pay all the losses.
14	Water pollution	Violating relevant law, a paper mill discharged waste water into fishing ponds, causing heavy losses.	Art. 32 of the Environmental Protection Law Regulations of Environmental Management for Construction Projects The factory was fined 3000 yuan, made to pay compensation of 25 000 yuan, and was forced to treat the pollution.
15	Water pollution	1046 persons were poisoned by waste water containing arsenic discharged by a pesticide factory.	Art. 32 of the Environmental Protection Law Provisional Regulations of Environmental Protection (of a province). The factory paid 20 000 yuan for the losses and was closed down to treat the pollution. The director received a disciplinary penalty.
16	Water pollution	A paper mill discharged 50 tons of heavy oil and caused heavy pollution.	Art. 32 of the Environmental Protection Law Provisional Regulations of Environmental Protection (of a province). The mill was fined 30 000 yuan.
17	Water pollution	An acid factory discharged acid liquid and seriously polluted a river.	Art. 32 of the Environmental Protection Law Article 39 of the Law on Prevention and Control of Water Pollution—'Enterprises and institutions violating this law, thereby causing water pollution, shall be fined.' The factory was fined 40 000 yuan and forced to repair and examine the equipment.
18	Water pollution	A tannery discharged acid waste water. Losses of aquatic products amounted to 250 000 yuan.	Art. 32 of the Environmental Protection Law Time limits were set for pollution elimination and control. The factory was forced to pay a compensation of 132 000 yuan and fined 25 000 yuan.

Table A.1 (cont'd)

No.	Classification	Case description	Sanctions and their legal bases
19	Pollution of hazardous waste	A metal company dumped a large amount of solid wastes containing heavy metals into the Yellow River, causing serious pollution.	Article 37 of the Law on Prevention and Control of Water Pollution—'Any violator of this law shall be warned or fined for dumping or discharging any pollutants or wastes.' The company was fined 5000 yuan, made to pay fivefold the fee for excess discharge, and received administrative criticism.
20	Pollution of hazardous waste	A power station discharged thousands of tonnes of coal dust into a river, causing silting and water pollution.	Article 37 of the Law on Prevention and Control of Water Pollution The polluter was fined 100 000 yuan and ordered to eliminate the pollution.
21	Pollution of hazardous waste	Solid wastes containing sulphates were dumped by an acid factory into a river, polluting drinking water sources.	Article 37 of the Law on Prevention and Control of Water Pollution The polluter was fined 30 000 yuan and time limits were set for pollution elimination and control.
22	Pollution of hazardous waste	A smelter sold arsenic ash that contained more than 20 per cent of arsenic to a village enterprise that had no ability to prevent and control the pollution. Serious arsenic pollution was caused and residents and crops were damaged.	Art. 32 of the Environmental Protection Law Article 124 of the Civil Code ² The company paid 80 000 yuan as compensation.
23	Pollution of hazardous waste	A research institution stored its radioactive waste in a village without taking any measures to prevent and control the pollution. The land and groundwater were polluted.	Art. 32 of the Environmental Protection Law Article 124 of the Civil Code The institution paid compensation of 500 yuan.
24	Violating the Rule of 'Three Same Time'	Violating the Rule of 'Three Same Time', a building material factory started production without facilities for environmental protection and caused environmental pollution.	Articles 6 and 16 of the Environmental Protection Law Article 124 of the Civil Code The company paid 20 000 Hong Kong dollars as compensation and also bore cost of producing evidence.

Note: The Environmental Protection Law cited in this table and in the following tables refers to the Environmental Protection Law of the People's Republic of China (for trial implementation) adopted in principle at the Eleventh Meeting of the Standing Committee of the Fifth National People's Congress on 13 September 1979. The formal Environmental Protection Law of the People's Republic was adopted at the Eleventh Meeting of the Standing Committee of the Seventh National People's Congress on 26 December 1989.

- Article 32 of the Environmental Protection Law: 'Units that have violated this Law and other environmental protection regulations and rules by polluting and damaging the environment and causing hazards to the people's health shall, according to the merit of each case, be criticised, warned, fined, or ordered to pay damages and stop production and control and eliminate such pollution, by the environmental protection organisation at various levels subject to the approval of the People's Government at the corresponding level. Unit leaders, persons directly responsible, or other citizens who have caused serious pollution and damage to the environment resulting in casualties or substantial damage to farming, forestry, animal husbandry, sideline production and fishery shall be held responsible administratively, economically, and even criminally, as the case may be, according to law.'
- Article 124 of the Civil Code: 'Any person who pollutes the environment and causes damage to others in violation of state provisions for environmental protection and the prevention of pollution shall bear civil responsibility in accordance with the law.'

Table A.2: Typical civil cases

No.	Classification	Case description	Sanctions and their legal bases
1	Air pollution	The raw materials of a chemical factory were seriously polluted by the dust from a company. The chemical factory claimed compensation.	Art. 32 of the Environmental Protection Law Article 124 of the Civil Code The company paid 60 000 yuan as compensation.
2	Air pollution	A chemical factory was struck by lightning and the leakage of chlorine gas poisoned by a nearby resident.	Art. 32 of the Environmental Protection Law Article 124 of the Civil Code The chemical factory paid compensation of 500 yuan.
3	Air pollution	A Hong Kong company discharged foul and toxic gases, and the noise level of production was up to 106 decibels. Local residents claimed compensation.	Articles 6 and 16 of the Environmental Protection Law Article 124 of the Civil Code The company paid 20 000 Hong Kong dollars for the loss. It also bore the cost of producing evidence.
4	Air pollution	13.5 hectares of orchard were polluted by sulphur dioxide discharged by a power station. The farmer claimed compensation.	Art. 32 of the Environmental Protection Law Article 124 of the Civil Code The power station paid compensation of 50 000 yuan.
5			Art. 32 of the Environmental Protection Law Article 124 of the Civil Code The factory paid 46 000 yuan for the loss.
6	Marine pollution	Marine pollution was caused by an oil spill when a Panamanian tanker ran into a Chinese tanker in Chinese waters. The Society of Chinese Fishers claimed compensation and demanded elimination of the pollution by the polluters.	Article 42 of the Marine Environmental Protection Law—'Units or individuals who have suffered damage caused by marine environmental pollution shall be entitled to claim compensation from the party which caused the pollution damage.' Article 124 of the Civil Code The Panamanian tanker paid compensation of US\$800 000.
7	Water pollution	A food-processing factory discharged waste water, polluting a fish pond. The owner claimed compensation.	Article 41 of the Law on Prevention and Control of Water Pollution Article 124 of the Civil Code. The food-processing factory paid compensation of 5847 yuan and bore the cost of producing evidence.
8	Water pollution	A steelworks discharged waste water into a reservoir and caused heavy losses to aquatic production.	Article 5 of the Law on Prevention and Control of Water Pollution—'Any unit or individual that has suffered losses directly from water pollution hazard has the right to claim damages from the polluter.' Article 124 of the Civil Code The steelworks paid compensation of 123 120 yuan.
9	Water pollution	A fish pond was polluted by waste water containing cyanide from a factory. The owner claimed compensation.	Article 5 of the Law on Prevention and Control of Water Pollution Article 124 of the Civil Code The factory paid compensation of 99 000 yuan and bore the cost of producing evidence.
10	Marine pollution	The territorial waters of China were polluted by 3000 tonnes of oil from a foreign tanker that ran onto rocks. China claimed compensation.	Article 42 of the Marine Environmental Protection Law CLC ¹ CRISTAL ² 17 750 000 yuan was paid for the damage.
11	Pollution of hazardous waste	A chemical factory dumped hazardous wastes on a hillside. They were washed into some fish ponds by heavy rain and the pond was polluted. The owners claimed compensation.	Article 41 of the Law on Prevention and Control of Water Pollution Article 124 of the Civil Code The chemical factory paid compensation of 50 000 yuan and bore the cost of producing evidence.

- 1 International Convention on Civil Liability for Oil Pollution Damage (Brussels 1969, as amended London 1976).
- 2 Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution.

Table A.3: Typical cases of criminal sanctions

No.	Classification	Case description	Sanctions and their legal bases
1	Water pollution	3420 tonnes of gasoline were discharged into the Yangtze River because of a sailor's operation against the rules. Serious pollution was caused.	Article 114 of the Criminal Code ¹ Article 67 of the Criminal Code ² The sailor was sentenced to two years' imprisonment with a two-year suspension.
2	Water pollution	28 tonnes of cyanide were discharged into a river by a worker ignorant of operation regulations. Serious water pollution was caused.	Article 32 of the Environmental Protection Law Article 115 of the Criminal Code ³ The worker was sentenced to two years' imprisonment.
3	Water pollution	12.5 tonnes of alkyl benzene were discharged into a river by a workman owing to dereliction of duty. Serious pollution was caused.	Article 187 of the Criminal Code ⁴ Article 67 of the Criminal Code The workman was sentenced to one year's imprisonment with a one-year suspension.
4	Oil pollution	530 tonnes of gasoline were spilled because of a workman's dereliction of duty in transportation. The losses amounted to 320 000 yuan.	Article 115 of the Criminal Code Article 32 of the Environmental Protection Law The worker was sentenced to two years' imprisonment with a one-year suspension.
5	Pesticide pollution	30 tonnes of pesticide were discharged into the environment because a manager caused a fire when smoking. Forty persons were poisoned seriously and 2000 persons were poisoned in moderation, and the losses were up to 340 000 yuan.	Articles 115 and 187 of the Criminal Code Article 67 of the Criminal Code The manager was sentenced to three years' imprisonment, suspended for three years.

1. Article 114 of the Criminal Code: 'If any staff member or worker of a factory, mine, forestry centre, construction enterprise or other enterprise or institution disobeys management and violates the rules and regulations or forces workers to work in a hazardous way in violation of the rules and thereby causes a serious accident involving injury or death and serious consequences, he shall be sentenced to fixed-term imprisonment of not more than three years or criminal detention. If the circumstances are especially flagrant, he shall be sentenced to fixed-term imprisonment of not less than three years and not more than seven years.'
2. Article 67 of the Criminal Code: 'A suspension of sentence may be granted to a criminal sentenced to criminal detention or to fixed-term imprisonment of not more than three years if, according to the circumstances of his crime and demonstration of repentance, it is considered that suspension of the sentence will not result in further harm to society. If a supplementary punishment has been imposed on a criminal whose sentence has been suspended, the supplementary punishment must still be executed.'
3. Article 115 of the Criminal Code: see 2.2 of this report.
4. Article 187 of the Criminal Code: see 2.2 of this report.

INDIA
DR Singh*

INTRODUCTION

Environmental problems have become a global concern. According to Hillary, quoting the experience of former Soviet Foreign Minister, Eduard Shevardnadze,

Environmental problems not only cross borders with impunity but challenge long-cherished tenets of international relations—particularly the assumption that nations have complete dominion over matters within their boundaries. In the same year as the Chernobyl nuclear reactor explosion, an enormous spill of dyes, insecticides and mercury caused by a fire at a Basel, Switzerland, warehouse, killed fish and other aquatic life along 300 kilometres of the Rhine river which passes through four countries. Around the same time, massive quantities of hazardous waste were being hauled from Europe to the Nigerian fishing village of Koko, where an Italian waste broker had successfully bribed unwitting villagers into accepting it. Some 8000 drums of the deadly stuff were found in an open field, children playing among them. Such incidents illustrate how easily environmental threats now violate boundaries—whether by air, water or human transport. Wind currents, rain patterns, rivers and streams carry pollutants hundreds, even thousands, of kilometres from their sources. Some 200 river basins are shared by two or more countries. On an even larger scale, the global environmental problems of ozone depletion, climate change, deforestation, and the loss of the earth's biological diversity threaten all nations. Any one country acting alone is powerless in the face of these problems.¹

The World Bank's 1992 report *Development and the Environment* raises pertinent questions about the future of development and the protection of the environment. The report states,

The achievement of sustained and equitable development remains the greatest challenge facing the human race. Despite good progress over the past generation, more than 1 billion people still live in acute poverty and suffer grossly inadequate access to the resources—education, health services, infrastructure, land and credit—required to give them a chance for a better

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life. The essential task of development is to provide opportunities so that these people, and the hundreds of millions no much better off, can reach their potential.

But, although the desirability of development is universally recognised, recent years have witnessed rising concern about whether environmental constraints will limit development and whether development will cause serious environmental damage—in turn impairing the quality of life of this and future generations. This concern is overdue. A number of environmental problems are already very serious and require urgent attention. Humanity's stake in environmental values has been neglected too often in the past.²

Aware of the Earth's growing environmental problems, the Environmental Section of the Division of Industry, Human Settlement and Environment, within the Economic and Social Commission for Asia and the Pacific, organised a group meeting on environmental impact assessment as a management tool for development projects; the meeting was held in Bangkok in August 1988 and developed guidelines for implementation.

On a broader scale, the United Nations Conference on Environment and Development—the Earth Summit—held in Rio de Janeiro in June 1992 set a new path for management of resources for development and protection of the environment. In particular, Agenda 21 lays down clear terms for the adoption of an 'Agreement on Environment and Development', which deals with protection of the environment through planning and management of natural and man-made resources. This protection concerns both developed and developing nations and all types of development.

In India, environmental problems have a number of characteristic origins; Swaminathan identifies them thus:

- the growing human and animal populations are making increasing demands on natural resources, resulting in unsustainable exploitation of those resources;
- industry's general indifference about environmental safety and protection has led to the spread of avoidable air, water and soil pollution;
- economic growth has brought with it increased energy use for industrial, agricultural and domestic purposes, to the extent that India has been listed the fifth-largest contributor of greenhouse gases in the world;
- the level of environment awareness is low and thus there is a gross undervaluation of the economic and ecological value of biological diversity;

- extensive damage is being done to the basic life-support system, in comparison with the benefits generated by development activities;
- the policies of the Central Government and the State governments have not incorporated environmental accounting principles, with the result that many development projects are conceived for short-term gain and little or no consideration is given to their long-term ecological and social impacts;
- the inability to convert the oft-repeated rhetoric of 'growth with equity' into reality has resulted in the persistence of widespread poverty, under-nutrition and high infant mortality.³

Furthermore, the needs of tribal and rural people are neglected. Although India has achieved much in industry and agriculture during its 45 years of independence, it has failed in the areas of family planning, poverty alleviation and environmental protection. New environmental ethics must find solutions to these problems.

1 SOCIAL FRAMEWORK AND REVIEW OF LEGAL HISTORY

1.1 Social framework

Article 21 of the Indian Constitution guarantees the fundamental right 'to life and personal liberty' for all persons living in India. Implicit in this is the 'right to a living environment' suitable to human existence. Any action that violates this right could be deemed an infringement of Article 21 of the Constitution.

The courts in India have curbed different activities that adversely affect the living environment, such as mining, quarrying, and encroachment on public parks, playgrounds and places of public recreation. It is, therefore, clear that any act, on the part of any person or the state, that adversely affects the living environment is a violation of the right to life and liberty. This apart, Article 47 of the Constitution emphasises the raising of the nutritional level and the improvement of public health.

The Indian Government took a major step forward in 1972, when Prime Minister Indira Gandhi attended the United Nations Conference on the Human Environment. In her address to the Conference she was emphatic that

The natural resources of the earth, including the air, water, land, flora and fauna, and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management as appropriate. Nature conservation, including

conservation of wildlife, must therefore, receive importance in planning for economic development.

During the 1970s the world began to fully realise the importance of protecting the environment from pollution. Pollution was considered a slow poison, which, if not prevented or controlled in the coming years, would imperil humanity. Realising the seriousness of the problem, in 1976 the Indian Parliament amended the Constitution through Articles 48A and 51A. Article 48A provides, 'The state shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.'

The use of the word 'environment' in this context is broad, embracing all factors affecting life—air, water, sand, sound, land, temperature, and so on. Article 48A is one of the directive principles of state policy and as such is useful for policy makers and the courts. It places an obligation on the state and all state organs to implement its provisions. If the state or a state organ fails to abide by this constitutional obligation the courts will be left with no choice but to intervene by issuing appropriate writs, orders and directions.

Article 51A(g) is much more significant because it makes it mandatory for an Indian citizen 'to protect and improve the natural environment, including forests, lakes, rivers and wildlife, and to have compassion for living creatures'. Thus the Constitution lays down the fundamental duty of both the citizenry and the state to protect and enhance the natural environment. That is, the constitutional directive operates at two levels: by creating a duty of the state towards society to provide a better environment and to conserve forests and wildlife; and by creating a duty of individuals to protect and enhance the natural environment through developing an awareness of nature and living creatures. India's constitutional provisions for protection of the environment are among the best in the world.

Both the Central Government and the State governments have an obligation to protect the environment. The Constitution provides three lists—the Union list, the State list and the concurrent list—as expressed in Schedule VII of the Constitution (see Attachment A). The Central Government has a Ministry of the Environment, headed by a Minister of State (full time), to deal with environmental problems, monitoring and control. The environment is now on the agenda of at least three leading political parties: the Congress Party, the Bharatiya Janata Party and Janata Dal.

Under the pollution control statute the Central Government has established the Central Pollution Control Board and the State governments have

established State Pollution Control Boards. The Central Pollution Control Board advises the Central Government and coordinates the activities of the State Pollution Control Boards. The State Boards fix standards for effluent discharge and treatment. In the case of air pollution the State Boards are empowered to designate air pollution control areas and prescribe the type of fuel to be used in those areas. No industries dealing with cement, asbestos, fertiliser or petroleum can be established without the consent of the State Boards. Several court decisions provide direction for the Central Government and the State governments in relation to the control of environmental pollution.

The Central Government began paying attention to environmental planning at the beginning of the Fourth and Fifth Five-Year Plans. In 1972 a committee on environmental coordination was established to look into the problems of the environment and, in consultation with experts and relevant Ministers and government departments, to propose remedies. Another committee was established in 1980—the ND Tiwari Committee—with the task of reviewing the legislative measures and administrative machinery for ensuring environmental protection and recommending measures to strengthen environmental protection. On the Committee's recommendation a separate Department of Environment was established in 1980. Subsequently, in 1985 a new Ministry of Environment, Forests and Wildlife was created to serve as the focal point of administration, planning, promotion and coordination of environmental programs.

Another committee was appointed by the Central Government under the convenorship of Dr RK Garg, head of the chemical engineering group Bhabha Atomic Research Centre in Bombay, to examine safety standards in 15 large industries. In its report the committee was extremely critical of the safety standards in the industries concerned. It found that industries manufacturing, handling and storing hazardous and poisonous substances operated to the lowest standards of all. It also objected to the location of industries near residential areas and suggested that when new industries were established or existing ones expanded the associated risks should be taken into account.

In one specific instance, Prime Minister Indira Gandhi, asked for a detailed report on a project of the Tehri Hydro Development Corporation and a committee was established under Dr SK Roy. The Roy Committee submitted that it did not support the continuation of the project. Other committees were formed: the Professor DR Bhumbta Committee and the Professor Vinod Gaur Committee, for example. After further examination of the Corporation's

safety and other measures, the Corporation was given clearance to proceed with the project.

1.2 Legal framework

India is a signatory to the 1972 Stockholm Declaration, which was the outcome of the United Nations Conference on the Human Environment. In consequence, the Indian Parliament has taken numerous measures; for example, the *Water (Prevention and Control of Pollution) Act 1974*, the *Air (Prevention and Control of Pollution) Act 1981*, the *Forest (Conservation) Act 1980* and the *Environment (Protection) Act 1986*. In addition, the *Factories Act 1948* was amended in 1986. Other legislation also deals with pollution—see Attachment B.

The trend towards greater interest in environmental protection is evidenced by the participation of the public and also the role played by the courts. In the case of *Municipal Council, Ratlam v. Vardhichand*⁴, in which a petition was filed by a resident of Ratlam in Madhya Pradesh, the Supreme Court took the view that citizens have a right to have a public nuisance removed. The Court disregarded the fact that the municipality had no funds for effecting the removal.

In two judgments—*ABSK Singh v. Union of India & Ors*⁵ and *Fertilizer Corporation of India & Ors v. Union of India*⁶—the Supreme Court has emphasised the need for environmental associations to involve themselves in the prevention of pollution. Justice VR Krishna Iyer upheld the validity of public petitions under Articles 32 and 226 of the Constitution and observed,

Our current procedural jurisprudence is no longer in the individualistic Anglo-Indian mould. It is broad based and people oriented and envisages access to justice through class actions, public interest litigation, and representative proceedings. We have no hesitation in holding that the narrow concept of individual litigation is becoming obsolescent in some jurisdictions.

Thus the Supreme Court opened the gates of justice to the public, to approach the courts directly through public interest litigation, so reinforcing the right of citizens to a 'living environment'.

A similar action was taken by the Legal Aid Committee of Rajasthan University, which filed a writ in the High Court against the Municipality of Jaipur, seeking an order that the Municipality cover open manholes in various parts of Jaipur because they were considered hazardous to the public. The

Municipality readily undertook the work of covering these manholes because it was duty bound to do so.

Apart from individual and court actions to protect the environment, there have also been popular campaigns, mainly in response to hazard-creating activities on the part of industry. The release of effluents, the leakage of gases, and pollution of rivers and streams have caused suffering in the community at large, and the community has reacted. The Chipko and Appiko movements are good examples.

The Chipko movement focussed attention on the environmental problems of the Alaknanda catchment area in Uttar Pradesh. The people of the area wanted the logging contractors to stop felling trees. The movement was successful, not only in stopping the felling of trees but also in educating the local people about afforestation. Voluntary agency workers, university students and experts organise camps to teach people about afforestation. Dasholi Gram Sarajaya Mandal is one of the voluntary agencies; Sunderlal Bahuguna can be called the architect of the Chipko movement.

The Appiko movement in Karnataka, which Sunderlal Bahuguna also helped to found, is similar. There, the people save the trees by embracing them. This movement began in 1983 and quickly spread throughout Karnataka State. It has three main objectives: to conserve forests; to grow trees; and to use forests rationally. The movement has since taken root in Kerala and Tamil Nadu.

The people's awakening to the importance of environmental protection has changed the complexion of the law and its implementation. Environment-related litigation is increasing. There is a growing body of people who are participating in the protection of the environment, in a non-violent way. Government has also taken a serious view of the situation and has enacted a variety of laws aimed at protecting the living environment.

As noted, the Government has established Central and State Pollution Control Boards to control, prevent and regulate certain types of activities that are harmful to the environment. The Central Pollution Control Board has 17 members, including the Chairman and the Member Secretary. The major problem with the Board is that 15 of its members can be members of the public with no specific knowledge, experience or qualifications in environmental protection.

In the case of State Pollution Control Boards the requirement is that at least two members have qualifications and experience in environmental protection. These Boards also have 17 members, all of whom are appointed by the State Government. Appointments are usually made with a view to the smooth functioning of the Board. Two members are appointed from industry, which makes the Board structurally weak from the standpoint of pollution control.

Air and water pollution are controlled through a system of consent between the Boards and industry. A Board may vary licence conditions at any time, but it has no power to compel an industry to cease a polluting activity. Indeed, it depends on the courts for prosecution. The Boards themselves are thus not at all effective in curbing air and water pollution.

Collaboration between the Boards and the judiciary is close and clear because prosecution under the environmental laws is possible only through the courts. Various legal decisions illustrate that the courts have been very influential in securing environmental protection.

1.3 Environmental problems

India's rapid urbanisation and industrialisation have resulted in heavy exploitation of natural resources, which has led to environmental pollution. Water is contaminated by noxious and toxic substances. Sulphur dioxide, oxides of nitrogen, and suspended particulate matter are serious air pollutants in industrial regions and cities. The other great problem is noise pollution, which occurs mainly in commercial and residential areas as a result of traffic, industrial activities, and religious festivals. These three major problems—water, air and noise pollution—are constantly discussed in various forums.

Mindful of the seriousness of pollution problems in India, the courts have on several occasions ruled that polluting activity by individuals, industries and corporate bodies should cease. One important case was *Rural Litigation and Entitlement Kendra, Dehradun v. State of Uttar Pradesh*⁷. It involved a voluntary organisation in Uttar Pradesh bringing a suit against illegal mining in Dehradun and Mussoorie because the mining not only caused ecological imbalances but also polluted rivers and streams such as the Song, Baldi, Rispana, Kaimte and Bitarli. In all, there were 105 mining leases in the area. The court ordered half of the mines to cease mining immediately. The Supreme Court ordered the State of Uttar Pradesh to pay costs of 10 000 rupees to the voluntary organisation.

Another case was *Damodar Rao v. Municipal Corporation, Hyderabad*.⁸ The Andhra Pradesh High Court ordered the Municipal Corporation, Hyderabad, and the Urban Development Authority to act according to the development plan they had previously published. The matter at issue was that they could not use places dedicated to recreational and park purposes for residential building or any other purpose.

In another case a social worker, Mr MC Mehata, filed a public interest suit to restrain the emission of trade effluents into the Ganges River, requesting that a treatment plant be established in order to arrest the pollution of the River. The Supreme Court issued a directive to the Central Government, the Uttar Pradesh Pollution Control Board and the District Magistrate to enforce the orders issued by it, to stop the working of tanneries and the emission of effluents until primary treatment plants were established and approved by the State Board. No effluents were to be released directly or indirectly into the Ganges without treatment.

In the case of air pollution, the tragedy in Bhopal on 2 and 3 December 1984 will always be remembered. Lives were destroyed, people continue to suffer, and some are bound to suffer for years to come. The plant has been shut down permanently.

Another case—*Shriram Foods and Fertilizers Industries & Ors v. Union of India and Ors*—involved a major leakage of oleum gas on 4 December 1985. Shriram Foods and Fertilizers operates several plants for the manufacture of, among other things, caustic soda, chlorine, hydrochloric acid, stable bleaching powder, soap, sulphuric acid, alum and anhydrous sodium sulphate. The complex covers approximately 76 acres of land in a densely populated area. The District Magistrate in Delhi issued orders to cease all manufacturing activities of hazardous and lethal chemicals and gases within two days and to remove all such chemicals from the premises within seven days. The Supreme Court allowed Shriram to restart the factory but laid down many conditions. Any failure to adhere to the conditions could amount to withdrawal of permission to restart the plant. Several other cases have been similarly dealt with by the Supreme Court.

Discussions taking place at various levels are focussing on issues arising out of the problems of ecological imbalance and pollution, including radiation. Several organisations in the country currently take up different issues for discussion. From time to time statements about environmental issues are published in the newspapers. For example, most of the national

newspapers—the *Hindu*, the *Times of India*, the *Indian Express*, the *Hindustan Times*, the *National Herald*—regularly carry items about the environment, as do a number of local newspapers. The *Hindu* recently published a special issue totally devoted to the problems of environment. Known as the *Survey of the Environment*, it contained 62 articles dealing with environment-related issues in general and referring to specific issues and specific States and Union Territories. Issues disturbing the community are often publicised through the media: national media usually deal with national and regional issues; local media usually deal with matters of local concern.

In particular, the attention of the media has recently been attracted to the polluting activities of industry and the municipalities. For example, the area taking in Nacharam, Uppal, Jeedimetla, Balanagar, Kukatapalli, Patancheru and Bolaram, which is about 80 kilometres from Hyderabad is one of the most affected places, supporting some 350 industrial plants. The people started to mobilise themselves during 1985, when a gas leak occurred and one person died and 12 were seriously injured. Between 1985 and 1987 three major demonstrations were organised, in which people blocked the national highways; men, women, children and the elderly took part.⁹ The media gave full coverage to the people's struggle to stop pollution from industrial effluents.

Forty years ago in India there were only a few organisations that focussed on problems associated with the environment. Now, both the Central Government and the State governments have a number of programs for increasing the people's awareness of environmental problems. Further, there are currently about 800 non-government organisations working to enhance environmental awareness. The Central Government assists about 200 of these organisations.

The Chipko movement (see Section 1.2) is not only concerned with preventing the felling of trees but also plays a significant role in other issues relating to ecology and the environment. The Appiko movement (see Section 1.2), the Kerala Sastra Sahitya Parishad, the Bombay Environmental Action Group, the Social and Civic Environmental Forum in Pune, and the Society for Preservation of Environment and Quality of Life in Hyderabad are other organisations that are active in the protection of the environment.

Such organisations have had an impact on the formulation of environmental policy in India and in some instances have forced both the Central Government and State governments to re-examine policies affecting

the environment. Individuals, too, have been involved in protecting the environment, and they have moved the Supreme Court to intervene. In keeping with its prominent position, the Supreme Court has willingly come to the aid of the community in protecting the environment.

Major polluters

The question 'Who are the main polluters of the environment?' can be answered in many ways. In this report, however, the emphasis is principally on industrial pollution and hazardous wastes. The chemical industry is one of the major polluters in India.

In 1983 India had 24 urea-manufacturing plants with a combined annual capacity of about 9.2 million tonnes. These plants generate wastes containing arsenic: filter cake from on-line filter of vetrocok solution; sludge from evaporation of arsenic-bearing concentrated effluents; spent resching erings contaminated with arsenic; and liquid wastes in the form of oil spills containing low but nevertheless harmful levels of arsenic. There are 12 phosphoric acid and diammonium sulphate plants, which annually release 4 to 5 tonnes of wet phosphogypsum containing toxic substances such as cadmium, chromium, copper, lead and manganese.

During 1984 the total output of caustic soda was 909 900 tonnes, the majority of it (88 per cent) coming from mercury cells. It is estimated that around 394 grams of mercury is used for each tonne of caustic soda produced. There is considerable loss of mercury during processing, and this is hazardous to health. The steel industry uses coke, which produces tar. It is estimated that about 1.4 million tonnes of tar are produced every year. This material is toxic and flammable.

Pesticides are manufactured by 40 plants and 35 plants prepare formulations. The total annual quantity of pesticides produced is 57 400 tonnes and the quantity of formulations produced is 85 000 tonnes. Different varieties of pesticides produce semi-solid wastes hazardous to human and animal health. In 1982-83, 18 400 tonnes of dyes and pigments were produced. A wide range of industrial plants produce wastes in liquid, gaseous and solid form; in many cases these wastes are hazardous.

The tanning industry in India is more than 100 years old. The precise number of plants is not known but it is in the hundreds and has increased rapidly in many parts of the country. The wide range of effluents produced by this industry has caused environmental problems. There are also paper and

textile industries, which use large quantities of water and whose untreated effluents are harmful if discharged into rivers and streams.

The polluting behaviour of these industries has been consistent. On several occasions, when the community has protested or where the matter has been brought before the courts, the issues have been taken seriously and the industry in question has been ordered to close down or to establish effluent-treatment plants. There is, however, a need to take a closer look at these industries and their polluting behaviours and to prepare appropriate environmental protection plans.

1.4 Historical development of environmental protection law

The historical development of environmental protection law in India can conveniently be discussed in three parts: water pollution, air pollution, and noise pollution.

Water pollution

In India the purity of water has long been emphasised. In the *Rig-Veda*, the *Yazur-Veda* and the *Atharva-Veda* there are references to the worship of Lord Varuna (God of Water) and Lord Indra. In the *Yazur-Veda* water is regarded as a source of life and grain. Worship of Lord Varuna is mentioned in the *Bhagavad-Gita*. In the Vedic period water was considered a component of life and, therefore, sacred and not to be polluted. In *Manusmriti* water is considered creator and source of life on earth. The protection of water tanks and dams was given the same importance as protection from highway robbery and plundering of villages. It is clearly stated that if a person does not help in preventing the destruction of a dyke that person shall be banished with their goods and chattels.¹⁰ Even taking away water or cutting off a water supply from a tank was an offence punishable by a fine.¹¹ So, even in ancient times it was the duty of every person in India to keep water pure, and pollution and destruction of water were recognised as an offence.

In recent years water pollution has reached alarming proportions as a consequence of industrialisation, urbanisation, and the presence of nuclear power plants and the wastes released from them. The first legislation dealing with water pollution was enacted in 1853—the Shore Nuisance (Bombay and Kolaba) Act. It was followed by the *Orient Gas Company Act 1857*. These Acts provided for punishment in cases of water pollution. Many other Acts have since come into force to protect water from pollution (see Attachment B). In addition, the provisions of the Constitution, the Indian Penal Code 1860

and the Criminal Procedure Code 1973 do much to protect against water pollution.

Furthermore, the Government has responded specifically to the increasing problem of water pollution by enacting the *Water (Prevention and Control of Pollution) Act 1974*.

Air pollution

As with water pollution, air pollution has become a very serious problem in recent years. The 1984 gas leak in Bhopal and the oleum gas leak in Delhi in 1985 are glaring examples. The principal sources of air pollution are, however, industry, traffic and domestic activities. Air pollution affects not only humans and animals but also plants and buildings (including monuments).

Section 278 of the Indian Penal Code specifically deals with 'atmospheric pollution'. Several other Acts also deal with air pollution—see Attachment B. None of this legislation attached sufficient importance to air pollution, so in 1981 the Central Government specifically enacted the *Air (Prevention and Control of Pollution) Act*.

Although the Criminal Procedure Code makes no direct provision for dealing with air pollution, cases involving air pollution have been dealt by the courts under Chapter X, Part B, of the Code, which provides for the removal of a public nuisance.

Noise pollution

Noise pollution is a health hazard as well as an inconvenience. Relative to the rest of the world, Indians experience very high levels of noise. There are various sources of noise pollution: factories, cars, trucks, trains and aeroplanes. In India the other major sources of noise are religious and social ceremonies. Loudspeakers are often used during birth, death and marriage festivities and temples and mosques use them, which has led to communal riots on some occasions.

Noise pollution is not a new phenomenon, but it has increased dramatically in recent years, attracting the attention of citizens and government. In 1980 the Society for a Clean Environment made a study of crowded localities in Bombay and reported that during the Ganapathi festival the noise level exceeded that commonly experienced at airports. While giving the presidential address to the National Science Congress Annual Convention in Calcutta in 1981, Professor AK Sharma noted that 'in the absence of any preventive

measures, Indian towns are noisier than those in the West. Calcutta, Bombay and Delhi are regarded as being among the noisiest cities in the world'. Dr VD Kulshrestha of the Indian Law Institute in New Delhi has pointed out that in the West noise pollution is checked by legislation, whereas in India there is no legislation to control noise levels. He suggested that specific legislation would be very timely.

In the absence of specific legislation, it is possible to file a civil suit seeking damages for nuisance. Under the law of torts no person has an absolute right to make noise on his or her land that disturbs the comfort of others. In the case of *Dhannulal v. Chittar Singh*¹² the Madhya Pradesh High Court made it very clear that constant noise that disturbs personal comfort is a nuisance. Similar judgments were made in *Radhey Shyam v. Gurprasad Saxena*¹³ and *G Veeraghadrapa v. M Nagamma*.¹⁴

Section 268 of the Indian Penal Code is relevant to noise pollution in providing that

A person is guilty of a public nuisance who does any act or is guilty of an illegal omission which causes any common injury, danger or annoyance to the public or to the people in general who dwell or occupy property in the vicinity, or which must necessarily cause injury, obstruction, danger or annoyance to persons who may have occasion to use any public right.

The Code of Criminal Procedure does not make direct provision dealing with noise pollution. Nevertheless, Chapter X, section 13, provides for the abatement of nuisance in ordinary cases and Chapter XI, under section 144, in urgent cases. Noise pollution is taken to be a nuisance.

There are other statutes under which control of noise pollution is exercised. Under section 5 of the *Aircraft Act 1935* the Central Government has power to make rules for the manufacture, possession, use, operation, sale, import or export of any aircraft. This allows for indirect control of noise. The India Aircraft (Public Health) Rules 1946 empower the Central Government to make rules to control noise pollution in the interest of public health.

The railways use huge engines and carriages that create large amounts of noise. The *Railways Act 1890* makes no provision for curtailing the noise. Section 16 of the Act authorises the railways administration to use locomotives: 'A railways administration may, with the previous sanction of the [Central Government], use a locomotive engine or other motive power and rolling stock to be drawn or propelled thereby.' It is of note that this Act was passed by the colonial rulers to further their interest in the country. In English

common law it would have been an actionable nuisance to use engines that were a source of danger.¹⁵ It is perhaps time to amend section 16 of the Railways Act.

Section 11 of the *Factories Act 1948* specifically provides for the control of noise pollution. Under this section it is the statutory duty of factories to provide adequate measures for the control of noise.

Motor vehicles are one of the main sources of noise pollution. The Motor Vehicle Act makes provisions under sections 20, 21J, 41, 68, 681, 70, 91 and 111A for the upkeep of motor vehicles. However, some rules made by the State governments—for example, the Bihar and Orissa Motor Vehicle Rules, the Delhi *Motor Vehicle Act 1940* and the Rajasthan Motor Vehicle Rules—fail to provide any effective controls over noise pollution.

The Bombay Police Act makes provision for banning the use of loudspeakers. To control noise some States have enacted their own laws dealing specifically with music and noise. For example, the Madhya Pradesh *Control of Music and Noises Act 1951* and the Rajasthan *Noise Control Act 1963* are examples of State legislation enacted to meet State requirements.

2 SANCTIONING STRATEGIES

2.1 Relevant national (administrative, civil and criminal) sanctions

In India pollution offences are dealt with under the law of torts, the Indian Penal Code, the Criminal Procedure Code, and specific legislation enacted for the purpose (see Attachments A and B). The Constitution also contains provisions touching on pollution.

The doctrine of strict liability is applied to liability without fault on the part of the defendant, as in cases of fire, gas explosions, electrical accidents, noxious fumes and poisonous vegetation. The doctrine was applied in the case of the Bhopal gas leak.

2.2 Specific criminal law provisions regarding environmental protection

The Indian Government enacted the first law relating to water pollution in 1974—the Water (Prevention and Control of Pollution) Act. The second enactment was in 1981—the Air (Prevention and Control of Pollution Act)—and it was followed in 1986 by the Environment (Protection) Act. In accordance with the provisions of the Environment (Protection) Act, the Central Pollution Control Board, the State Pollution Control Boards and the

Joint Pollution Control Boards are established to deal with pollution (see Attachment C).

The State Pollution Control Boards are authorised to issue orders restraining establishments from releasing matter that pollutes water. Failure to comply is punishable. A Board may also report to a magistrate First Class to obtain a restraining order. Failure to comply with a magistrate's order may result in three months' imprisonment and a fine of 10 000 rupees. For every day the offence continues a fine of 5000 rupees is applicable. Repeat offenders are punished more severely. The names and addresses of offenders can be published if the court so wishes.

Sanctions for air pollution are similar. The minimum sanction is 18 months' imprisonment; the maximum is six years' imprisonment and fines equivalent to those imposed for water pollution. Recidivist offenders are treated more harshly.

2.3 Environmental protection under criminal law as related to administrative and civil law

The functions of the Central Pollution Control Board are to advise the Central Government and the States on pollution, to plan nationwide prevention and control programs, to provide technical guidance and sponsor investigations, to organise training programs, and to enhance public awareness through the media.

The State Pollution Control Boards are responsible for advising State governments on matters relating to prevention, control and abatement of water and air pollution, to monitor enforcement, and to gather information. They also carry out inspections of plant, equipment and processes and can issue directives for prevention and control of pollution. State governments may establish or authorise laboratories to assist the Boards in their work.

2.4 Organisation of public control and its significance in the field of environmental criminality

At present, the police have a minimal role in pollution control. Prosecution can be initiated only upon a complaint being made to a First Class magistrate. A court can take action in relation to an offence only after receiving a complaint from a Pollution Control Board, or an officer authorised by such a Board, or a person who has given at least 60 days' notice, in the manner prescribed, of an alleged offence and of his or her intention to register a complaint with a Board or authorised officer. No court inferior to that of a

metropolitan magistrate or a judicial magistrate First Class is permitted to try an offence punishable under pollution legislation.

The judiciary is very conscious of its role in the prevention and punishment of environmental crime. It takes a dim view of those who flout the provisions of environmental legislation and has made many historic judgements.

3 ENFORCEMENT

Environmental protection laws are enforced by the Pollution Control Boards of the States and the Union Territories, supervised by the Central Pollution Control Board.

To assess the state of enforcement of environmental laws in India, the author prepared a questionnaire and mailed it to all the States and Union Territories. Only three States responded: Maharashtra, Orissa and Tamil Nadu¹⁶. Sections 3.1 and 3.2 examine the empirical data received from these States.

3.1 Empirical data

The data in this section deal with the number of cases of investigation of environmental offences registered in each State, the year of registration, the location of the agencies in terms of rural and urban areas, and the time taken to investigate cases.

Case registrations, by State

Table 1 shows that almost half of the cases registered were from Tamil Nadu; Maharashtra accounts for most of the remainder. Maharashtra is a highly industrialised State in comparison with Tamil Nadu. It is possible that there are fewer violations of environmental laws in Bombay and that not all cases that do occur are registered promptly there. It is also possible that in Tamil Nadu the law is enforced more vigorously and there are more violations.

Table 1: Case registrations, by State

State	No. of cases	Percentage
Maharashtra	394	44.1
Orissa	68	7.6
Tamil Nadu	431	48.3
Total	893	100.0

Case registrations, by year

Table 2 shows the pattern of case registrations for 1982 and 1984-91. The highest number of cases was registered in 1985, the year after the Bhopal disaster. No particular trend is evident.

Table 2: Case registrations, 1982 and 1984-91

Year	No. of cases	Percentage
1982	40	4.5
1984	66	7.4
1985	226	25.3
1986	2	0.2
1987	68	7.6
1988	180	20.2
1989	196	21.9
1990	63	7.1
1991	33	3.7
Not determined	19	2.0
Total	893	100.0

Case registrations, by type of industry

Several types of industry are significant contributors to environmental pollution. Table 3 shows that the major polluting industries are the chemical industry and tanneries. The chemical industry is mainly located in Bombay, in Maharashtra State, and the tanneries are predominantly in Tamil Nadu. Other polluters include the food, pharmaceutical, fertiliser and petroleum industries.

Table 3: Case registrations, by type of industry

Type of industry	No. of cases	Percentage
Chemical	179	20.0
Petroleum	4	0.4
Fertilisers	6	0.7
Tanneries	154	17.2
Paints and dyes	1	0.1
Medicines	12	1.3
Foods	29	3.2
Other	508	56.8
Total	893	100.0

Case registrations, by location of industry

Most industry is located in cities or on the outskirts of urban areas. This has been the trend in the last two decades. The Central Government and the States have encouraged industry to set up in rural and semi-urban areas by offering concessions; this has had some effect. Table 4 shows that more than one-third of industry is located in urban areas and that there is relatively little industry in rural areas.

Table 4: Case registrations, by location of industry

Location	No. of cases	Percentage
Rural	71	8.0
Semi-urban	299	33.5
Urban	335	37.5
Not stated	188	21.0
Total	893	100.0

Case registrations, by type of management

Who causes most pollution? Government-run industries, publicly controlled industries, or those operated by private enterprise? Table 5 shows that private enterprise is the major offender. Few cases are registered against public and government industry. In a little more than one-tenth of the cases the type of management could not be determined.

Table 5: Case registrations, by type of management

Type of management	No. of cases	Percentage
Government	2	0.2
Public	5	0.6
Private	792	88.7
Not determined	94	10.5
Total	893	100.0

Case registrations, by type of pollution

Table 6 shows that the predominant type of pollution is that of water, followed by combined water, air and noise pollution. It is noteworthy that

water pollution is present in more than three thirds of the cases. This is a matter for concern.

Table 6: Case registrations, by type of pollution

Pollution type	No. of cases	Percentage
Water	353	39.5
Air	105	11.8
Noise	3	0.3
Water and air	138	15.5
Water and noise	45	5.5
Water, air and noise	195	21.2
Not determined	54	6.0
Total	893	100.0

Case registrations, by type of discharge

Pollution is caused by many different types of discharges. Table 7 shows that liquid discharges are the major pollutant, followed by solid wastes. In more than one-third of the cases, however, the type of discharge could not be determined.

Table 7: Case registrations, by type of discharge

Discharges	No. of cases	Percentage
Solid	92	10.3
Liquid	263	29.4
Semi-solid or liquid	65	7.3
Vapour/gases	53	5.9
Smoke	34	3.8
Ashes	10	1.1
Dust and smoke	56	6.3
Husks and dust	5	0.6
Not determined	315	35.3
Total	893	100.0

3.2 Trends in prosecution

In enforcing environmental standards it is the courts that must determine whether an individual or an agency has violated the law. Generally, it is agencies and industry, rather than individuals, that violate anti-pollution laws in India. This section focusses on the number of court hearings, the time taken to dispose of cases, the length of time for which cases can be pending, the type of conviction, the amount of fines imposed, and the length of imprisonment.

Case registrations, by number of hearings

It can take a long time to dispose of a case in court. Table 8 shows that in one instance it took 97 hearings before a case was resolved. In general, the number of hearing ranges between seven and thirteen.

Table 8: Case registrations, by number of hearings

Number of hearings	Frequency	Percentage
1-5	25	2.8
6-10	42	4.7
11-15	43	4.8
16-20	11	1.2
21-25	11	1.2
26-35	6	0.7
More than 35	4	0.4
Not determined	751	84.1
Total	893	100.0

Case registrations, by length of time taken for disposal

Delays in the disposal of cases are common. At present, in the High Courts and the Supreme Court several hundred cases await disposal. The situation is worse in the lower courts. Table 9 provides details of the length of time taken for disposal of cases involving environmental violations.

Case registrations, by length of pendency

Table 10 shows that some cases were pending for more than seven years and that a substantial number of cases were pending for more than two years. This suggests that the court system has shortcomings when it comes to resolving environment-related disputes.

Table 9: Case registrations, by length of time taken for disposal

Time taken (months)	No. of cases	Percentage
01-12	191	21.4
13-24	105	11.8
25-36	45	5.0
37-48	48	5.4
Over 48	7	0.8
Not determined	497	55.6
Total	893	100.0

Table 10: Case registrations, by length of pendency

Length of pendency (months)	No. of cases	Percentage
01-12	175	19.6
13-24	127	14.2
25-36	65	7.3
37-48	46	5.2
49-60	53	5.9
61-72	45	5.0
73-84	4	0.4
Over 84	8	0.9
Not determined	370	41.4
Total	893	100.0

Table 11: Case registrations, by penalty

Type of penalty	No. of cases	Percentage
Fine	172	19.3
Imprisonment	3	0.3
Fine and imprisonment	42	4.7
Restrained	3	0.3
Warning	44	4.9
Industry fined	7	0.8
One fined and one acquitted	5	0.6
Not determined	617	69.1
Total	893	100.0

Case registrations, by penalty

The courts decide, on the basis of evidence produced, what punishment violators of the law should receive. Table 11 shows that in almost one-fifth of

cases a fine has been imposed. In a number of cases both a fine and a prison term have been imposed.

Case registrations, by amount of fine

Table 12 shows that only in two cases were fines in excess of 200 000 rupees imposed. The overwhelming majority of fines imposed are less than 2000 rupees.

Table 12: Case registrations, by amount of fine

Amount of fine (rupees)	No. of cases	Percentage
Less than 250	84	9.4
251-500	74	8.3
501-1000	25	2.8
1001-2000	36	4.0
2001-3000	3	0.3
3001-4000	2	0.2
Over 200 000	2	0.2
Not determined	667	74.7
Total	893	100.0

Table 13: Case registrations, by length of imprisonment

Length of imprisonment (months)	No. of cases	Percentage
1-6 months	5	0.6
13-18 months	2	0.2
Not determined	886	99.2
Total	893	100.0

Case registrations, by length of imprisonment

In most cases the courts impose fines on those who violate environmental laws. Prison sentences are imposed rarely in comparison with other types of sanctions. Table 13 shows that the prison sentence is most commonly of one to six months' duration.

3.3 Summary

The foregoing serves to show that in the States of Maharashtra, Tamil Nadu and Orissa enforcement of environmental law has the following characteristics: hearings are often numerous, and this leads to the non-attendance of defendants and witnesses and the dropping of many cases; most industrial offenders are urban-based, privately owned enterprises; the most

common form of pollution is that of water and air; the time taken for the disposal of environmental cases is considerable; there are large numbers of cases pending trial; fines are the main form of sanction; and the imposition of prison sentences is rare. All this suggests that environmental law is inadequately enforced in the three States that responded to the questionnaire.

4 PROPOSED REFORMS

In 1986 Professor Upendra Baxi suggested to the Chief Justice that a special science and technology 'cell' be established within the Supreme Court, so that experts would be available to interpret scientific evidence for the judges and thus help them to resolve disputes. Professor Baxi also suggested that appellate judges undertake refresher courses in aspects of science and technology upon which they are frequently called to make judgment. These suggestions have not yet received attention.¹⁷

In general, India's courts are not equipped to deal with environment-related litigation: they lack the scientific and technological information that Professor Baxi's proposed cells could provide. Furthermore, they lack enforcement power. For example, the elaborate directives given by Justice Venkataramaiah in the *Ganges Tanneries Case* (see Section 1.3) have yet to be implemented.

Procedural complexities make it difficult for the public to take action in the face of environmental crime. Individuals and groups must wait until the Pollution Control Board takes action and if the Board fails to do so they can either file a writ to compel the Board to act or file a civil suit for damages and an injunction. The procedures need to be reviewed so that victims of environmental crime can approach the courts directly.

The response of the Pollution Control Boards to these problems has been lukewarm, and they have sometimes failed to take action against polluters. In these instances, writs filed directly in the High Courts and the Supreme Court have been useful to the complainants.

A number of inadequacies in environmental laws should be rectified, too. All the laws are punitive in their intent and make little attempt at prevention. The Pollution Control Boards are solely reactive: they can act only after an offence has been committed. A further problem involves the overlap of power, whereby a licence can be issued by one authority and a 'no objection' certificate by another. An industry can start operations upon being granted the licence but before receiving the certificate. This situation is very unsatisfactory.

Another serious problem is the lack of pollution-related information available to the public, to enable them to take action against erring industries. This prevents the community from involving itself in environmental protection.

There is also a need to develop explicit policies dealing with safety standards and the location of potentially hazardous industries. The Pollution Control Boards should have clear power to order the closure of hazardous industries, and the fact that two members of each Board are industry nominees is a matter for concern.

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5. AIR 1981 SC 228.
6. AIR 1981 SC 344.
7. AIR 1989 SC 594.
8. AIR 1987 AP 171.
9. For details, see T Narayana Rao, 'Environmental pollution: the case of Patancheru', Paper presented at 20th annual conference of the Indian Society of Criminology, Pondicherry, 20-22 July 1991.
10. *Manusmriti*, chapter IX.
11. *ibid.*
12. AIR 1959 MP 240.
13. AIR 1978 Allahabad 86.
14. AIR 1988 Karnataka 217.
15. *London, Brighton & South Coast Ry, K Truman* (1885) 11 App. Cas. 45.
16. III - 1991 Census

Maharashtra	78 748 215	capital city Bombay (8 227 332);
Orissa	31 512 070	capital city Bhubaneswar (219 400);
Tamil Nadu	55 638 318	capital city Madras (3 276 600).

 (Editors' Note)
17. For details, see U Baxi, 'Environmental justice: a movement in infancy', in *The Hindu Survey of the Environment*, Madras, 1991.

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ATTACHMENT A

LEGISLATIVE POWERS RELATING TO THE ENVIRONMENT

Union list

- industries
- regulations on development of oil fields and mineral resources
- regulation of mines and mineral development
- regulations on development of interstate rivers and river valleys
- fishing and fisheries beyond territorial waters.

State list

- public health
- agriculture, protection against pests, and prevention of plant diseases
- land colonisation
- fisheries
- mines and minerals, subject to provisions of the Union list
- industry, subject to provisions of the Union list.

Concurrent list

- forests
- protection of wild animals and birds
- economic and social planning
- population census and planning.

In addition, the Central Government has exclusive power to legislate on any subject in any of the lists for any part of the territory not included in the lists.

ATTACHMENT B

LEGISLATION DEALING WITH ENVIRONMENTAL MATTERS

Union legislation

Miscellaneous

- *Wild Life (Protection) Act 1972*
- *Indian Forests Act 1927*
- *Forests Conservation Act 1980*
- *Indian Fisheries Act 1987*
- *Urban Land (Ceilings and Regulations) Act 1976*
- *Prevention of Food Adulteration Act 1954*
- *Ancient Monuments and Archaeological Sites and Remains Act 1958*
- *Environment (Protection) Act 1986*

Air pollution

- *Indian Boiler Act 1923*
- *Factories Act 1948*
- *Industries (Development and Regulation) Act 1951*
- *Mines and Minerals (Regulation and Development) Act 1947*
- *Air (Prevention and Control of Pollution) Act 1981*

Water pollution

- *River Boards Act 1956*
- *Merchant Shipping (Amendment) Act 1970*
- *Water (Prevention and Control of Pollution) Act 1974*
- *Water (Prevention and Control of Pollution) Cess Act 1978*

Radiation

- *Atomic Energy Act 1962*

Pesticide

- *Insecticides Act 1968*
- *Factories Act 1948*
- *Poison Act 1919*

State legislation

Smoke control

- *Bengal Smoke Nuisance Act 1905*
- *Gujarat Smoke Nuisance Act 1963*
- *Bombay Smoke Nuisance Act 1912*

Water pollution

- *Orissa River Pollution Prevention Act 1953*
- *Maharashtra Prevention of Water Pollution Act 1969*

Pest control

- *Andhra Pradesh Agricultural Pest and Disease Act 1919*
- *Assam Agricultural Pest and Disease Act 1954*
- *Uttar Pradesh Agricultural Disease Pests Act 1954*
- *Mysore Destructive Insects and Pest Act 1917*
- *Kerala Agricultural Pests and Disease Act 1958*

Land utilisation and land improvement

- *Andhra Pradesh Improvement Schemes Act 1949*
- *Acquisition of Land for Flood Control and Prevention of Erosion Act 1955*
- *Bihar Waste Lands (Reclamation, Cultivation and Improvement) Act 1946*
- *Delhi Restriction of Use of Land Act 1964*

Noise pollution

- *The Motor Vehicles Act 1939*
- *The Bihar Control of the Use and Play of Loudspeakers Act 1955*
- *Grant of Permission under the Himachal Pradesh Instruments (Control of Noise) Act 1969*

ATTACHMENT C

CONSTITUTION OF POLLUTION CONTROL BOARDS

Central Pollution Control Board

CHAIRMAN

|
Member Secretary

5 members nominated by the Central Government	5 members nominated by the Central Government from State Boards	3 members, non-officials nominated by the State governments	2 members representing companies or corporations

State Pollution Control Boards

CHAIRMAN

|
Member Secretary

5 members nominated by the State government	5 members nominated by the State government from local authorities	3 members, non-officials nominated by the State government	2 members representing companies or corporations

Joint Pollution Control Boards

CHAIRMAN

|
Member Secretary

2 members nominated by the Central Government from participating States or Union Territories	1 member nominated by the Central Government from local authorities	2 members, one non-official nominated by the Central Government & one non-official nominated by participating States or Union Territories	2 members nominated by the Central Government and representing companies or corporations

NIGERIA

*Omobolaji Adewale**

INTRODUCTION

Environmental protection has assumed an international dimension, especially in the last decade. This may be due to the transboundary effect of environmental degradation. In most developing countries, the urge and the need to develop have led to industrialisation, with its attendant effect of pollution. In Nigeria, for example, with the advent of the oil boom in the 1970s coupled with rapid industrialisation, environmental degradation has attained alarming proportions. The need to regulate activities that degrade the environment has thus become paramount.

The use of criminal law as a vehicle in the regulation, management and protection of the environment is the focus of this report, and its effectiveness is assessed against the background of Nigerian society. The scope of the report is limited: the main pieces of legislation considered are federal laws, which are applicable throughout Nigeria but capable of being enforced only by federal government agents. The area covered by the report is only Lagos State. The persons interviewed at the various local governments, the customary courts, and the Ministry of Environment and Physical Development in Lagos State limited their experiences and to the laws of Lagos State.

1 FRAMEWORK AND REVIEW OF LEGAL HISTORY

1.1 Social framework

Politically and constitutionally Nigeria is a federation. This means that power is divided between the national, or countrywide, government and a number of regional governments in such a way that each exists as a government separately and independently from the others, operating, directly on persons and properties within its territorial area, with a will of its own and its own apparatus for the conduct of its affairs, and with an authority in some matters exclusive of all the other governments.¹

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Under the 1979 Presidential Constitution (Cap. 62 LFN 1990), two separate lists were created: the exclusive legislative list and the concurrent legislative list. The exclusive legislative list is the preserve of the Federal Government; the concurrent legislative list is within the purview of both the Federal Government and the State governments. Residual matters fall within the purview of the States by implication.² The basis for the division of power is the premise that issues common to the States and that require united, national action should be dealt with by the Federal Government while issues that are largely differential in nature should be exclusive to the States.³

The Constitution makes no specific mention of the environment. The exclusive legislative list does, however, deal with the following issues that touch on the environment: meteorology (Item 36, Part 1, section 4); mines and minerals, including oil fields, oil mining, geological surveys and natural gas (Item 37, Part 1, section 4); maritime shipping and navigation (Item 35, Part 1, section 4); national parks (Item 38, Part 1, section 4); water from such sources as may be declared by the National Assembly to be sources affecting more than one State (Item 62, Part 1, section 4); and quarantine (Item 53, Part 1, section 4). The concurrent legislative list, on the other hand, includes items such as agriculture (Item 15, Part 2, section 11), health, safety and the welfare of persons employed to work in factories, offices or other premises. Issues that are not mentioned under the exclusive or concurrent lists can by implication fall into the residual list; for example, water that is within a State.

The difficulty created by the fact that the Constitution does not mention the word 'environment' has led to two schools of thought about the competent authority to legislate on the matter. The first school of thought is that the environment should be dealt with as a residual matter in view of the fact that it is not mentioned in either the exclusive or the concurrent list. The second school of thought is that matters pertaining to the environment should be treated as matters incidental to those in the exclusive and concurrent lists. If one holds to the first school of thought, environmental regulation could lack uniformity because the standards in the States may vary. Thus it is evident that the constitutional allocation of responsibility for the environment is not clear.

Legislative capacity to deal with environmental matters has been made more complex by section 11 of the Constitution, which authorises both federal and State legislatures to make laws that will maintain and secure public safety and public order. Environmental degradation may be considered as affecting public safety; for example, the 'Koko incident'—see Section 4.2.

Decree No. 1 of 1984 is another enactment that complicates the division of legislative powers. Section 2(1) of the Decree allows the Federal Government to make laws for the peace, order and good government of Nigeria and any part thereof with respect to any matter whatsoever. The State Governor is also given the power to legislate on any item in the concurrent list if the President's consent is obtained (section 11 of the Constitution). This approach could be termed 'unfederal' since it militates against the basic principles underlying federalism.

From the foregoing, there is no doubt that environmental laws enacted by State and federal governments can exist together, within the context of certain limits. If the law enacted on a particular matter by the Federal Government can be said to have covered the field in the area the State Government cannot legislate in that particular area. If the law has not covered the field—that is, if the Federal Government has not made a law on the subject—the State may make laws in the area. The two may co-exist, but if there is any inconsistency between the two the federal law will prevail.⁴

In the case of *Joel Odi & Ors v. Shell BP and Anor*⁵ the plaintiff claimed from the defendant the sum of 56 000 naira as the balance of compensation paid to the plaintiff by the defendant for damage done to the plaintiff's property resulting from the defendant's oil mining activity. The plaintiff relied on the Rivers State Minimum Crop Compensation Edict of 1973. The rate of compensation under the Edict far exceeded that which the plaintiff would have been paid under the federal law. The plaintiff argued that the subject matter to be determined concerned agriculture, which is a State matter, and not mining, which is a federal matter.

The defendant asserted that any compensation payable to the plaintiff fell legally and constitutionally to be determined only in accordance with the provisions of the Oil Pipelines Act, this being the applicable federal law. The Judge held, among other things, that the Oil Pipelines Act dealt with and covered matters dealt with in the Rivers State Minimum Crop Compensation Edict. Furthermore, since the Rivers State Edict is inconsistent with the federal law on the same issue, it is void to the extent of its inconsistency.⁶

It would seem better if the Federal Government is charged with responsibility for managing the environment.⁷ This is because the Federal Government has an edge over the States in the areas of law and finance, which are necessary tools in preserving and managing the environment. The current position is that the Federal Government, through an agency—the

Federal Environmental Protection Agency—has overall responsibility for the environment. Minimum guidelines and standards on the environment are set by this Agency.⁸ The States are expected to work within the framework of the standards set by the Agency.

The structure of environmental protection

Environmental protection in Nigeria is predicated on the Federal Environmental Protection Agency Act (Cap. 131 LFN 1990), which provides for the establishment of a body corporate (section 1), to be known as the Federal Environmental Protection Agency. The Act represents a landmark in environmental issues in Nigeria: it is the first national enactment that deals with the environment in detail at a national level⁹ and it marks the beginning of coordination of the legal control and regulation of the environment.¹⁰

The Agency has responsibility for developing, managing and protecting the environment. It is also empowered to 'establish such environmental criteria, guidelines, specifications or standards for the protection of the nation's air and interstate waters as may be necessary to protect the health and welfare of the population from environmental degradation' (section 5(a)). Further, section 4 requires the Agency to

- (a) Advise the Federal Military Government on national environmental policies and priorities on scientific and technological activities affecting the environment;
- (b) Prepare periodic masterplans for the development of environmental science and technology and advise the Federal Government on the financial requirements for the implementation of such plans;
- (c) Promote co-operation in environmental science and technology with similar bodies in other countries and with international bodies connected with the protection of the environment;
- (d) Co-operate with Federal and State ministries, local government councils, statutory bodies and research agencies on matters and facilities relating to environmental protection.

In view of the vast and intricate nature of the environment, section 2 of the Act provides for the representation of all the ministries whose activities are deemed to affect the environment. Hitherto, the different ministries or government departments whose activities affected the environment dealt with such matters on a ministerial basis. Thus pollution arising from petroleum was the responsibility of the Ministry of Petroleum Resources, while pollution

from pesticides and fertilisers was the responsibility of the Ministry of Agriculture. In most such ministries the protection of the environment was seen as a function incidental to their main duties. The inclusion of representatives of these ministries in the membership of the Agency will no doubt enhance and foster cooperation in the struggle to ensure a sound environment.

Part II of the Act provides for the establishment of national environmental standards for water quality (sections 15 and 16), air quality and atmospheric protection (sections 17 and 18), and noise and hazardous substances (section 19).

The regulatory power of the Agency supersedes the power of any government ministry in respect of the environment.¹¹ State and local governments are expected to set up their own environmental protection bodies (section 24) within the parameters of the Federal Environmental Protection Agency Act. Some States have done this; for example, the new Federal Capital Territory of Abuja created an Environmental Protection Board in 1989. The Board has overall responsibility for environmental protection in Abuja. The Board liaises with the Federal Environmental Protection Agency.

Before the advent of the Federal Environmental Protection Agency Act, most States had a legal framework for the regulation and protection of their environment; these laws are called Environmental Sanitation Edicts.¹² Matters usually dealt with in the Edicts include disposal of refuse, waste and sewage, industrial pollution, pest control, promoting the aesthetic quality of the environment, water pollution, and noise and air pollution. Environmental issues are dealt with purely as matters arising under public health. This rudimentary effort may not help one to place environmental problems in their proper perspective.¹³

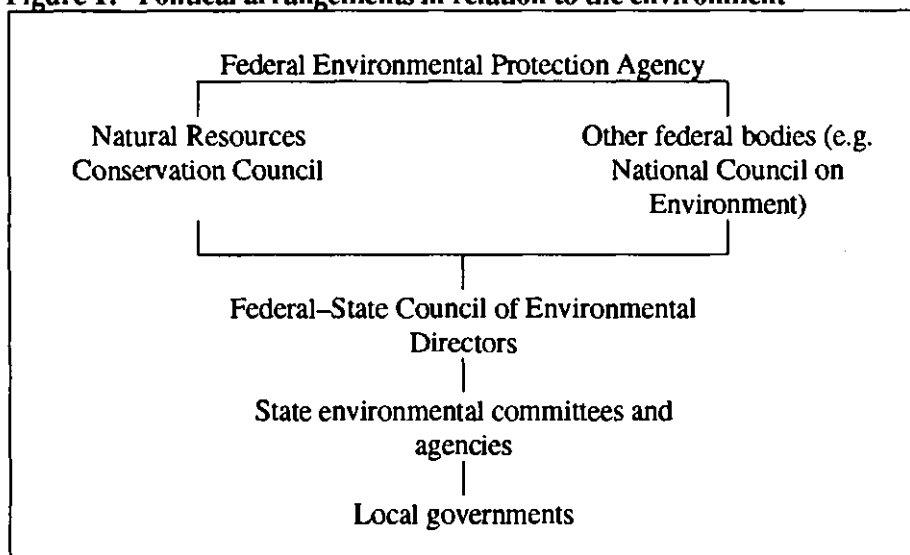
Under such Edicts, a body is usually established to implement the objectives of the Edict. The main duty of the body is to ensure 'the promotion of cleanliness of premises, public places and other visible locations'.¹⁴ Conflict can occur since the Federal Government now has powers to perform functions that were previously the province of State governments; for example, matters relating to waste disposal. Under the new guidelines released by the Federal Environmental Protection Agency in April 1991 the disposal of industrial waste is to be handled by the Agency. Lagos State Government has also promulgated an Edict on the management of industrial waste in Lagos State. The Edict makes it the responsibility of the Lagos State Waste Disposal

Board to dispose of industrial waste. There is a need to coordinate the activities of all tiers of government as they relate to the environment.

It has been suggested that, although the standards on environmental issues are being set by the Federal Environmental Protection Agency, implementation of those standards should rest with the State governments. The standards set by the Agency should be regarded as minimum standards and State governments could improve on the standards according to the level of development and the objectives of the particular State.¹⁵ A concerted cooperative effort is essential to ensure that the environment is less harshly treated.

Policy makers have been studying the nature of intergovernmental relationships in connection with environmental management, so as to make the best of the present situation.¹⁶ As a consequence, in 1992 the Federal Environmental Protection Agency was removed from the Federal Ministry of Works and Housing and placed directly in the Presidency, to report directly to the President. This is now the case with all federal bodies that deal with environment; for example, the Natural Resources Conservation Council, which was established in 1989. Presumably, this will increase the political influence and power of such agencies. Figure 1 shows current political arrangements as they pertain to environment matters.

Figure 1: Political arrangements in relation to the environment



The two political parties, the Social Democratic Party and the National Republican Convention, which were established by the present military government, have incorporated environmental issues in their manifestos. The Social Democratic Party manifesto provides for

the improvement of the environment through programmes like environmental sanitation, annual tree planting, free supply of nursery plants, reclamation of land for building projects and the fight against erosion and industrial waste in order to protect the lives of our people, as well as plants and animals, and eliminate pollution of water and the atmosphere, and [to promote] vigilance against unmindful dumping of industrial wastes.¹⁷

In its manifesto the National Republican Convention provides that 'the party shall put in place a policy on the disposal of industrial waste in order to protect the life of people, plants and animals by controlling pollution of water and the atmosphere'.¹⁸

In spite of this, environmental matters do not feature prominently in political party platforms in Nigeria. There are no politicians or political parties whose *raison d'être* is the preservation and protection of the environment. This is quite understandable in view of the fact that the average person is much more interested in food, clothing and shelter—the basic amenities of life. These issues, rather than environmental issues, are the ones that attain prominence during political campaigns and meetings. Nevertheless, the link between the environment and development is becoming more obvious and key government figures are noting the link.

In the past, parliamentary committees and investigating bodies have been established to deal with environmental issues. These committees are usually established on an *ad hoc* basis, when an environmental issue becomes pressing. For example, in 1982 the now defunct House of Assembly established a committee to examine, among other things, the amount of damage done to the environment as a result of a blow-out that occurred during petroleum operations in Rivers State. Similarly, a committee was set up to investigate the Koko incident of 1988 (see Section 4.2).

In 1989, the President launched the National Policy on Environment. The Policy serves as a vehicle for achieving environmentally sound management of human and natural resources. Its goal is to achieve sustainable development in Nigeria. In particular, it seeks to

- (a) Secure for all Nigerians a quality of environment adequate for their health and well being.

- (b) Conserve and use the environment and natural resources for the benefit of present and future generations.
- (c) Restore, maintain and enhance the ecosystem and ecological process essential for the functioning of the atmosphere, to preserve biological diversity and the principle of optimum sustainable yield in the use of living natural resources and ecosystem.
- (d) Raise public awareness and promote understanding of essential linkages between environment and development and to encourage individual and community participation in environmental improvement efforts.

It must be noted that there is a difference between political or parliamentary committees or investigative agencies and government agencies, commissions and special bodies created to deal with environmental issues. The former are temporal in nature; the latter are permanent.

1.2 Legal framework

Under the Criminal Code Act (Cap. 77 LFN 1970), which was originally enacted in 1916, the provisions on environmental protection are general in nature and relate to common nuisance, noxious acts and fouling of water. The Act provides that any person who vitiates the atmosphere or acts in any way likely to spread disease dangerous to human or animal life is guilty of a misdemeanour (section 247). Further, a person who fouls or corrupts water, thereby rendering it less fit for the purpose for which it is ordinarily used, is guilty of a misdemeanour (section 245). The penalty for both offences is six months' imprisonment. The offence of common nuisance under the Criminal Code Act (section 234), which is similar to the offence of nuisance created under the State Environmental Sanitation Edicts, includes a host of activities against public health. This is not surprising: nuisance has been described as a 'catch-all for a multitude of ill-assorted sins'.¹⁹ Environmental issues are treated in the Criminal Code Act purely as a public health concern. This may have been sufficient when the laws were enacted: at that time industrial activity in Nigeria was very limited. Industrial and commercial activities have since increased drastically, but the law remains unchanged, as do the penalties provided for therein.

Apart from the Criminal Code Act, a host of other legislation and Regulations touch on the environment, among them are the following:

- Mineral Act (Cap. 226 LFN 1990)
- Petroleum Act (Cap. 350 LFN 1990)

Oil in Navigable Waters Act (Cap. 337 LFN 1990),
 Oil Terminal Dues Act (Cap. 339 LFN 1990)
 Factories Act (Cap. 126 LFN 1990)
 Associated Gas Reinjection Act (Cap. 26 LFN 1990)
 Endangered Species (Control of International Trade and Traffic) Act
 (Cap. 108 LFN 1990)
 Harmful Waste (Special Criminal Provision) Act (Cap. 165 LFN 1990)
 Federal Environmental Protection Agency Act (Cap. 131 LFN 1990)
 Sea Fisheries Act (Cap. 404 LFN 1990)
 Quarries Regulation (Cap. 383 LFN 1990)
 Mineral Oil Safety Regulation (Cap. 350 LFN 1990)
 Petroleum Regulations, Petroleum Drilling and Production Regulations,
 Petroleum Refining Regulations (Cap. 350 LFN 1990).

Most of the Regulations are administrative rules relating to various industrial concerns and containing some provisions on the environment as it affects industrial activities. Most of the Acts contain criminal offences. In general there has been a trend to increase sanctions over the years, from, for example, a fine of 100 naira contained in some Regulations in the 1950s to 2000 naira in the 1960s and, for corporate bodies, 500 000 naira at present. Similarly, the number of years of imprisonment has changed from six months, which was the most common term, to life, as contained in the Harmful Waste Act. An additional trend is the use of forfeiture as a sanction.

The emphasis has always been on punishment. The current severity of sanctions may be primarily due to the fact that the major polluters are corporate entities. It is believed that heavy fines accompanied by sanctions such as forfeiture of licences or closure of the premises concerned will act as a deterrent to large entities. The validity of this remains to be proven: it has been said that this attitude has not worked in the past and will not work in the future.²⁰ Further, the early enactments did not make adequate provision for the punishment of corporate entities or their officers. The recent enactments, however, make adequate provision for the punishment of corporate entities and their officers who knowingly participate in a crime by an act or omission (for example, the Harmful Waste Act and the Federal Environmental Protection Agency Act).

The trend that can be discerned in efforts to secure compliance with environmental laws has two elements. First, the law now imposes stringent penalties on environmental offenders. Second, enforcement agencies are moving to ensure that industries install pollution-abatement equipment. In

practice, the emphasis has moved towards trying to persuade polluters to comply, although in theory the emphasis remains on stringent penalties.

The Federal Environmental Protection Agency has recently created the Department of Inspectorate and Enforcement, the main responsibility of which is to ensure that industry complies with the Agency's regulations. In doing this, the Department registers waste disposal companies, issues permits and licences, designates waste disposal sites, and accredits consultants, laboratories and pollution management and control companies. The Department has established a pollution complaints unit to receive complaints from individuals and groups. The Office of Ombudsman has also been established. It is to be assisted by a board (the Complaints Arbitration Board), which will re-examine appeals from industries and companies on decisions taken by the Federal Environmental Protection Agency. The recommendations of the Arbitration Board, membership of which comprises representatives of the Manufacturers Association of Nigeria, environmental scientists and the community, will be presented to the Director of the Federal Environmental Protection Agency via the Ombudsman. The Director will act upon or set aside such recommendations. Apart from the Department of Inspectorate and Enforcement, the Agency has the following departments: Environmental Quality, Finance and Administration, Environmental Technology, Planning and Evaluation, and Environmental Conservation and Management.

The Natural Resources Conservation Council coordinates all matters relating to conservation of species, natural resources and habitats. The Council is responsible for monitoring the conservation programs of other agencies, encouraging the conservation of natural habitats, ensuring the protection of habitats, and helping to control coastal zone development and coastal erosion. The Chairperson of the Council is the President of Nigeria. The Vice President and the Ministers of Agriculture, Water Resources and Rural Development, Works and Housing, Health, and External Affairs are members of the Council. The National Advisory Committee on the Conservation of Renewable Resources assists the Council. The five departments in the Council are Biological Resources, Ecological Services, Conservation Liaison, Finance and Administration, and Planning Research and Statistics.

In compliance with the National Policy on Environment, the National Council on Environment was established in 1989. This Council, which meets at least once a year, coordinates, harmonises, manages and implements

environmental policies among the States. It ensures cooperation and coordination between the Federal Environmental Protection Agency and the State environmental agencies.

State environmental committees were also proposed under the National Policy on Environment and already exist in most of the States. These committees facilitate coordination and cooperation between State and local government authorities.

The National Committee on Ecological Problems was established in 1985. Its role is to advise on ways of using a fund provided for dealing with ecological problems. The Committee has five priority areas:

- soil erosion and flood control
- desertification and drought control
- general environmental control
- oil spillage and pollution
- relief assistance to disaster victims.

The Natural Resources Conservation Council coordinates the activities of the Committee. A number of other federal ministries deal to some extent with the environment:

- the Ministry of Works and Housing, which has responsibility for housing policy, lands, gardens, parks, protection of the sea coast against erosion, construction and maintenance of public buildings, and urban planning and development;
- the Ministry of Petroleum and Mineral Resources, which has responsibility for conservation, inspection and control of the oil industry, natural gas, petrochemicals refineries, and hydrocarbons;
- the Ministry of Agriculture, Water Resources and Rural Development, which has responsibility for water resources, development of river basins, dams and irrigation, underground water, and water supply;
- the Ministry of Health and Human Services, which has responsibility for public health and the safety of food and drugs;
- the Ministry of Transport and Communication, which has responsibility for inland waterways navigation and maritime shipping;
- the Ministry of Industries and Technology, which has responsibility for industrial development quality control and standardisation, research in the areas of energy, agriculture, building, medicine, roads, and industry, issues relating to forestry, plants, fisheries, soil erosion control and quarantine, the establishment of game reserves, botanical gardens and wildlife and

zoological gardens, minerals, geological survey, quarries, and national energy policy;

- the Ministry of Trade and Tourism, which has responsibility for formulating general guidelines for the development and conservation of the aesthetics of the environment as they relate to tourism.

It is very difficult to establish the precise number of personnel dealing with environmental issues in a particular ministry. Suffice to say that 'pockets' of environmental officers can be found in all the aforementioned ministries. Natural Resources Conservation Council personnel number about 120. In some institutions—for example, the Federal Environmental Protection Agency—staff numbers are moderate but consultants from the public and private sectors are used.

What applies to the personnel of these departments could also be said of the departments' budgets. For example, although the budget for the Ministry of Health and Human Services exceeded 500 000 000 naira in 1990 and 750 000 000 naira in 1991, only about 2 per cent of it was directed towards the environment. The 1991 budget for the Federal Environmental Protection Agency was about 13 000 000 naira and the annual budget of the Natural Resources Conservation Council was about 50 000 000 naira. Abuja State Environmental Protection Board has an annual budget of 30 000 000 naira; the Lagos State Ministry of Environment has an annual budget of 90 000 000 naira, 75 per cent of which is assigned to drainage problems.

1.3 Environmental problems²¹

In terms of Nigeria's environmental problems, the four issues being accorded highest priority are the following:

- ensuring sustainable industrial production
- preventing and reversing desertification
- managing forest and wildlife resources
- combating floods and inland and coastal erosion.

Ensuring sustainable industrial production

With the exception of the petroleum industry, most industries do not have waste treatment systems. The few treatment plants that do exist either are not functioning as a result of over-use or lack of proper servicing or are unable to cope with the vast amounts and types of industrial effluents passing through them. The real challenges of industrial pollution can be identified thus:

- air pollution (gas or particle emissions), especially from the cement and asbestos industries;
- land and water pollution—effluent discharged onto land and into water has become a great concern, particularly in view of the epidemic tendencies of such pollution. The pharmaceutical, chemical, textile and oil industries are the major polluters;
- noise pollution.

Preventing and reversing desertification

Nigeria has lost about 351 000 square kilometres of its land to the desert, and the desert is advancing at a yearly rate of 0.6 kilometres. Desertification is the most important problem for northern Nigeria. Entire settlements, and in some cases major access roads, were buried by sand dunes in some parts of the north quite recently.

Managing forest and wildlife resources

Deforestation and loss of wildlife resources are problems throughout the nation. Deforestation affects timber production and the production of non-wood products (such as medicines, food and paper) that are obtained from the wood. There has been a ban on the export of wood obtained from natural forest since 1976, but much of the deforestation that occurs is the result of using wood for domestic purposes.

Hunting is a major cause of loss of wildlife. There is a need to protect wildlife and biodiversity by specifically providing for the protection of certain species and areas that are of scientific, recreational or aesthetic value.

Combating floods and inland and coastal erosion

Nigeria's coastal resources have been greatly damaged by erosion and this has had severe financial consequences. Research into methods of controlling floods and erosion is being promoted.

Government responses to pollution incidents

There have been some spectacular cases of environmental pollution in Nigeria. In 1982, for example, an oil spill occurred in Rivers State as a result of a well blow-out. The area was engulfed by fire for several days, humans and animals died, and the largest amount ever paid as compensation for environmental damage was paid by the oil company involved. The Federal Government has since paid particular attention to oil pollution, spending large sums to ensure a reduction in such pollution and enacting several laws with

this aim. It has also involved members of the Navy and Air Force in combating oil pollution.

Another specific case that received much attention is that in which toxic waste was illegally dumped at Koko by a foreign country (see Section 4.2). The waste was eventually returned to the country of origin and a law was enacted to ban the dumping of toxic waste.

Public perceptions and responses

Industrial pollution, which is the main source of environmental pollution in Nigeria, is not seen by the general public to be a major problem. What comes to the mind of most people when the issue of environmental protection is discussed is refuse disposal, or environmental sanitation. And the States have approached the issue in the same way: perusal of the Environmental Sanitation Edicts reveals this.

As long ago as 1985 the Federal Government declared the last Saturday of every month to be 'an environmental sanitation day' throughout the entire federation. On these days, between 7.00 am and 10.00 am citizens must clean their immediate surroundings. All personal and commercial activities come to a halt and the Government sends out War Against Indiscipline officers to arrest persons found wandering the streets. These people are fined by a customary court.

The consistent, and commendable, attention given to environmental issues by the media is also approached via public health and environmental sanitation. Radio jingles are generally concerned with keeping the environment clean and tidy. Television advertising is expensive so environmental issues receive scant attention in that medium. In cases of disaster, however, television coverage is usually good and commentaries comprehensively presented. Radio is equally competent in these circumstances. Further, activities geared towards the 1992 United Nations Conference on Environment and Development included considerable publicity about the Federal Environmental Protection Agency and the environment and sustainable development.

There are no citizen groups operating in the area of the environment. There are, however, a number of non-government organisations that focus on the protection of the environment. The Nigerian Environmental Study Action Team was established in 1987 with the following objectives: to collect data and information on the state of the Nigerian environment; to investigate and

assess potential environmental hazards; and to analyse patterns of human behaviour and cultural and social relations vis-a-vis the environment. The Nigerian Conservation Foundation was established in 1982 by a group of scientists with the aim of promoting public awareness and action in preventing land degradation, helping to develop and implement conservation policies, and encouraging local conservation activities. The Nigerian Environmental Society was established in 1985. It campaigns to enlighten the public on environmental matters, especially the hazards of improper industrial waste disposal. Nigerian Environmental Watch disseminates information on all aspects relating to the preservation of the environment.

The non-government organisations are a force to be reckoned with. Many of them have links with international organisations. The first national profile of the Nigerian environment, launched in 1991, was prepared by a non-government organisation.

1.4 Historical development of environmental protection law²²

During the colonial era protection of the environment was not a priority and there was no policy aimed at preserving and protecting the environment. Matters relating to the environment were dealt with as a tort of nuisance because disputes in environmental law were not viewed as public matters warranting State intervention. The few environment-related laws that existed criminalised activities that could degrade the environment. This is revealed in the Criminal Code Act of 1916, sections 245 and 247 of which prohibit water pollution and air pollution respectively. The Act also creates the offence of nuisance.

In 1917 the Public Health Act was enacted. Although somewhat broad in scope, this Act does provide various sanctions for the pollution of water and air and the dumping of waste on land. Thus it is evident that at this time matters relating to the environment were dealt with in a rudimentary manner, from the view point of environmental sanitation.

After independence in 1960, and the discovery of oil in commercial quantities, it became apparent that existing laws dealing with the environment were grossly inadequate. Most of the provisions on environmental protection were scattered throughout various laws on various subjects and had been created as ad hoc responses to different needs in different situations.²³ During the decade of independence acts that resulted in environmental degradation were further criminalised; for example, the Oil in Navigable Waters Act

prohibited the discharge of oil in navigable waters and the Petroleum Act prohibited environmental degradation as a result of petroleum activities.

During the 1970s numerous environment-related laws were enacted in response to the industrial growth that resulted from the oil boom. The River Basin Authorities were created and environmental units were established in some government ministries. Again, the laws that were enacted were often 'knee jerk' responses to emergency situations.

The 1980s witnessed the most drastic, and to some extent systematic, laws on the environment. Laws establishing government councils or commissions were enacted; for example, the Energy Commission of Nigeria. Some international conventions on the environment were signed and thus led to the enactment of a number of laws; for example, the Harmful Waste (Special Criminal Provision) Act, the Federal Environmental Protection Agency Act and the Endangered Species Act. Most States promulgated laws on environmental sanitation during this period.

The colonial attitude of approaching environmental issues from the domestic health perspective, thereby abandoning a host of other key environmental issues, is very obvious in the State environmental laws that were enacted during the two decades following independence.²⁴ Further, the tilt towards the tort of nuisance is very evident. The result of this is that environmental case law is much more developed than the legislation.

2 SANCTIONING STRATEGIES

In Lagos State, local government sanitation and health officers visit industries, factories and residential areas. The regularity of these visits is dependent upon the number of staff at the disposal of the local government involved. In some local government areas where the number of staff is limited and where there is relatively little industry (and consequently less pollution-creating activity) action is reactive; for example, Lagos Mainland Local Government. In the Ikeja local government area, however, operations are proactive. This local government area is the seat of industrial activity in Lagos State, and visits to inspect industries occur daily.

When an offence of continuing nuisance is discovered the creator of the nuisance is served with a notice and usually given two or three days to rectify the situation. Upon breach of the notice, the creator of the nuisance is taken to court. If, however, the nuisance or pollution is very serious, the local government concerned may direct the matter to the State Ministry of

Environment and Physical Development. In addition to the imposition of some obligations on the creator of the nuisance or pollution, the Ministry will offer technical assistance in managing the situation. If the creator proves unamenable the result is usually prosecution.

The types of breach that often result in prosecution differ from one local government to another. In Lagos Island local government area, for example, improper disposal of refuse and an insanitary environment (such as dirty drains and gutters) are considered very important and breach of a notice usually results in prosecution. This is also the case in Shomolu, Apapa and Ajegunle local government areas. In Ikeja local government area non-compliance with notices on water and land pollution generally results in prosecution.

In most local government areas noise pollution is usually dealt with informally. In Ikeja local government area this is also the case with air pollution. Water pollution is given priority because of its epidemic propensities. Many cities in developing countries, including Nigeria, have a high incidence of diseases, most of which are water borne and the result of an insanitary environment or improper waste and refuse disposal. In Lagos State the sanctions imposed are as stipulated under the Lagos State Environmental Sanitation Edict: a fine of 4000 naira for a corporate entity and a fine of 200 naira or three months' imprisonment for an individual (sections 2 and 18 of the Edict). For water pollution a fine of 4000 naira is imposed on corporate polluters; for an individual it is either a fine of 250 naira or three months' imprisonment (section 3(2)). From the records available²⁵, it appears that there were no cases of imprisonment between 1988 and 1990—see Table 1. Eighty per cent of inhabitants or users of premises that were found unsatisfactory complied with their clean-up notice or order of abatement.

On the basis of the interviews conducted for this report, there seemed to be no difference in enforcement activities directed towards particular categories of polluters. One might expect that the creation of various categories of polluters would define the enforcement activities. The general attitude of persons interviewed is that anyone who commits an offence under the Edict will be prosecuted. The case of *Mushin Local Government v. Nigerian Railway Corporation*²⁶, in which a government agency was prosecuted for an environmental offence, was cited by government officials.

Table 1: Enforcement activities: Ikeja local government area

Year	Item	Figure
1988	No. of premises inspected	24 748
	Amount recovered as fines (naira)	16 240
1989	No. of premises inspected	23 331
	No. of premises found satisfactory	18 295
	No. of premises found unsatisfactory	5 036
	No. of persons arrested and prosecuted	216
	No. of persons found guilty	185
	No. of suits pending	31
	Amount recovered as fines (naira)	29 105
1990	No. of premises inspected	20 128
	No. of premises found satisfactory	12 340
	No. of premises found unsatisfactory	7 888
	No. of persons prosecuted	349
	No. of persons found guilty	228
	No. of persons discharged	67
	No. of suits pending	54
	Amount recovered as fines (naira)	33 990

It is well known that the activities of oil companies usually result in air, water, noise and thermal pollution. Yet, despite decades of activity in Nigeria, not one oil company has been prosecuted for an offence against the environment. The devastating effects of oil pollution on man and the ecosystem cannot be exaggerated.²⁷ Further, in Benue State the activities of the State-owned cement company have caused considerable damage to the environment. No prosecution has been brought against the company. Some people in the State have sought the fiat of the Attorney-General to sue the company, but the Attorney-General has not been willing to give consent because the same Attorney-General would probably have to defend the case. It would seem that some companies are not prosecuted because government has an interest in them. The experience of civil cases suggests that, even if companies are prosecuted, they would use their considerable power to deal

with such cases: this may be another reason for the reluctance to sue them. At the local government level, 85 per cent of those prosecuted were individuals or very small companies whose contribution to environmental degradation was almost inconsequential.

This report would be incomplete if the approach of the Federal Environmental Protection Agency were ignored. Until August 1991, when the National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Waste) Regulation and the National Environmental (Effluent Limitation) Regulation were enacted, the Agency was unable to take any legal action against any company whose activities degraded the environment. This was because the guidelines and standards for environmental pollution did not have any legal backing. Rather, they could be described as directives or expressions of government intention.

Since August 1991, the Agency has commenced enforcement activity through its Inspectorate and Enforcement Department, which is both reactive and proactive. Through the Pollution Complaints Unit the Department responds to all complaints of environmental degradation. It uses a camera and video outfit when investigating. When its investigations establish environmental degradation, a notice is issued to the company concerned, with recommendations on the steps to be taken to put an end to the degradation. In the Lagos zone only four investigations were made between August and October 1991 and none resulted in prosecution. No sanction has been imposed because the period of grace for industries to install the appropriate pollution-abatement device is three months and the companies concerned were still enjoying the period of grace at the time of writing this report. In other cases of minor pollution, however, the companies have complied with the Agency's recommendations. In view of the fact that the Department is still in its infancy, little can be said about its sanctioning strategies. Section 1 of the National Environmental (Effluent Limitation) Regulation 1991 provides for the installation of abatement equipment for industries already existing. Failure to do this may lead to the closure of the plant.

It would seem that many of the problems encountered by the State Government in prosecuting multinational corporations and State entities may be eliminated by the creation of the Office of the Ombudsman within the Department. In addition, being a federal entity, the Agency has federal might behind its operations, especially since its transfer to the Presidency.

2.1 Inventory of relevant national (administrative, civil and criminal) sanctions

The legal basis for the protection of the Nigerian environment comprises statutory provisions, judicial (common law) rules, protocols and conventions, and codes of conduct.

Statutory provisions

The national statutory and administrative provisions dealing with protection of the environment are as follows:

- the Animal Diseases (Control) Act (Cap. 18 LFN 1990), which provides for the control and prevention of animal diseases. The main objective is to prevent the spread and introduction of infectious and contagious diseases among animals, hatcheries and poultry enterprises;
- the Bee (Import Control and Management) Act (Cap. 33 LFN 1990), which provides that bees and agricultural materials shall be imported by licensed persons only;
- the Endangered Species Act (Cap. 108 LFN 1990), which provides for the conservation and management of wildlife and the protection of species in danger of extinction as a result of overexploitation;
- the Hides and Skins Act (Cap. 167 LFN 1990), which provides for the regulation and control of the trade and export of hides and skins;
- the Live Fish (Control of Importation) Act (Cap. 209 LFN 1990), which prohibits the importation of live fish without a permit;
- the National Crop Varieties and Livestock Breeds Act (Cap. 249 LFN 1990), which provides for the certification, registration and release of national crop varieties and livestock breeds;
- the Agricultural (Control of Importation) Act (Cap. 12 LFN 1990), which, for the purpose of controlling plant diseases and pests, makes provisions regulating the importation of specific articles;
- the Agricultural and Rural Management Training Institute Act (Cap. 11 LFN 1990), which establishes a training institute to identify management training needs in agricultural and rural development organisations throughout the country and provides for the development and implementation of training programs to meet the needs of managers in agriculture and rural development;
- the Pest (Control of Produce) Act (Cap. 349 LFN 1990), which provides for the inspection of produce for pests before export from all air and sea ports;

- the Quarantine Act (Cap. 384 LFN 1990), which regulates the imposition of quarantine so as to prevent the introduction of infectious diseases;
- the Associated Gas Reinjection Act (Cap. 26 LFN 1990), which prohibits gas flaring that will result in air and thermal pollution;
- the Civil Aviation Act (Cap. 51 LFN 1991), which regulates atmospheric pollution resulting from aviation activities;
- the Oil in Navigable Waters Act (Cap. 337 LFN 1990), which prohibits the discharge of oil into navigable waters;
- the River Basin Development Authority Act (Cap. 390 LFN 1990), which establishes 11 river basin development authorities to undertake development of surface and underground water resources for multiple uses, especially for the control of floods and erosion and for watershed management;
- the Sea Fisheries Act (Cap. 404 LFN 1990), which provides for the regulation and protection of sea fisheries in territorial waters;
- the Territorial Waters Act (Cap. 428 LFN 1990), which determines the limit of Nigeria's territorial waters;
- the National Water Resources Institute Act (Cap. 284 LFN 1990), which establishes the National Water Resources Institute, the purpose of which is to promote and develop training programs in water resource management and to advise government on training needs and priorities;
- the Exclusive Economic Zone Act (Cap. 116 LFN 1990), which defines the Exclusive Economic Zone of Nigeria as extending 200 nautical miles seawards from the coast and enables Nigeria to exercise its sovereign rights, especially in relation to the conservation or exploitation of the resources of the seabed, subsoil and superjacent waters;
- the Kainji Lake National Park Act (Cap. 197 LFN 1990), which establishes Kainji Lake National Park for the conservation and preservation of wildlife and natural life;
- the Harmful Waste Act (Cap. 165 LFN 1990), which prohibits the carrying, depositing and dumping of harmful waste on land or water;
- the Land Use Act (Cap. 202 LFN 1990), which vests all land in a State in the governor of that State and defines interests that can be held in land;
- the Mineral Act (Cap. 226 LFN 1990), which provides for environmental protection during mining activities;
- the Petroleum Act (Cap. 350 LFN 1990), which provides for the protection of the environment during petroleum activities;
- the Criminal Code Act (Cap. 77 LFN 1990), creating the offence of public nuisance, which includes fouling of water and air;

- the Energy Commission of Nigeria Act (Cap. 109 LFN 1990), which establishes the Energy Commission of Nigeria for the purpose of coordinating the development of Nigeria's energy resources;
- the Factories Act (Cap. 126 LFN 1990), which provides for the safety of factory workers and others exposed to occupational hazards;
- the Federal Environmental Protection Agency Act (Cap. 131 LFN 1990), providing for the establishment of the Federal Environmental Protection Agency, which is charged with the responsibility for protecting and preserving the environment;
- the Natural Resources Conservation Council Act (Cap. 268 LFN 1990), provides for the establishment of the Natural Resources Conservation Council, responsible for the conservation of natural resources and the formulation of a national policy for resource conservation.

2.2 Specific criminal law provisions regarding environmental protection

Criminal law sanctions for environmental degradation and non-compliance can conveniently be discussed in terms of water protection, emission control, water removal, and animal and plant protection.

Water pollution²⁸

Section 6 of the Oil in Navigable Waters Act prescribes a sanction of 1000 naira for the offence of discharging oil into prohibited sea areas and Nigerian waters. This fine is imposed on summary conviction. Section 245 of the Criminal Code Act provides for six months' imprisonment for the misdemeanour of fouling water.

The Sea Fisheries Regulation, which prohibits the catching and destruction of any fish in Nigerian water by the use of any poisonous matter or explosive substance, provides for a fine of 200 naira or six months' imprisonment with an additional fine of 100 naira for each day the offence continues (section 9). Furthermore, under section 10 the catch, the boat or the apparatus employed in the commission of the offence is to be forfeited to the Federal Government. Section 20(2) of the Federal Environmental Protection Agency Act provides for a maximum term of 10 years' imprisonment or a fine of 100 000 naira for a person who discharges harmful substances into Nigerian waters. In the case of a corporate body, section 20(3) provides for a fine not exceeding 500 000 naira, with an additional fine of 1000 naira for every day the offence continues. Officers of the corporate body may also be directed to pay compensation for any damage incurred or to repair and restore the polluted environment or area to a level approved by the Agency. This additional

sanction may, however, not be necessary if it can be proved to the satisfaction of the court that due diligence was used to secure compliance and the offence was committed without the knowledge of the officers of the corporate body.

The Petroleum (Drilling and Production) Regulation provides that precautions should be taken to prevent the pollution of water. The sanction for a breach of any Regulation pursuant to the Petroleum Act is revocation of the licence (Schedule 1, section 2, paragraph 24, of the Act). The Petroleum Regulation prohibits the discharge or escape of petroleum into water. The offender is liable on summary conviction to a fine not exceeding 100 naira or a term of imprisonment not exceeding six months, or both. Where the offender holds a licence under the Regulation, the licence may be revoked (paragraph 106).

Emission control

Section 247 of the Criminal Code Act provides for a term of six months' imprisonment for persons who vitiate the atmosphere. The Associated Gas Reinjection Act penalises oil companies that pollute the air by flaring gas. Under section 4 of the Act such companies shall forfeit their concession in the field where the offence was committed. The Minister may also order the withholding of any entitlement of the offender and use such entitlement to defray the cost of completion or implementation of a desirable reinjection scheme or for the repair or restoration of any reservoir in the field in accordance with good oil field practice.

The Federal Environmental Protection Agency Act prohibits the discharge of harmful quantities of any hazardous substance into the air. The penalties are the same for water pollution: for an individual, a maximum of 10 years' imprisonment or a fine of 100 000 naira; for a body corporate, a fine not exceeding 500 000 naira, with an additional fine of 1000 naira for each day the offence continues. The National Environmental (Effluent Limitation) Regulation 1991 and the Pollution Abatement (in Industries and Facilities Generating Waste) Regulation 1991 provide for the installation of facilities that will reduce pollution in industries releasing harmful gaseous matter. Persons who breach the Regulations will on conviction be penalised under sections 35 and 36 of the Federal Environmental Protection Agency Act: section 35 of the Act prescribes a maximum term of two years' imprisonment or a maximum fine of 20 000 naira for contravention of any provisions in the Federal Environmental Protection Agency Regulation. Section 36 prescribes a

maximum fine of 500 000 naira for corporate bodies convicted of an offence under the Regulation. There is no provision for restoration.

Waste disposal

In the case of waste disposal, the main legislation is again the Federal Environmental Protection Agency Act and the sanctions are the same as those for emission control. The Pollution Abatement (in Industries and Facilities Generating Waste) Regulation also provides for waste disposal and removal in industries. As provided in paragraph 22 of the Regulation, penalties for non-compliance are those stipulated in sections 35 and 36 of the Federal Environmental Protection Agency Act. For illegal dumps from quarries, paragraph 30 of the Quarries Regulation stipulates a fine of 200 naira and 10 naira for every day the offence continues. The Harmful Waste (Special Criminal Provision) Act provides for a sentence of life imprisonment for any person who carries, deposits or dumps harmful waste on any land or water in Nigeria. In addition, under section 6 of the Act any vehicle used in the transportation or importation of harmful waste and any land on which the harmful waste is deposited or dumped shall be forfeited to the Government. Section 12 of the Act makes provisions for civil liability and damage claims. Paragraph 45 of the Petroleum Refining Regulation provides for a fine of 100 naira or six months' imprisonment for the improper disposal of refinery effluent. The Petroleum (Drilling and Production) Regulation provides that waste should be drained in proper receptacles. Companies violating this provision may have their licences revoked (Schedule 1, section 2, paragraph 24, of the Petroleum Act).

Animal and plant protection

Under the Endangered Species (Control of International Trade and Tariffs) Act persons who contravene the provisions of the Act by trading or dealing in a specimen that is prohibited in Schedule 1 of the Act are guilty of an offence and liable to a fine of 1000 naira for a first offence and to imprisonment for one year without the option of a fine in the case of a second or subsequent offence. Where the specimen dealt with by the offender falls within Schedule 2, a fine of 500 naira is imposed on a first offender and a second or subsequent offender is subject to imprisonment for six months without the option of a fine. In addition, the court may order the forfeiture of the specimen in question and make such orders as it deems fit; for example, the upkeep of a live specimen at the expense of the person convicted (section 5 of the Act).

The Kainji Lake National Park Act prohibits the introduction of vegetation or wild or domestic animals to the Park. It also places restrictions on hunting in the Park. The sanction for a breach of the restrictions is a minimum fine of 1000 naira or a maximum term of five years' imprisonment, or both. The sanction for a breach of the prohibition is a minimum fine of 500 naira or a maximum term of three years' imprisonment, or both (section 14). Under section 8 of the Agricultural (Control of Importation) Act a fine of 400 naira or imprisonment for one year is the prescribed sanction for persons who breach the provisions of the Act, which is designed to control plant diseases. Paragraph 7 of the Regulation made under the Act stipulates a fine of 100 naira or six months' imprisonment for offenders under the Regulation. Under section 10 of the Animal Diseases (Control) Act, which provides for prevention of the introduction and spread of infectious and contagious diseases among animals and poultry, any offence under the Act will be punished by a fine of 250 naira or a term of three months' imprisonment.

Criminal sanctions

Although most environmental laws in Nigeria seek to protect public health²⁹ and the right of the individual to a clean environment, these objectives are yet to be met.³⁰

The Criminal Code Act provides a good example of the attempts to protect public health. Its interest in this objective is revealed in the environmental issues with which it deals. For example, the fouling of water (section 245), the sale of foods and drinks unfit for human consumption (section 234), and noxious acts (section 247) are criminalised.

It has been argued that the offence of fouling water was not created to preserve the environment; rather, that it was created to protect human activity. The premise is that the pollution of water must render it less fit for the purpose for which it is ordinarily used. In some instances, ordinary use of water does not necessarily protect and preserve the quality of that water; for instance, until a few years ago the dumping of faeces into a lagoon was considered an ordinary use of water. As for noxious acts, these are prohibited only when they are 'detrimental to human life'.³¹ The problem lies in identifying the point at which an act can be said to be detrimental to human life.

Many offences are created under criminal law; a few are created under administrative law. The Oil in Navigable Waters Act, which came into existence as a result of the International Convention for the Prevention of

Pollution of the Sea by Oil (London 1954)³², provides an example of an offence of mixed form. The offences created under this Act are criminal offences. The provisions of the Act are very similar to those under the common law rule in *Rylands v. Fletcher*.³³ Most environmental offences are result oriented. The obvious exception is the offence of dumping under the Harmful Waste Act, which is act oriented.³⁴ The requirement of *mens rea* is necessary in most environmental offences.

The Criminal Code Act imports into all criminal legislation the requirement of *mens rea* by rendering the provisions of Chapter V of the Criminal Code (which deals with criminal responsibility) applicable to all enactments. This does not, however, mean that offences of strict liability cannot be created in Nigeria. The provisions of the Harmful Waste Act create offences of strict liability and the elements of *mens rea* can scarcely be observed in them.³⁵ In creating the offences, the Act provides that a person who, without lawful authority,

- (a) carries, deposits, dumps or causes to be carried, deposited or dumped, or is in possession for the purpose of carrying, depositing or dumping any harmful waste on any land or in any territorial waters or contiguous zone or exclusive zone of Nigeria or its inland waterways or
- (b) transports or causes to be transported or is in possession for the purpose of transporting any harmful waste or
- (c) imports or causes to be imported or negotiates for the purpose of importing any harmful waste or
- (d) sells, offers for sale, buys or otherwise deals in any harmful waste, shall be guilty of crime under this Act.

Although the offence seems to be one of strict liability, the word 'causes', which is used a number of times in the Act, has been said to presuppose some element of mental knowledge. Thus it has been argued that it may not be possible to convict a person if there is no evidence that the act was done knowingly.³⁶ But it is possible for a person to cause an act unknowingly. For example, a person may unknowingly transport harmful waste if the label on the container does not specify that the substance contained therein is harmful waste.

The view has also been expressed that, where an enactment of a penal nature is silent on the issue of *mens rea*, there is a presumption that the element of *mens rea* is intended in the enactment.³⁷ The section in question

should not, however, be read in isolation. Some offences created in the Harmful Waste Act specifically require the element of knowledge; for example, section 7 provides that the neglect, consent or connivance of an officer of a company in the commission of a crime is punishable. This is obviously not a strict liability offence and differs from that contained in section 1 of the Act: the offence created in section 7 is an offshoot of that created in section 1. Thus the offence must have been committed by the corporate entity before the offence and sanction in section 7 can be applicable.

In *Alphacell Ltd. v. Woodward*³⁸ a corporate body was convicted of polluting a river under the Rivers (Prevention of Pollution) Act of 1951. The company was convicted of the offence under the Act but, dissatisfied with the judgment of the lower court, it appealed. Upholding the decision of the lower court, the House of Lords held that *mens rea* was not relevant before a conviction could be obtained under the Act, despite the fact that the act was not a crime in the strict sense.

Section 1 of the Harmful Waste Act creates an offence of strict liability, probably to avoid the problems of proof that may arise during litigation and to ensure that the legislation is enforced.³⁹ It may also be because before the Act came into force toxic waste was dumped in the country. The serious implications of such an action must have led to its categorisation as a strict liability offence. Under the Federal Environmental Protection Agency Act, the offences created do not impose strict liability. They are formulated such that the onus is on the defendant to avail himself or herself of defences that negate fault (sections 20(4) and 36 of the Act).

Customary law, which is unwritten, condones some environmental degradation. An example that is very common in southern Nigeria is bush burning. This is an acceptable customary practice used by farmers and hunters to clear the bush and to force animals from their hiding places during the hunting season. The results are destructive to the environment and there are many instances of such fires becoming uncontrollable. Persons who engage in such acts are often exempted from punishment under customary law.

Another example occurs in the petroleum industry, where waste is disposed of in pits. There is an abundance of environmental law cases dealing with instances when waste escaped from these pits.⁴⁰ The disposal of waste in this manner is, however, customary in the petroleum industry, and it is

allowed by the Department of Petroleum Resources. In some cases, the waste also seeps through the soil and contaminates ground water.

2.3 Legal sanctions

The various types of sanctions—fines, imprisonment, restoration, plant closure, forfeiture of licence or the instrument used to commit the offence, and so on—are discussed in the preceding sections. The severity of the offence is reflected in some instances by the severity of the sanction. The nature of the offender may also influence the severity of the sanction. Under the Federal Environmental Protection Agency Act, fines for both individuals and corporate offenders are high in view of the fact that the discharge of hazardous substances in harmful quantities is considered very dangerous. The fine is five times higher for corporate offenders than for private individuals, and, as noted, an additional fine of 1000 naira for every day the offence continues is applicable to corporate bodies (section 20(3) of the Act).

Persons who misinform the authorities or interfere with investigations are also punishable. The Harmful Waste Act provides a minimum fine of 50 000 naira or a minimum of five years' imprisonment for persons who hinder or obstruct any measures taken by the Minister in relation to the dumping of hazardous waste. The same sanction applies to persons who knowingly, without reasonable excuse, break a seal affixed by the Minister in relation to an area used, or to be used, for dumping hazardous waste (section 11(6) of the Act).

Section 27 of the Federal Environmental Protection Agency Act provides for a fine of 500 000 naira or imprisonment for up to 10 years, or both, for any person who wilfully obstructs an authorised officer in the performance of official duties or who fails to comply with any lawful enquiry or requirement made by an authorised officer. Thus the sanctions for persons who actually commit an offence and persons who obstruct authorised officers investigating an offence are the same. Further, under section 34 of the Act any false information knowingly and recklessly given in purported compliance with a requirement under the Act will attract a maximum fine of 200 naira or a maximum of one year's imprisonment. This is an important provision since most of the serious acts of pollution in Nigeria are perpetrated by large companies, which may be secretive about their activities and may not provide the necessary information about the nature of discharges from their industry.

The Harmful Waste Act punishes persons who attempt to commit an offence under the Act. The sanction is the same for persons who actually commit the offence.

2.4 Efficacy of environmental sanctions

The stiff penalties provided for in the Federal Environmental Protection Agency and Harmful Waste Acts could be seen as evidence of government's intention to minimise environmental pollution. But the traditional view that stiff penalties will reduce the incidence of offences does not concur with reality: the incidence of pollution remains the same, or is higher if one takes account of the increased number of industries.

Sanctions alone cannot curb pollution. Pollution abatement is dependent upon a number of other features, too, among them technology, finance, and political support for industries complying with the standards. Despite the penalties, many companies do not comply because it is uncertain whether they will be punished. To date, as noted, the Federal Environmental Protection Agency has not prosecuted any person or company for pollution. Nor has the Lagos State Ministry of Environment prosecuted anyone for failure to comply with the Environmental Pollution Control Edict. In this latter case the reason for non-prosecution may be found in the Edict itself. Section 21 of the Edict provides that any person engaged in any form of manufacturing shall pay an annual pollution discharge fee, which ranges from 60 000 naira to 300 naira. Companies pay the pollution discharge fee and make little effort to abate pollution arising from their activities. The State Government would probably find it very difficult to prosecute a company that has paid the charge. Another reason that has been proffered for non-prosecution is the powerful nature of corporate bodies, which are the major polluters: they use their 'connections' to avoid prosecution.

The only group of companies paying penalties for non-compliance on a consistent basis is the oil companies. They pay penalties to the Government for gas flaring because it is cheaper to pay the penalties than to reinject or process the gas.

2.5 Side sanctions

As well as providing for the liability of the polluter, the Federal Environmental Protection Agency Act provides for side sanctions. These include costs to third parties in the form of reparation, restoration, restitution, compensation, and any spillage-removal costs that might be incurred by any

government agency in the restoration or replacement of natural resources damaged or destroyed as a result of a discharge (section 21 of the Act). The Harmful Waste Act provides for forfeiture of the vehicle used for transportation of the waste and of the land on which the waste was dumped (section 6).

Section 2(6) of the Lagos State Environmental Sanitation Edict authorises the sealing up of tenements where liquid waste generated by persons therein is not contained and treated before discharge into any public sewage. This is additional to the sanction of 5000 naira payable by an offender.

Most large-scale polluters are industries, many of which can afford to pay a fine and then continue their environmentally unsound operations. Side sanctions such as plant closure or licence forfeiture should serve as sufficient deterrent to such polluters, but they are not being used.

As noted, recent enactments provide for the punishment of both corporate bodies and officers of those bodies. Early enactments such as the Criminal Code Act prescribe only a term of imprisonment for environmental offences. This is of course problematic if the offender is a corporate body.

The more recent Harmful Waste Act provides that if a crime under the Act has been committed by a body corporate and it is proven that the crime was committed with the consent or connivance of or is attributable to any neglect on the part of

- (a) a director, manager, secretary or other similar officer of the body corporate; or
- (b) any other person purporting to act in the capacity of a director, manager, secretary or other similar officer

that person as well as the body corporate shall be guilty of the crime and shall be liable to prosecution and punishment (section 7 of the Act). The Federal Environmental Protection Agency Act contains a similar provision (section 36). There is a difference, though: under the latter Act officers of a body corporate can only be fined (section 36), while under the Harmful Waste Act officers can be imprisoned for life. This evolving principle of corporate criminal liability is not peculiar to environmental offences. It is characteristic of recent enactments.

Some years ago the directors of several oil companies were detained in Alagbon Prison for offences committed by their companies. This approach became fashionable during the military regimes, when the difficulty of

imputing criminal liability on a legal abstraction was encountered. Society's attitude to corporate criminality is that acts are committed by people and not by companies. Further, investigations reveal that the image of a company is not seriously damaged: few people view companies convicted of environmental crimes as 'criminal entities'.

The Federal Environmental Protection Agency Act provides that the Agency or officers of the Agency may be sued in civil or criminal proceedings, presumably for not enforcing compliance or proper implementation of the Act. The procedure for such suits is laid down and there is a legal restriction on execution against the property of the Agency, although any sums awarded against the Agency shall be paid (section 31 of the Act).

2.6 Protection under civil law

The tort rules of liability that deal with the protection of the environment are nuisance, negligence, the rule in *Rylands v. Fletcher*, and trespass to land. The sanctions available under these rules are mainly damages and injunction.

The rule in *Rylands v. Fletcher*, which is supposed to be one of strict liability, has been used in cases of environmental pollution.⁴¹ The rule is that any person who for his own purpose brings, collects and keeps anything likely to do mischief must keep that thing at his or her own peril. The determination of non-natural user and what constitutes a mischievous thing that must have been brought and accumulated on the land has been considered in environmental litigation in Nigeria. In the Supreme Court case of *Machine Umudge v. Shell*⁴², where oil that escaped from the land of the defendant during petroleum operations flowed into the land of the plaintiff, thereby damaging the plaintiff's property, the rule in *Rylands v. Fletcher* was applied and the plaintiff was awarded damages. In *Otuku v. Shell BP*⁴³, oil from the defendant's manifold escaped into the plaintiff's fishpond and onto some of his land. In awarding the plaintiff damages, the judge held that the manifold that was placed on the land constituted a non-natural use of land. The main defect of the rule, however, comes from the numerous exceptions contained in it, which have reduced its utility as a strict liability rule.

Trespass

Trespass is the unauthorised intrusion on or invasion of property. The intruder or invader does not have to be a person: it may be a substance from another property. Thus, in *Gregory v. Piper*⁴⁴ garbage from the defendant's

property was blown by the wind onto the plaintiff's property. It was held that the defendant had trespassed on the land of the plaintiff. This common law rule aims to protect the welfare, health and safety of citizens. Every person has a right to quietly and comfortably enjoy his or her property.

Negligence

The tort of negligence has also been relied upon by plaintiffs in environmental litigation. The burden of proof is always onerous, and in most cases insurmountable. The plaintiff must establish that there exists a duty to conform to the required legal standard. There must also be a proven failure to conform to the standard. And then a causal link between the breach and the harm done must be established. In *Simon Onajoke v. Seismograph Services Ltd*⁴⁵ the plaintiff's building was damaged during the blasting operations of the defendant. The judge held that the defendant owed to anyone whose house was likely to be damaged by the blasting operations a duty to take steps to avoid such damage by moving to an area where the operations would not cause damage. Damages were awarded to the plaintiff for the injury done.

In some cases, the maxim of *res ipsa loquitur* has been relied upon to relieve the plaintiff from the onerous task of proving negligence.⁴⁶ Thus, in *Victor Elem v. Shell BP*⁴⁷ oil escaped from the defendant's oil site onto the plaintiff's property, causing damage. The judge evoked the principle of *res ipsa loquitur* and awarded damages to the plaintiff.

Nuisance

Unlawful interference with a person's enjoyment of his or her land has led to successful environmental litigation under the tort of nuisance, although success is usually limited to cases of private nuisance. A successful action in public nuisance requires the plaintiff to prove that the injury he or she has suffered differs from the injury suffered by other members of the community. Thus, in *Amos & Ors v. Shell BP*⁴⁸ the plaintiff's action for public nuisance failed because he could not produce evidence to show that the damage to the waterway affected him in a manner different from other members of the public. Although public nuisance is a crime actionable by the state, the Attorney-General's Office has not given it lengthy consideration and it is rarely used.

There are no special procedural principles that apply only to environmental crimes. In such litigation the issue of proof could, however, be problematic. The prosecution must establish its case beyond reasonable

doubt. Apart from environmental sanitation offences, which are relatively simple, environmental cases that are of a technical nature—for example, pollution as a result of an oil well blow-out—may present the difficulty of establishing the burden of proof, especially if the prosecution does not possess the wherewithal (expert witnesses, and so on) to prosecute the case.

The Harmful Waste Act has made some slight changes in relation to the burden of proof. Where damage has been caused as a result of harmful waste having been dumped, the person who dumped the waste shall be liable in all circumstances but two: if it can be shown that the damage was wholly the fault of the person who suffered it or that the person who suffered the damage had voluntarily accepted the risk (section 12 of the Act).

2.7 Organisation of public control and significance in the field of environmental criminality

In Nigeria, jurisdiction on environmental matters is granted to several courts under several laws. In Lagos State, the Magistrate and Customary Court Grade B have jurisdiction to deal with cases involving environmental sanitation. There are also plans to re-establish the Mobile Sanitation Court, to ease pressure on the higher courts and ensure that cases are treated with dispatch.⁴⁹ The Lagos State Edict specifically provides that magistrates' and customary courts can impose penalties provided for in the Edict, even if the penalty imposed is outside the court's jurisdiction (section 25 of the Edict).

With the exception of magistrates' courts, it is usually the lowest courts that try environmental offences in the States. Most customary courts are not presided over by lawyers and they are not courts of record. The presentation of evidence in such courts is quite different from that in higher courts. For most environmental offences in Lagos State there is no legal representation. The issues of legal representation and the need to ensure that basic human rights are not abused are rarely considered in these courts, and record-keeping practices are not impressive.

At the federal level, the Federal Environmental Protection Agency Act provides that the High Court has jurisdiction to try cases brought under the Act. The High Court Rules prescribe the method of presentation of evidence in the Court. The Oil in Navigable Waters Act gives the High Court jurisdiction to try offences under that Act. There is no record of an environmental offence having been tried by any of the higher courts. This does not mean that offences are not committed under the two Acts: the offenders are either not detected or not prosecuted.

When cases are reported to the police, a report is written and the matter usually ends there. The problems encountered by the police force, including a shortage of adequately trained personnel and equipment to effectively combat crime, may be the cause of the lack of prosecution. It is also doubtful if environmental crimes are considered a priority by the police: the emphasis is on traditional crimes prevalent in society (armed robbery, for example). The police force's attitude may also stem from the paltry sums that will be paid as fines and the impracticability of imprisonment for corporate entities. The time and energy spent in prosecuting offenders may simply not be worthwhile considering the inadequacy of the sanctions prescribed by some laws.⁵⁰

In some cases the Attorney-General's Office is expected to prosecute environmental crimes, but the difficulty is that the Office is engaged in matters that the authorities consider more important.⁵¹ Environmental issues are not given adequate consideration: other crimes receive priority.

Under the Lagos State Environmental Sanitation Edict, the police do not have the power to prosecute—their jurisdiction is limited to the power of arrest. The cases are prosecuted by the environmental health workers in the Health and Environmental Services Department of the State. These health workers have recorded the highest success rate in prosecuting environmental offences.

3 ENVIRONMENTAL CRIMINALITY UNDER INTERNATIONAL CRIMINAL LAW

The transboundary nature of environmental pollution can render national laws grossly inadequate. Water and wind can carry toxic waste beyond the boundaries of several nations. It is doubtful whether Nigerian environmental laws could adequately cope with the international aspects of environmental pollution. Most of the laws are limited to domestic interests.

The Harmful Waste Act is one of the few laws that affects international criminal law. Section 9 of the Act excludes the immunity conferred on certain persons under the Diplomatic Immunities and Privileges Act. This is contrary to Article 29 of the Vienna Convention on Diplomatic Relations (1961), which protects diplomats from criminal and civil prosecutions in the host state, and has been questioned by experts in international law.⁵² In Nigeria, the principle of territoriality applies.

Cases of border-crossing water pollution have occurred in Nigeria. Around 1986, for example, water hyacinth from the Republic of Benin spread into

Nigerian waters. The occurrence was not dealt with legally since it is not punishable under domestic law. Further, it was not the result of an intentional industrial act; rather, it was a natural growth of water plants and was not curtailed by the neighbouring country. Nigeria and Benin have since signed agreements to cooperate in dealing with the problem.

Nigeria has ratified about 30 international conventions and treaties dealing with the environment.⁵³ These conventions and treaties do not come into force in Nigeria until the National Assembly enacts them into law (section 13 of the Constitution). About five such conventions and treaties have been enacted into laws since independence.

There are several bilateral agreements between Nigeria and some of its immediate neighbours; for example, for the management of the Benue, Niger and Lake Chad basins and for the control of desertification. The agreements for management of the water basins make provision for joint control bodies and encourage exchange of information.

Apart from the Koko incident, Nigeria has not investigated or prosecuted major cases of border-crossing pollution. In the case of the Koko incident, inquiries were made of the Ministry of External Affairs to establish whether Nigeria had any law prohibiting the dumping of toxic waste. The Italian company involved in the dumping was probably aware that there was no law dealing with the matter. Dumping of such waste is an offence in Italy but it was not then an offence in Nigeria.

The likelihood of being able to punish a foreign country under Nigerian law for dangerous emissions is very remote. This may be because until about two years ago general environmental standards in Nigeria were, as in most developing countries, rather low. It is common for multinationals to adopt in Nigeria standards of operation, especially in relation to environmental protection, that simply would not be acceptable in their home countries. This is particularly the case with oil companies. The stringent environmental laws in their home countries make operations very expensive there but in some developing countries such as Nigeria operations are cheap.

Nevertheless, on the basis of some international agreements ratified by Nigeria offenders can be prosecuted; for example, under the International Convention on Civil Liability for Oil Pollution Damage (Brussels 1969, as amended London 1976) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington 1973).

4 ENFORCEMENT

The myriad problems besetting the enforcement of environmental laws have social, legal, economic and political origins. Many interests must be accommodated. For instance, imposition of a fine for non-compliance could lead to the closure of the company concerned if the amount of the fine (say, 500 000 naira, as prescribed in the Federal Environmental Protection Agency Act) exceeds the company's capital. This could lead to people being deprived of employment, which in turn could lead to crime. It is also said that the implementation and enforcement of strict environmental standards, especially in a developing country, may hinder development and economic progress. Thus, the question is, 'How clean can we afford to be?' In striking a balance, it is crucial to ensure that laws that do not have a negative impact on society's needs are enforced.

Conflicts between State and federal agencies (especially Lagos State and the Federal Environmental Protection Agency) may also undermine enforcement. Some industries have challenged the sole authority of the Lagos State Ministry in matters relating to the environment. The State has been more interested in collecting charges (which may be as high as 60 000 naira per year) than in enforcing environmental standards. The Federal Environmental Protection Agency, on the other hand, has as its chief aim the enforcement of standards, not the collection of fines.

The Federal Government's approach to the enforcement of environmental laws is revealed in the Federal Environmental Protection Agency Act. In executing its functions, the Agency has the power to maintain a program of technical assistance in relation to implementation of environmental criteria, guidelines, regulations and standards, and monitoring enforcement of regulations and standards.

Part IV of the Federal Environmental Protection Agency Act deals with enforcement powers. Under section 38, an authorised officer, who may be an employee of the Agency or a police officer not below the rank of Inspector of Police, or any customs officer has the power to enforce the provisions of the Act. They have the power to inspect, without warrant, relevant documents under the Act (section 25). Where they have reasonable grounds to believe that an offence has been committed under the Act, they can search and seize any item or substance that they have reason to believe has been used to commit the offence and they can cause to be arrested any person whom they have reason to believe has committed such offence (section 26). If the

authorised officers are not in uniform, they shall produce identification sufficient to show that they are authorised officers for the purposes of the Act (section 28). If the officers refuse to identify themselves, non-compliance with their requests shall not be an offence.

It is not clear whether criminal action can be initiated by the Agency. The view that criminal action can be instituted by the Agency⁵⁴ is based on the premise that institution of criminal action will be considered a function that is necessary if the Agency is to discharge its duty. The need for the Agency to institute criminal action is undoubtable in view of the problems that arise if this is done through the Director of Public Prosecutions or the police. The establishment of four Agency offices in Kaduna, Kano, Port Harcourt and Benin City will assist in the implementation and enforcement of the Act in the States.

Under section 10 of the Harmful Waste Act powers of enforcement are conferred on any police officer. Section 3 of the Lagos State Edict authorises a sanitary officer of a local government council or anyone duly authorised by that officer to enforce the provisions of the Edict. A police officer or a sanitary officer may arrest persons who contravene any provision of the Edict (section 29). In October 1991 Lagos State Government promulgated a by-law that established the Sanitation Enforcement Agency. The main function of the Agency is to enforce the provisions of the Edict.

A noticeable trend in the enforcement of the law is the use of administrative agencies to deal with environment matters. The recent establishment of the Office of the Ombudsman within the Department of Inspectorate and Enforcement, to enforce the provisions of the Federal Environmental Protection Agency Act and to ensure compliance, is a testimony to this. The Federal Environmental Protection Agency has shown an obvious preference for conciliation through the Department rather than punishment through the criminal justice system.

4.1 Empirical data

Most of the recorded environmental offences differ from local government to local government.⁵⁵ With the exception of Ikeja, which is the capital of Lagos State, most of the local governments do not have an adequate record of environmental offences. In most cases in which a corporate entity was involved, the services of a lawyer were engaged. Further, there was usually an appeal from the customary court to the magistrates' court. For individuals, there was usually no appeal, and only rarely were the offenders represented

by a lawyer. This may be because fines for individuals are much lower than fines for corporate entities: it may be unreasonable to spend energy, time and resources on defending or appealing against a case in which the offender is fined only 100 naira.

The Abuja Environmental Protection Board also has good records for environmental offences. All of the offences in its jurisdiction were sanitation offences; for example, dirty surroundings and an unkempt environment. In Lagos State (Ikeja Local Government) this is also the case. In Lagos Island local government area, many were also prosecuted for street trading. All such offenders were fined; there was no case of imprisonment.

Tables 2, 3 and 4 show statistics for investigation and prosecution of environmental offences, for the Federal Environmental Protection Agency, Lagos State Ministry of Environment, and Ikeja Local Government respectively. For all cases reported, fines were imposed: there was no imprisonment.

**Table 2: Investigation and prosecution of environmental offences:
Federal Environmental Protection Agency, 1988-91**

Year	No. of visits	No. of prosecutions	Fine collected (naira)
1988	-	-	-
1989	-	-	-
1990	-	-	-
1991 (Oct.)	10	-	-

- Zero.

Source: Inspectorate and Enforcement Department,
Federal Environmental Protection Agency.

**Table 3: Investigation and prosecution of environmental offences:
Lagos State Ministry of Environment, 1988-91**

Year	No. of visits	No. of prosecutions	Fine collected (naira)
1988	n.a.	-	n.a.
1989	1 021	-	n.a.
1990	2 080	-	4 000 000
1991 (Oct.)	1 279	-	3 000 000

- Zero.

n.a. Not available.

Source: Environmental Pollution Control Division, Department
of Environmental Pollution Control, Sewage and Water,
Lagos State Ministry of Environment.

**Table 4 Investigation and prosecution of environmental offences:
Ikeja Local Government, 1988-91**

Year	No. of visits	No. of prosecutions	No. found guilty	Fine collected (naira)
1988	24 748	n.a.	--	16 240
1989	23 331	216	185	29 105
1990	20 128	349	228	33 990
1991	n.a.	n.a.	n.a.	n.a.

- Zero.

Source: Sanitation Unit, Ikeja Local Government.

n.a. Not available.

4.2 Offences of international relevance

The only offence of international relevance is the Koko incident. In 1988 there were reports of toxic waste encased in drums and containers being in the port town of Koko, in Bendel State. This town of about 15 000 people became the centre of attention for a few weeks as national and international experts arrived to investigate the nature of the waste. The waste had been imported with fake documents about a year before its discovery under the wrong classification of 'pure chemical'. In a bid to have the toxic waste sent back to Italy, its country of origin, the Federal Government detained an Italian merchant ship to ship the waste to Italy.

Nigeria referred the case to the International Court of Justice at the Hague but withdrew upon receiving advice to negotiate with Italy on the amount to be paid as damages. Although Italy claims that compensation has been paid to Nigeria, Nigeria claims not to have received the compensation. The questions that arise include: if the compensation was paid, to whom was it paid? How and when was it paid?

4.3 Perceived effectiveness of sanctions

When asked about the effectiveness of sanctions, those interviewed expressed a variety of views. Most local government representatives were of the view that punishment has been more effective than conciliation in securing compliance. Lagos State Ministry of Environment was of the opposite opinion. The Federal Environmental Protection Agency also expressed a preference for conciliation. This may explain why these two bodies have never prosecuted any offender. Victims of pollution, especially in oil-producing States, maintained that the level of compliance is low because of the

conciliatory approach of enforcement authorities. They believe that a punishment-oriented approach would do more to alleviate their suffering.

Nevertheless, conciliation has greater potential than punishment to change polluters' attitudes. Conciliation leads to long-term, or even permanent, compliance. In some cases, the enforcement agency has no alternative but to rely on conciliation, especially if government has not provided adequate facilities or infrastructure. For example, some industrial estates do not make provision for adequate drainage and effluent often spreads to nearby land. In these circumstances it may be difficult to prosecute industries for polluting nearby land or diminishing environmental amenity since the reason for the pollution is the lack of infrastructure, which ought to have been provided by government. Current and future compliance strategies are highly dependent upon resource allocation, the sophistication and experience of enforcement personnel, and political support.

The business of protecting the environment is capital intensive. Laboratories are needed to conduct tests, and equipment is needed by the enforcement agency. If the efficiency of such agencies is to be enhanced substantial resources are necessary. Otherwise very little will be achieved.

Some environmental experts have, however, claimed that the funds provided to environmental agencies are not fully used.⁵⁶ For example, only 14.5 per cent of the funds allocated for sewerage, drainage and solid waste disposal programs was expended on these programs during the Third National Development Plan. It has also emerged that in Lagos State monies allocated to the executing agencies and local government councils were not fully disbursed to them by the State Government.

Another major problem is the lack of personnel qualified to carry out the various tasks associated with environmental protection. The modern, sophisticated equipment necessary for environmental protection functions requires experienced and properly trained personnel. Further, without adequately trained personnel, the level of compliance will be low. These inadequacies could to some extent be attributed to poor remuneration. Low salaries and slow rates of promotion are disincentives. They may also lead to corruption, where owners of insanitary premises offer bribes to avoid prosecution.

Political support is a very potent weapon in the battle to ensure compliance. Lagos State Ministry of Environment has received a great deal of political support from the State Government and is at the forefront in

environmental issues in Nigeria. Pollution-abatement levies paid to the State Government are used for research projects and in some cases to purchase equipment to combat pollution. A laboratory financed by the levies will be completed soon.

On the other hand, victims of pollution believe that the political support given to industries by governments at State and federal levels has encouraged non-compliance, because such support involves non-prosecution. If this situation were to continue environmental degradation would increase.

At the federal level, the political support of the Federal Government has been stressed many times by the President. Plans are being made to translate this political support into economic support.

Another point worthy of note is the difference between political support and political will. It is doubtful if any sub-Saharan developing country has the political will to properly enforce compliance with environmental laws, where such laws exist. This may be because most developing countries see economic progress as the priority. Economic progress is a result of development, which in turn is dependent on factors such as industrialisation. Industrialisation usually causes environmental degradation. When development and the environment are placed on the balance, the tilt is towards development. And this development is not sustainable: it is development for now.

There is no doubt that the sanctions for environmental crimes have been ineffective. Much money has been collected in fines, but imprisonment is not used as a sanction. Apart from the fact that it is virtually impossible to sanction a corporate body by means of imprisonment, most of those interviewed for this project were of the opinion that imprisonment was too harsh a punishment. In addition, some judges have observed that using imprisonment as a sanction will serve only to swell the number of people in prison and allow environmental offenders to mingle with other criminals. This may not be in the interests of the Nigerian society.

5 PROPOSED REFORMS

Both the Federal Government and the States are contemplating a number of reforms to deal with polluting behaviour. But such reforms can take 10 or more years before becoming reality. For example, the Bill that established the Federal Environmental Protection Agency was delayed for about 10 years before it was enacted in 1988. Even then, the enactment was prompted by the Koko incident. A catastrophic event usually results before laws are enacted.

Proposals for reform can have social, economic or political origins. The reforms proposed by four main bodies—the Federal Ministry of Justice, the Federal Environmental Protection Agency, the Department of Petroleum Resources, and the Natural Resource Conservation Council—are considered here.

The Federal Ministry of Justice is in the process of incorporating environmental crimes in the Criminal Code Act. As noted, at present issues relating to environmental degradation are presently dealt with as public nuisance matters. It is proposed that a section entitled 'Environmental Crimes' be incorporated in the Act. This section will be explicit and will deal with environmental crimes that are common because of Nigeria's rapid development and industrialisation.

The Federal Environmental Protection Agency sees the need to enact as quickly as possible an environmental impact assessment law. This law will provide that an environmental impact assessment must be conducted for major and minor projects involving industry. The Agency is also poised to begin research into the following issues:

- the harmonisation of environmental laws in the light of Nigeria's federal nature;
- the need to establish a legal framework for the enforcement of environmental laws;
- the need to review all treaties and conventions relating to the environment that Nigeria has ratified.

The Department of Petroleum Resources is proposing to publish environmental guidelines for all oil companies, with a view to regulating activities in the oil industry. There will also be provisions for monitoring the activities of the oil companies to ensure that they adhere to the guidelines.

The Natural Resources Conservation Council has submitted to the Government proposals for combating desertification, including offering various alternatives to wood as a source of energy. The Council has also proposed that environmental education and awareness be promoted through the inclusion of educational programs in school curricula.

6 CONCLUSION

The current regime of criminal liability for environmental crimes is not effective. The basic philosophy of criminalisation for environmental crimes is not coherent. To a large extent, the problem of enforcement has made the laws

relevant only on the statute books, although this does not apply to the Environmental Sanitation Edicts of the States.

The question to be answered by many developing countries, including Nigeria, is 'How clean can we afford to be?' The answer to this must involve a union between realistic laws on environmental protection and the realities of economic development. The political will of the Government will be needed to secure this union. The cooperation and collaboration of more developed countries will contribute to the success of the union.

Cooperation and collaboration are inevitable because environmental protection is an international concern. It is crucial, too, that the pace of development in relation to the environment be sustainable. Only when this occurs will future generations have reason to thank us.

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53. These include the following: the International Convention for the Prevention of Pollution of the Sea by Oil (London 1954); the Convention on the Continental Shelf (Geneva 1958); the Convention on Fishing and Conservation of the Living Resources of the High Seas (Geneva 1958); the Convention on the African Migratory Locust (Kano 1962); the Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water (Moscow 1963); the Convention and Statute Relating to the Development of Chad Basin (Fort Lamy 1964); the African Convention on the Conservation of Nature and Natural Resources (Algiers 1968); the International Convention on Civil Liability for Oil Pollution Damage (Brussels 1969, as amended London 1976); the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution (Brussels 1971); the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxic Weapons and on their Destruction (London, Moscow, Washington 1972); the Convention on the Protection of the World Cultural Heritage (Paris 1972); the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London, Mexico City, Moscow, Washington 1972); the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington 1973); the United Nations Convention on the Law of the Sea (Montego Bay 1982); the Convention for the Protection of the Ozone Layer (Vienna 1985); the Protocol on Substances that Deplete the Ozone Layer (Montreal 1987).
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TUNISIA

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INTRODUCTION

Will the twentieth century become the century of the ecological revolution? The acknowledged significance of the protection of the environment and the importance given to this issue in the mass media throughout the world in the last twenty years, allow for a positive response to this question. Considered for a long time 'an invention of the industrialised countries'¹, the environmental issue has suffered, until recently, from low value attached to it in developing countries, whose efforts to control population growth and to feed their populations leave little chance for the conservation of fauna and flora. Nevertheless, and perhaps because of this passivity, many of these countries continue to be used as dumping grounds for various types of waste from industrialised countries, with or without receiving compensation in the form of subsidies or other kinds of assistance. It is thus taking time to overcome the difficulty of reconciling the requirements of economic growth and those of the protection of the environment. The former imply, among other things, an enormous tapping of natural resources that the latter tend to protect and stabilise by a strategy based on the idea of sustainable development.²

Furthermore, just as the sun shines on everybody, so the ozone layer covers the entire Earth. The ecological movement has taken on a universal dimension, starting from the idea that 'all attacks on the ecological equilibrium are transnational and international phenomena'.³ According to the World Bank, the funds required for protection of the environment are estimated, solely for developing countries, to be US\$75–100 billion each year from now until the end of this century. Developing countries consider that industrialised countries are largely responsible for the pollution that exists, and that as a consequence they must bear the greater part of this cost. Convinced of the validity of this claim, Lewis Preston, President of the World Bank, stated at the closure of the meeting of the Joint Development Committee of the International Monetary Fund in April 1992 that, instead of continuing to

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quarrel fruitlessly 'as to who is to blame for environmental degradation ... the time has come for all the parties involved to undertake commitments for the preservation of the planet, using all manpower, institutional and financial resources that can be mobilised'.⁴

Twenty years after the Declaration of Stockholm, which in its first principle promoted the right to a high-quality environment as a human right, environmental concerns in Tunisia are, as elsewhere in the world, eminently topical. Particular attention is paid to all the issues relating to the protection of nature and this has resulted in an increase in the number of ecologically oriented institutions and organisations. This interest was confirmed in October 1991 with the creation of the Ministry for the Environment and the Management of Government Areas (*Ministère de l'Environnement et de l'Aménagement du Territoire*), which is charged with enforcement of government environmental policy and coordinating activities related to the protection of nature. This is a huge task since Tunisia is facing both the environmental problems peculiar to developing countries, due to the pressure exerted on delicate and limited natural resources by a constantly increasing population, and those peculiar to industrialised countries, with ever-increasing industrial and urban pollution.⁵

As in most developing countries, environmental law in Tunisia is still in its infancy. In fact, and lacking constitutional ratification, former laws making provision for environmental matters, some of which date back to the 1950s, are still in force, along with a series of more recent provisions dealing with most of the fields related to environmental protection.

The recent evolution of environmental law has been marked both by the elaboration of new rules and 'also, and perhaps above all, by the creation of administrative structures that are responsible for the elaboration of environmental policy, monitoring enforcement, and giving unity and consistency to environmental law'.⁶

In this report environmental policy is examined in terms of the structures that exist for management of environmental matters, fields of intervention and sanctioning strategies; that is, prevention, arrest, and penal, administrative or civil sanctions.

1 FRAMEWORK OF ENVIRONMENTAL MANAGEMENT

The Tunisian experience in the ecological field, although quite a recent one, is characterised by a wealth of institutions that bear witness to the

combined action of the parties involved, both government and non-government. In 1992 the *Green Guide*⁷ listed more than 500 organisations operating directly or indirectly in areas related to environmental protection. Some of these organisations have explicit mandates, their *raison d'être* being the management of the environment; others have implicit mandates, their focus being more on production than the environment, and thus their involvement being partial or indirect. Other institutions, such as research bodies, provide support within the environmental framework but have no specific interest in this field.⁸

These organisations, progressively established since the 1960s, can be classified as follows.⁹

Legislative and consultative organisations

The Chamber of Deputies deals with environmental matters, at the national level through the enactment of laws and at the international level by ratifying treaties and conventions.

There is also a number of commissions and national councils that have essentially consultative roles; for example, the National Commission for the Environment and the National Council for the Protection of Nature. Other structures have more specific objectives, such as health and welfare, the regulation of pesticides, and hunting.

Government departments

As noted, the Ministry for the Environment and the Management of Government Areas has responsibility for enforcing government environmental policy and coordinating activities related to the protection of nature. Most other government departments include in their operating charter sections or services that deal with various environmental matters. Thus, the Ministry of the Economy controls a department dealing with energy and mining and a department responsible for the environment and the regulation and control of its quality. The Ministry of Agriculture controls divisions in charge of water, forests, soils, agricultural engineering, livestock farming, and fishing. Housing and urban planning are managed by the Ministry for Local Amenities and Housing. The Department for Welfare and the Protection of the Environment, which is controlled by the Ministry of Health, has an important role in illness prevention and health education matters.

Public agencies

Responsibility for the majority of public agencies—the most important being the National Agency for the Protection of the Environment (Agence Nationale de Protection de l'Environnement), enacted on 2 August 1988—passed from the Office of the Prime Minister to the Ministry for the Environment and the Management of Government Areas after the creation of that Ministry in 1991. Other public agencies operate in specific fields relating to the environment; for example, the Agency for Agrarian Reform and Irrigated Public Areas (Agence pour la Réforme Agraire et des Périmètres Irrigués Publics), the Agency for Agricultural Popularisation and Training (Agence de Vulgarisation et de Formation Agricole), the Energy Control Agency (Agence des Maîtrises de l'Énergie), the National Agency for Valuing and Exploiting Archaeological and Historic Resources (Agence Nationale de Mise en Valeur et d'Exploitation du Patrimoine Archéologique et Historique), the National Office for the Improvement of Tourism in Tunisia (Office Nationale de l'Assainissement du Tourisme Tunisien), and the Institutes of Nutrition and Food Technologies, Health, and Safety in the Workplace (Instituts de Nutrition et des Technologies Alimentaires, de Santé, et de Sécurité au Travail).

Local government

Among other things, local governments are charged with protection of the environment within their jurisdiction. A National Day of Health and Conservation of the Environment is celebrated in June each year. On this occasion, the Ministry of the Interior awards progress prizes to local governments that have distinguished themselves in this field.

Business enterprises

A number of business enterprises, for the most part owned by the state, operate generally in the fields of energy and water (STEC—Société Tunisienne de l'Electricité et du Gaz; SONEDE—Société Nationale d'Exploitation et de Distribution des Eaux; ETAP—Entreprise Tunisienne d'Activités Pétrolières; and so on) and in other fields linked to different aspects of the environment, such as housing (SNIT—Société Nationale Immobilière de Tunisie; BH—Banque de l'Habitat) and agriculture (BNA—Banque Nationale Agricole).

National organisations

The activities of a number of national organisations touch on the environment. The Tunisian Union for Agriculture and Fishing (Union Tunisienne de l'Agriculture et de la Pêche) is an example, as are organisations such as the Tunisian Union for Industry, Commerce and Crafts (Union Tunisienne de l'Industrie, du Commerce et de l'Artisanat) and the General Union of Tunisian Workers (Union Générale des Travailleurs Tunisiens).

Political parties

Although there is no specifically ecologically oriented political party, the protection of the environment is included in the platforms of most parties, of which there are seven. The Democratic Constitutional Union (Rassemblement Constitutionnel Démocratique) has created a working group on environment and sustainable development, and the Tunisian Communist Party (Parti Communiste Tunisien) is very concerned with working conditions, especially in the mines.

Non-government organisations

There are about 70 non-government organisations that have some interest in environmental matters. National associations, such as the Tunisian Association for Nature and the Environment (Association Tunisienne de la Nature et de l'Environnement), created in 1977, and regional associations operating all over Tunisia have as their principal aim the protection of nature and the environment. Other organisations operate in the areas of fauna and flora protection and the conservation of both urban and natural areas.

Academic institutions

The six Tunisian universities place great importance on scientific research, and environmental matters are one of their priorities. Higher education courses in agriculture endeavour to make pupils sensitive to the protection of the environment. The National Foundation for Scientific Research (Fondation Nationale à la Recherche Scientifique), which was created in 1989, is giving increasing emphasis to action-oriented research in the field of environmental protection.

Institutes and research centres

Institutes and research centres can be considered the counterpart of the academic institutions, since they are directly or indirectly concerned with environmental matters and deal with issues such as the cultivation of olive

trees, archaeology and the arts, arid regions, oceanography and fishing, forestry, astronomy and agricultural engineering.

Documentation centres and information agencies

Documentation centres offer bibliographical references relating, among other things, to environmental matters, thus contributing to the creation of a database in this field.

There is no specialised press coverage of environmental matters, but information agencies do contribute to the dissemination of information on these matters. Important coverage of information on the environment is carried out by most Tunisian periodicals and by the radio and television channels. Programs deal directly (through, for example, the weekly broadcast '*Vers un environnement meilleur*'—'Towards a better environment'—on Radio Tunis) or indirectly with the protection of the environment. Television debates are often used for discussing environment-related matters.

Co-operative institutions

Many international institutions (for example, the United Nations Program for Development, FAO, UNESCO and the European Economic Council), specialised agencies (such as USAID), and international non-government organisations (such as the Friedrich Naumann Foundation) support Tunisia in the field of environmental protection. Greenpeace, which specialises in this field, has recently established a regional office for Africa and Arab countries in Tunis.

2 FIELDS OF INTERVENTION

The main fields of intervention in environmental matters can be identified through the provisions of the laws and regulations related to the environment in general and through specific natural elements. These can be described under the following headings: agriculture, the natural landscape, the urban environment, and international obligations.

2.1 Agriculture

Agriculture is covered by many laws, the most important in terms of environmental protection being the following:

- the Forestry Code (Code Forestier), promulgated by Law No. 88-20 of 13 April 1988 governing the forest heritage, which is considered a national

resource, the protection and development of which are a basic requirement for the economic and social development of the nation;

- Law No. 83-87 of 11 November 1983, dealing with the protection of rural land, this being all land having the potential to be or being used for agricultural, forestry or pastoral production;
- Law No. 58-106 of 7 October 1958, dealing with compulsory reforestation, which acknowledges the positive influence that forested lands can have on climate, soil and water quality, and reducing erosion;
- Law No. 76-6 of 7 January 1976, establishing the Arid Regions Institute (Institut des Régions Arides), which is responsible, in particular, for the fight against desertification in the southern part of the country.

Erosion and desertification constitute a major environmental dilemma for Tunisia. The situation is aggravated by climatic conditions, which are characterised by 'aridity, the frequent occurrence of strong wind and the torrential nature of the rain'.¹⁰

Urbanisation has also exacerbated the problem of *recul de la terre* (loss of rural land): the area of arable, pastoral and forestry land has shrunk by 9 million hectares, or over 50 per cent of total land area. At present, losses in the extent of productive land are estimated at 23 000 hectares per year as a result of the combined effects of erosion by water, desertification (caused by wind erosion and the salinisation of land), flooding and urbanisation.¹¹

The conservation of soil resources and the fight against desertification are conducted with the benefit of national experience; a number of efficient intervention techniques are in use. Nevertheless, the rural population's limited awareness of the need to protect the soil, coupled with a lack of financial resources, is a significant barrier to the achievement of the desired outcomes.

2.2 The natural landscape

The natural landscape can conveniently be discussed in terms of four components: water, the sea, fauna and flora, and the cultural, archaeological and historical heritage.

Water

The protection of continental water is governed by many laws, the most important being the Water Code (Code des Eaux), promulgated by Law No. 75-16 of 31 March 1975, which regulates the conservation and the rational use of water resources and testifies to the legislators' intention to combat

water pollution by means of a regime of sanctions for causing water quality to deteriorate.¹²

It is estimated that Tunisia's water resources are sufficient to satisfy national needs until 2020.¹³ Most of these resources are in the form of surface water and are polluted mainly through direct or indirect discharges of used water and waste. Water resources are threatened by soil erosion, which reduces both the quantity and the quality of water in dams and storage basins and causes siltation. This is the case with the Sidi-Salem dam in northern Tunisia: because the dam's basin is not protected from erosion, effluents, refuse and fertilisers, the quality and quantity of the water are threatened.¹⁴

Efforts to protect water resources are reinforced by stringent regulations as well as a sound knowledge of the sources of degradation and techniques used to control it. But there is insufficient institutional coordination in the management of Tunisian water resources and resources for qualitative and quantitative monitoring and conservation of water are limited.¹⁵

The sea

Tunisia's 1300 kilometre coastline is largely made up of beaches that are the site of concentrated tourist activity and provide access to rich marine resources. Fishing and the marine environment in general are protected by a number of laws, the most important of which are the following:

- Law No. 79-42 of 15 August 1979, setting up the General Commissariat for Fisheries (Commissariat Général à la Pêche), which is charged with the regulation of fisheries operations, thus preserving Tunisian waters and their wealth of resources;
- the Decree of 26 July 1959, which reformed the regulation of maritime fishing and was amended by Law No. 63-49 of 30 December 1963 and Law No. 87-12 of 23 March 1987;
- Law No. 68-4 of 8 March 1968, concerning the protection of seals in Tunisian territorial waters;
- Law No. 89-21 of 22 February 1988, dealing with maritime wrecks.

The marine environment is threatened by several types of pollution. Discharges emanating from sewerage systems and dumping grounds produce dangerous bacterial pollution, which is difficult to combat, makes reuse and purification of water difficult, and is a particular problem in the highly developed tourist areas. Pollution is also caused by the discharge of industrial waste into the sea. Two important towns in southern Tunisia—Sfax and

Gabès—have for two decades had their beaches contaminated and made unsuitable for bathing by the activities of the chemical industry. In other coastal areas beaches are suffering from *recul de la côte* (loss of the coastline) due to the proliferation of building on sand dunes.¹⁶

These problems aside, Tunisia lacks the financial resources to fight pollution caused by hydrocarbons, which originates, in particular, from activities related to exploiting and transporting petroleum products.

Fauna and flora

Fauna and flora are protected by the Forestry Code, which makes provision for compulsory reforestation and regulates hunting, and by several regulations, such as Law No. 76-115 of 31 December 1976, which established a fund for the protection of wild game. The species of plants constituting the national floristic heritage are estimated to number 2200, of which 400 species are rare and require specific protection to avoid extinction.¹⁷ The fauna is represented by 75 species of mammals, 350 species of birds, and 500 species of reptiles and fish. Most of these are endangered species and some of them are threatened with extinction.¹⁸

Tunisia has created a number of national parks and nature reserves to protect biological diversity, the most important being Ichkeul National Park. Again, however, the lack of financial resources hinders both management of these areas and experimental research carried out in this field.

Tunisia has ratified the principal international conventions related to the protection of fauna and flora, such as the the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar 1971), the Convention for the Protection of the World Cultural and Natural Heritage (Paris 1972), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington 1973) and the Convention on the Conservation of Migratory Species of Wild Animals (Bonn 1979).¹⁹

Cultural, archaeological and historical heritage

Law No. 86-35 of 9 May 1986 provides for the protection of archaeological properties, monuments, and natural and urban sites. The pressures of urbanisation and air pollution pose the main threat to the conservation of this heritage, the significance of which stems from Tunisia's location. The nation lies at the meeting point of East and West and throughout history has been invaded by a great variety of peoples—Berber, Phoenician, Roman, Vandal, Byzantine, Arab, Ottoman, Spanish and French.

2.3. The urban environment

Fifty-eight per cent of the population is urban; the figure is expected to increase to 70 per cent by the year 2000.²⁰ This high degree of urbanisation brings with it pollution, particularly associated with solid waste and used water. In several regions, the disposal of domestic refuse is carried out in a makeshift manner, the refuse simply being dumped. The National Sanitation Office (Office National de l'Assainissement) has an important network for the management of used waters but it does not extend to rural and semi-rural areas.

To this can be added the problem of air pollution inherent in the larger urban centres. Some efforts have been made in this regard by encouraging the use of less-polluting energy sources such as natural gas and by improving housing conditions. The financial resources are again inadequate, however, and citizens in general and manufacturers in particular are reluctant to participate in clean-up programs.

From a regulatory standpoint, the Code of Urbanism, promulgated by Law No. 79-43 of 15 August 1979, determines building areas and regulates construction. Law No. 76-34 of 4 February 1976 deals with building permits. The Code of Labour, promulgated by Law No. 66-27 of 30 April 1966, deals with dangerous and unhealthy establishments.

Other fields of intervention for the protection of the environment include the fight against the harmful effects of, among others, oil waste, chemical waste or ionising radiation, which are covered by Law No. 81-51 of 18 June 1981. The exploitation of mines is regulated by the Decree of 1 January 1953 and the exploitation of quarries is covered by Law No. 89-20 of 22 February 1989, which provides that permits are to be granted only on the meeting of strict requirements for safety, hygiene, health, public peace and the protection of the environment.

2.4 International obligations

Tunisia has ratified the main international conventions related to the protection of nature; for example, the International Convention for the Prevention of Pollution of the Sea by Oil (London 1954), the International Convention on Civil Liability for Oil Pollution Damage (Brussels 1969), the African Convention on the Conservation of Nature and Natural Resources (Algiers 1968), the Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona 1976), the United Nations Convention on the

Law of the Sea (Montego Bay 1982), and the Convention on the Conservation of Migratory Species of Wild Animals (Bonn 1979). Tunisia is also a signatory to the Convention for the Protection of the Ozone Layer (Vienna 1985); and the Protocol on Substances that Deplete the Ozone Layer (Montreal 1987).

In April 1991 Tunisia hosted a meeting of Ministers for the Environment from French-speaking countries; the meeting adopted the Tunis Declaration on Environment and Sustainable Development (*Déclaration de Tunis sur l'Environnement et le Développement Durable*) in view of the United Nations Conference on Environment and Development held in Brazil in June 1992.

3 SANCTIONING STRATEGIES

The national strategy for environmental protection is based on the concept of sustainable development and focusses mainly on prevention, prosecution and other sanctions.

3.1 Prevention

Action aimed at protecting the environment is mainly preventive. It is a requirement that an environmental impact assessment be presented to the National Agency for the Protection of the Environment before the building of any kind of industrial, agricultural or commercial facility whose activities may pose risks of pollution or environmental degradation.²¹ Furthermore, the fact that administrative authorisation is required for most activities related to the environment provides a control mechanism for identifying potential environmental hazards.

At another level, a policy of fiscal and financial entitlements, involving mainly exonerations, reductions or suspension of rights and taxes, is pursued to encourage responsible behaviour towards nature. For example, Article 130 of the Water Code (promulgated by Law No. 75-16 of 31 March 1975) makes provision for financial and technical support to companies that wish to establish processing units for used water. Article 131 of the Code makes provision for companies that construct or order the construction of plants for the purification of industrial water to amortise their costs by 50 per cent. Article 7 of Law No. 88-91 of 2 August 1988, instituting the National Agency for the Protection of the Environment, provides that investments aimed at protection of the environment can benefit from a temporary suspension of customs duties and taxes on imported materials and equipment and an amortisation of 25 per cent for the cost of investment and credit facilities with preferential conditions from the Central Bank (*Banque Central*).

This kind of approach to securing compliance is also applied at the national level, where the 'Swap for Nature' system has been adopted. Basically this involves a reduction in interest on borrowings if a country is participating in a project aimed at the conservation of the environment and the fight against pollution. Until 1991 Tunisia made 'swaps' with Sweden to the value of 7 000 000 dinars, or 15 per cent of its debt to that country, by engaging in environment-oriented projects.²² Another approach, a contractual one based on monitoring potentially damaging activities, is also applied in the forestry industry (Article 497, paragraph 5, of the Forestry Code).

3.2 Prosecution

Tunisia's Penal Code makes no provision for offences against the environment. Such provisions must be searched for in a profusion of scattered laws and regulations relevant to various fields. An environmental offence can be defined in general terms; for example, pollution 'in the form of solid, liquid, gaseous or other refuse' (Article 8 of the Law of 2 August 1988). It is generally linked in its material element to a protected area and is precisely defined.

Alongside the main laws dealing with environmental matters, which include prosecution and sanctions, there is a host of regulations, decrees and orders that are frequently made in pursuance of the main laws through delegation of the powers of the Legislature to the Executive, and without which prosecution would be difficult because of the generalistic nature of the law. Thus, for example, the Water Code penalises 'any fact capable of altering water quality' (Article 24 of the Water Code), leaving to the courts, in the absence of a decree or an order of application, the interpretation of the fact incriminated.

Regulation is sometimes pursued to the smallest detail and a great number of offences against the environment are, as a consequence, determined by the sole fact of perpetrating the prohibited act independently from intent, so that it has been said that the law penalises situations but not behaviours.

At another level, many laws do not include provisions for penal sanctions and their interest, beyond the technicality of the matter they regulate, is limited to being of use for information and attainment of responsible behaviour through an individual or collective awareness of the vital role of nature and its elements.

An offence can be a positive action, such as the discharge of polluting substances into the sea, or it can be an offence of omission, resulting from the absence of a permit or authorisation required by law.

Any individual can be pursued if he or she commits an act outlawed by environmental protection law. The person responsible is sometimes identified: generally it is the owner (Article 94 of the Forestry Code), the head of a company (Article 325 of the Labour Code) or an employer (Article 175 of the Labour Code), but it can also be an individual or legal entity (Article 8 of the Law of 2 August 1988), or an industrial (Article 102 of the Forestry Code), agricultural or commercial (Article 8 of the Law of 2 August 1988) concern.

3.3 Other sanctions

Investigations are carried out by agents employed by the central administration (Ministry for Agriculture, Ministry of Energy and Mines, Ministry of Public Works and so on) or by the National Agency for the Protection of the Environment. The reports made by agents of the central administration are transmitted to the Public Prosecutor's Department for prosecution. The National Agency for the Protection of the Environment, which is legally bound to do likewise (Article 12, last paragraph, of Law of 2 August 1988), does it only as an exception and relies largely on the powers of conciliation conferred on it by law (Article 11, paragraph 4, of the Law of 2 August 1988), thus avoiding prosecutions and favouring payment of a fine by the offender. There are exceptions to this, though: if the offender is a recidivist or has committed serious offences that cannot be dealt with through conciliation, such as fires caused by negligence, offences committed inside sand dune stabilisation areas, national parks and nature reserves, and offences involving native fauna and flora (Article 134 of the Forestry Code, serious offences being defined by an Order of the Ministry for Agriculture of 29 November 1988).

The few available statistics confirm the importance of the conciliatory approach. For 1990, 166 forestry offences were prosecuted out of a total of 690; for 1989, the figures were 173 out of a total of 933.²³

Nevertheless, conciliation, which operates extra-judicially, does not constitute an alternative to the sanctions contained in specific laws related to the protection of nature, which also make provision for fines, imprisonment, forfeiture, reparation, and closure of units.

There is a marked preference for imposing fines, and they are applied as the penalty for a variety of offences; for example, the discharge of air-

polluting refuse (Article 11 of the Law of 2 August 1988) or the introduction into a forest of a herd not protected by a guardian over 13 years of age and without the specific authorisation of the Department of Forests (Article 94 of the Forestry Code). This predilection for fines is reinforced by the wording of the penal provisions, which usually nominate fines first and then imprisonment. The reverse order is normally adopted in penal law.

The amount of the fine is calculated in proportion to the extent of the damage—the number of hectares of land (Article 74 of the Forestry Code), the load of the vehicle, the number of animals harnessed or beasts of burden used for the extraction of forest products (Article 84 of the Forestry Code), the number of trees felled or destroyed (Articles 86 and 87 of the Forestry Code), or the amount of cork oak or oak bark lost or destroyed (Article 88 of the Forestry Code).

Sometimes the fine amounts to only a few dinars (cf. the fine foreseen by Articles 82 and 84 of the Forestry Code, respectively fixed at 50, 7, 5 and 2 dinars according to the load of the vehicle, the animal harnessed, the beast of burden, or the person's load) and sometimes it reaches the maximum of 10 000 dinars, as applies to some offences related to the protection of agricultural land (Article 14 of the Law of 11 November 1983), and the exploitation of quarries (Article 91 of the Law of 22 February 1989 regulating the exploitation of quarries). Inconsistencies in financial penalties for environmental offences and generally small fines act to inhibit the potential for deterrence.

Similarly with imprisonment, the length of which can vary, according to the seriousness of the offence, from two days (Article 91 of the Forestry Code) to five years (Article 30 of the Law of 22 February 1989 regulating the exploitation of quarries). But the difference between sentences pronounced for the same offence is sometimes extreme: for example, for an offence such as unauthorised exploitation of quarries (Article 30 of the Law of 22 February 1989), the prison sentence varies from two months to five years. This discrepancy could be justified by a judge's determination of the facts at issue but it could also lead to controversy.

The use of fines rather than imprisonment, as seen at a legislative level, seems to be confirmed at the judicial level: judgments very rarely result in imprisonment. Sometimes, however, judges are obliged to impose prison sentences—particularly in cases of recidivism, which occurs frequently in

offences related to the selling of forest products (Article 100 of the Forestry Code) and pastures (Articles 92 and 93 of the Forestry Code).

Alongside the main sanctions—fines and imprisonment—there are complementary sanctions: forfeiture, as in the case of ships contravening fishing regulations or using prohibited fishing equipment (Article 34 of the Decree of 26 July 1951 updating the legislation related to maritime fishing), or of instruments used to commit hunting offences (Article 170 of the Forestry Code), restoration of sites used for unauthorised buildings, shelters or fences on land that is part of the nation's forest heritage (Article 82 of the Forestry Code) and, in cases of water pollution, for illicit activities or works (Article 160 of the Water Code); and temporary or permanent closure of establishments for serious offences such as unauthorised exploitation of a quarry (Article 36 of the Law of 22 February 1989).

4 CONCLUSIONS

The National Agency for the Protection of the Environment, in collaboration with the departments involved, has developed a National Program of Action for the Environment²⁴, which identifies a series of national and local projects principally aimed at eliminating industrial pollution and domestic refuse, combating erosion, and preserving Tunisia's archaeological and historical heritage. These measures call for financial resources that will only partially be gained through application of the polluter-pays principle.²⁵ It is estimated that approximately US\$80 000 000 will be required annually for environmental protection.²⁶ This represents 1.1 per cent of gross domestic product, which is comparable to that in most industrialised countries, where it is between 0.8 and 1.9 per cent.²⁷ New sources of finance are necessary to ensure that investments for the protection of the environment are not made at the expense of development. International cooperation has an important role to play in this regard.

From the point of view of environment-related legislation in Tunisia, despite numerous positive results, it is obvious that much remains to be done to eliminate the gaps and imperfections in the legislation, in particular its inconsistency and fragmentation.

The recent creation of the Ministry of the Environment is intended to provide the environment with the attention it deserves and to contribute to a rational evolution of the legal instruments of Tunisian environmental policy.

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ATTACHMENT A

MAIN LAWS AND REGULATIONS

FOR THE PROTECTION OF THE ENVIRONMENT IN TUNISIA

- Law No. 83-87 of 11 November 1983 for the protection of agricultural land.
- Forestry Code, promulgated by Law No. 66-60 of 4 July 1966, modified by Law No. 73-25 of 7 May 1973 and updated by Law No. 88-20 of 13 April 1988.
- Law No. 74-12 of 11 May 1974 for the protection of wild fauna and flora species threatened with extinction.
- Law No. 76-6 of 7 January 1976 creating the Institut des Régions Arides.
- Code of Urbanism, approved by Law No. 79-43 of 15 August 1979.
- Law No. 79-42 of 15 August 1979 instituting the Commissariat Général à la Pêche.
- Decree of 26 July 1951 updating the legislation of the police for maritime fishing, modified by Law No. 63-49 of 30 December 1963 and Law No. 87-12 of 23 March 1987.
- Law No. 73-49 of 2 August 1973 determining the boundaries of territorial waters.
- Law No. 68-4 of 8 March 1968 related to the protection of seals in Tunisian territorial waters.
- Decree of 3 July 1941 related to fishing and the selling of shells and sea products.
- Decree of 4 September 1952 modifying Decree of 25 July 1941 related to fishing and the selling of shells and sea products.
- Decree of 8 January 1953 regulating the maritime and air health police.
- Law No. 69-54 of 26 July 1969 regulating poisonous substances.
- Law No. 61-39 of 7 July 1961 related to the control of the trade of poisonous substances used for agriculture.
- Law No. 58-83 of 25 August 1959 related to the breeding of goats in some administrative areas in northern Tunisia.
- Decree No. 77-340 of 1 April 1977 creating the Zembre and Zembrette Islands National Park.
- Decrees Nos 1606, 1607 and 1608 of 18 December 1980 creating respectively Bou-Hadma, Chambi and Ichkeul National Parks.
- Decree of 8 March 1885 creating the Department of Antiquities, Fine Arts and Historic Monuments.
- Decree of 11 March 1920 instituting a Consultative Committee for Historic Monuments within the Department of Antiquities, Fine Arts and Historic Monuments.

- Decree of 30 March 1957 creating the National Institute of Archaeology and Arts.
- Decree of 2 April 1966 defining the mission of the National Institute of Archaeology and Arts and organising its activity.
- Law No. 86-35 of 9 May 1986 related to the protection of archaeological properties, monuments, natural and urban areas.
- Law No. 88-11 of 25 February 1988 creating the National Agency for Valuing and Exploiting Archaeological and Historical Resources.
- Law No. 75-16 of 31 March 1975 promulgating the Water Code.
- Decree of 28 April 1955 regulating the exploitation of quarries.
- Law No. 74-73 of 3 August 1974 creating the National Office for Sanitation.
- Decree No. 79-768 of 8 September 1979 regulating the connection and discharge of effluents into the public sanitation network.
- Decree No. 85-56 of 2 January 1985 regulating discharges.
- Decree of 16 October 1982 and Order of the Ministry for National Economy of 18 July 1983 regulating the recovery of used oils.
- Law No. 61-39 of 7 July 1961 regulating the trade and use of pesticides for agricultural purposes.
- Decree of 29 December 1984 related to nuisances and noise.
- Law No. 81-5 of 18 June 1981 related to protection against the harmful effects of ionising radiation.
- Decree of 27 October 1982 creating the National Centre for Radiation Protection.
- Decree of 28 March 1986 determining the general principles for protection against ionising radiation.

ANNEX A: "FIELD GUIDE"

General

The intended purpose of this guide is to provide to each field researcher(s), in each nation selected for detailed appraisal, a basic outline of the nature and scope of the data to be gathered. It is of obvious importance to ensure that to the greatest degree possible similar types of data are gathered about similar issues in each country.

Apart from setting data gathering parameters the construction of the guide also allows the research direction team to identify and elaborate the theoretical and policy relevant framework for the project.

I. Framework and Review of Legal History

A. *Social Framework*

Any understanding of the manner in which a nation responds to the protection of the environment must take initial account of the constitutional and political structures which prevail within its borders. Thus a nation possessing, respectively, federal or unitary systems of government is likely to respond very differently in this area to environmental issues.

Within the context of such structures some of the key questions and points of analysis to be addressed in the field research should include:

- how is responsibility allocated constitutionally for the protection of the environment?; is this responsibility clearly established?; are there key judicial decisions interpreting areas of uncertainty?;
- how is responsibility allocated within the ruling government hierarchy in relation to environmental issues?; for example, is there an all-embracing Ministry for the Environment?; what is the political influence and power possessed by the various structures established in this area?; what tensions, conflicts, concerns currently exist in relation to the political structures dealing with environmental issues?;
- to what degree have environmental issues become part of the current agenda of indigenous political parties?; where do environmental issues fit on party political platforms?; are there political parties and/or politicians whose *raison d'être* is the protection of the environment?;

- have any special political (parliamentary?) committees, investigative agencies, enquiries, or like bodies been established to examine/monitor environmental issues?

B. *Legal framework*

Just as constitutional and political structures affect the manner in which a nation deals with environmental issues so too does a nation's legal and administrative framework. In this regard an understanding is required of the laws which govern environmental issues, and especially those which relate to the sanctioning process. Equally, knowledge is required of the structures established to administer these laws, including elements of the criminal justice system. Some specific questions to be answered include:

- within the criminal law/code is recognition given to matters affecting the protection of the environment?; how is this recognition provided?; what specific criminal offences have been created in this area?; what is their historical origin?; have there been recent amendments, additions and changes to these offences?; what formal penalties are set for breakers of these laws?
- apart from the traditional criminal law (or "real crimes"), what other sanctioning legislation, regulations, administrative rules or like instruments exist in relation to relevant environmental concerns?; what formal penalties do these instruments contain?
- can any shift/trend/movement be discerned and documented in the approach adopted to secure compliance with environment protection laws?; is this shift one away from persuasion towards punishment?; what factors have led to/influenced any change?
- what governmental departments, agencies, commissions or other special bodies exist to deal with environment protection?; are these bodies dealing exclusively/partially with environmental issues?; what are the stated mandates given to these bodies in regard to the protection of the environment?; what resources and budgets have been allocated for these bodies?; have there been recent changes in these allocations?; what types of personnel does each relevant body possess?; to what degree do these bodies collaborate with one another/with other enforcement agencies like police and prosecutors/with comparable agencies in other nations?

C. Environmental problems

The principal focus of the project is upon sanctioning strategies relating to polluting behaviours affecting the air, water and the management of hazardous waste. Thus under this heading information will be sought about the status of environmental problems in these specific areas. However, attention must also be given to the status of public attitudes at large to environmental issues. The responsiveness of political power makers to environmental concerns will obviously be influenced, to a lesser or greater degree depending on the governmental structure, by community feelings on the subject. Specific questions to be asked should include:

- what are the most important environment protection issues being discussed/publicized?; are there specific cases of polluting behaviours which have received particular attention? (spectacular cases such as toxic waste in Hamburg (FRG), Windscale (GB), Seveso (I)); what is the nature of these cases?; is there a difference between what is being discussed at the public level about environmental concerns and what may be "the real" problem associated with protection of the environment?
- what is the level of attention given in the media to environmental issues?; is this attention merely disaster orientated, or more balanced and consistent?; how much of the media coverage in this area is related to national/international pollution topics?
- what type and number of groups exist in the community whose aims and objectives are to support various environmental protection issues?; how influential are these groups?; has their nature and number changed in recent years?
- who are the major polluters?; how much is known about each category of polluters?; what types of polluting behaviours does each category engage in?; are these behaviours consistent/sporadic/in the process of change?

D. An historical development of environmental protection law

An historical approach to the extent necessary for comprehending the current regulation density/deficiencies: e.g. legal control of emissions in response to industrialization; water use as a reaction to epidemics; guiding criteria: "the polluter pays-principle"? Environmental precautions.

II. Sanctioning strategies

This heading addresses some of the most important questions to be considered by the project. It is hoped that from an analysis of the cross-national data gathered about sanctioning strategies applied to polluting behaviours it will be possible to identify and describe those which offer the greatest potential for protecting the environment.

It is quite possible that information within this area may be sparse in many of the nations selected for study. Regular statistical data about such matters as the type, gravity and outcome of environment protection prosecutions may not be collected or published, or may be too general to be of much use.

Thus consideration may need to be given to designing and implementing a number of supplementary studies of the sanctioning process relating, say, to the management of hazardous waste. Subject to these potential limitations and responses, questions to be asked should include:

- what is the nature and level of the enforcement activities applied in the areas of interest?; what types of investigations are launched?; are these investigations reactive or proactive in nature?; what is the outcome of these investigations?; how many and which types of breach identified of environmental laws, rules, regulations result in prosecution; are dealt with informally, are given priority?; what sanctions are imposed?
- are there differences in the enforcement activities directed towards particular categories of polluters?; what are these differences?; who gets prosecuted and who does not?
- what is the predominant compliance strategy prevailing?; does this strategy vary between polluters, victims, over time, between regions, between agencies?
- what is the range and the severity of sanctions imposed?; what use is made of civil law and administrative sanctions (e.g. plant closure, equipment modification, injunctions) in preference to more traditional criminal law sanctions?; what use is made of imprisonment for polluting behaviours?

II.1. Inventory of the Relevant National (Administrative, Civil and Criminal) Sanctions

Legal bases and areas of protection (regulations serving mainly to protect the environment)

- of water protection (ground and surface water, rivers, coastal waters, estuaries, swamps, oceans)
- of emission control (air pollution and noise)
- of waste removal
- of animal and plant protection

by means of

- specific (in part-) regulation in the penal code?
- (in part-) regulation in the penal code?
- administrative laws containing criminal sanctions (e.g. clean water act, emission control act, clean air act)?
- administrative laws containing non-criminal sanctions (e.g. administrative violations, administrative /civil offences)?
- civil injunctions and damage claims? (outline; emphasis on industrial emissions)
- others? (e.g. mixed forms, such as administrative regulations and licenses for the exploitation of the environment, pollution-rights-models)

II.2. *Specific Criminal Law Provisions Regarding Environmental Protection*

II.2.1. Scope and level of protection under criminal law

- Protected interests and their relative importance (human rights, concern with the future, etc.)
- Basic models of environmental protection under criminal law

B.1 Forms of typifying the offence

B.1.1 Technique of formulating the definitional elements of offences

- formulating the offence under genuinely criminal law including administrative and technical terms?
- global laws? Interlocking with administrative laws, regulations and case law
- mixed forms?

B.1.2 Formulation as

- result or act-oriented offences?
- offences requiring a specific damage / offences of merely concrete or abstract endangering?
- other substantive characteristics? (e.g. limitation to intentional acts; strict liability; punishability of the attempt; presumption of causation; special criteria of negligence for certain occupational groups; focusing on emissions)

B.1.3 Omnibus clauses (e.g. general criminalization of non-compliance with executive orders, use of traditional criminal offences)

B.2 Possible exemption from punishment

- in cases of minor impairment of the environment or impairment condoned by customary law (through specific regulations, both substantive and procedural?; interpretation of the offence, etc.; criteria - general or individual -: minimal, customary and similar impairments)
- conflict of diverging interests? (e.g. workplace security, compliance with production plants / environmental goods)
- official licenses?
- other reasons for refraining from sanctions? (e.g. considering all circumstances, the act is "reasonable")

B.3 Special privileges for abandonment? (e.g. voluntary averting the consequences of the act before significant damage has occurred)

B.4 Legal sanctions

B.4.1 Type of penalty (i.e. imprisonment, fine; relationship to administrative / civil sanctions)

B.4.2 Severity of sentence

- normal range of punishment
- aggravating circumstances (e.g. endangering human life/health; causing major environmental damage; misinforming the authorities; interfering with the investigations)

- privileged cases
- others? (e.g. preclusion of a continuation of offence, increase in severity of punishment for each day of the contravention, special recidivism clauses)

B.4.3 Side sanctions (e.g. forfeiture, confiscation, closing down of works, sequestration, loss of tax privileges, restitution in kind, substitute performance, compensation for damage, environmental protection fees, prohibition to practise a profession)

B.5 Particulars concerning the offender, e.g.

- punishability of management in case of legal persons (corporate bodies)?
- criminal liability of the enterprise as such? (as a general principle? as a special characteristic of environmental law?)
- punishability of environmental enforcement agencies? (e.g. officers, violation of supervision or control duties)
- others

II.3. Environmental Protection Under Criminal Law as Related to Administrative and Civil Law

II.3.1. Administrative environmental provisions

- Outline of the law of environmental organization (responsibilities and competences)
 - central environmental protection agency? specific agencies?
 - system of inspecting agencies? Duty to consider certain non-environmental media or decision power strictly limited to the field of the specific department?
- Problems of the dependence of criminal law from administrative provisions
 - impact of administrative provisions on constituting a criminal offence? (existence, substantive legality, revocation of a defective administrative decision, administrative toleration as points of reference?)
 - extent of administrative permissions? (constitution of an offence outside the environmental criminal law in cases complying with administrative orders concerning the environment)

- problems of intent in cases depending on the executive (intent referring to: contents and/or existence of an administrative decision / provision supplementing the criminal law provisions?)

II.3.2. Cases of protection under civil law

II.4. *Organisation of Public Control and its Significance in the Field of Environmental Criminality*

II.4.1. Competences of police, public prosecution, criminal courts

- special procedural principles (e.g. principle of absolute legality, regulations concerning the presentation of evidence)
- specific organizational and structural measures? (special decision-making bodies, public prosecution focusing on certain offences, "mobile environmental task forces", technical equipment)

II.4.2. Competences of administrative agencies, administrative criminal courts

III. **Environmental Criminality under International Criminal Law**

III.1. *Scope of protection provided by the law of environmental offences*

- limitation to domestic legal interests?
- extension to foreign interests?

III.2. *Principles of jurisdiction under environmental law*

III.2.1. General principles of reference in international criminal law:

- principle of "territoriality" and concept of "place where the crime is committed"
- related to the citizenship of the perpetrator? So- called principle of "active personality"
- depending on the citizenship of the victim? So- called principle of "passive personality" or of "protection"
- world-wide applicability of a criminal provision: so- called principle of "universality"
- principle of "vicarious" criminal jurisdiction?

III.2.2. Special regulations concerning emissions and the protection of water? e.g. by extending territorial jurisdiction by applying the principle of protection resp. universality.

III.3. Cases of border crossing water contamination and air pollution

For example:

- a) Abstractly dangerous emission from a foreign country becomes a concrete danger within the country. (Punishability under domestic law, place of effect in cases of abstract endangering?)
- b) The foreign emittend is not violating foreign law, but would not be allowed to emit under domestic law. (Fictitious permission if emission complies with a standard permitted under international law)
- c) The domestic emittend is not allowed to emit under domestic law, but the foreign environmental standard allows such an emission: place of commission and place of effect diverge (structure of the definition of the offence - offences of abstract endangering, result crimes - in connection with the concept of the place of action?)

III.4. Obligation to prosecute on the basis of international agreements?

For example, ratification of the following agreements:

- International Convention for the prevention of marine pollution from ships (London, 2/11/1973)?
- International Convention on the prevention of marine pollution by dumping of wastes and other matter (London, 29/12/1976)?
- Convention on the conservation of the living resources of the Southeast Atlantic (Rome, 23/10/1969)?

III.5. Prosecution in cases of border crossing environmental criminality

III.5.1. Bilateral agreements to make public prosecution effective (e.g. joint control bodies for instance in the field of water pollution; co-ordination of means, exchange of data and informations)

III.5.2. Agreements on legal cooperation

IV. Enforcement

IV.1. Empirical Data

- a) Statistics, case descriptions, other investigations of recorded environmental offences
- b) Offences of international relevance
- c) Trends in public prosecution .

IV.2. Perceived Effectiveness of Sanctions

The data available about the effectiveness of various sanctioning strategies may be limited in many of the nations to be studied. Thus it may be necessary, and generally desirable, to utilize in-depth interviews with key persons involved in the administration of environment protection policies; with victims of pollution; with polluters; with environment protection experts; with politicians; and others to establish an adequate data base on this issue. In certain countries more formal evaluations may also be available of the impact of alternative sanctioning strategies.

The questions to be asked in this area should include:

- what is the relative effectiveness of compliance strategies based on conciliation versus punishment?; are there certain types of polluters for whom persuasion/punishment is more or less applicable?
- to what extent is the effectiveness of current/future compliance strategies dependent upon issues like resource allocation; sophistication and experience of enforcement personnel, political support, economic progress?
- what is the perceived and relative effectiveness of a range of sanctioning strategies including fines and imprisonment?; what case examples can be provided to support such perceptions?

V. Proposed Reforms

This final heading is intended to capture information about proposals for change which may be contemplated or in progress for dealing with polluting behaviours. Recommendations of law reform commissions, special enquiries into pollution catastrophes, and like bodies should be identified and obtained.

The general climate for change within each nation regarding protection of the environment should also be assessed. Such an assessment will be of value in determining the degree to which guidelines flowing from the project may be utilized by the international community.

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