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ACTION AGAINST NATIONAL AND TRANSNATIONAL ECONOMIC AND ORGANIZED CRIME, AND THE ROLE OF CRIMINAL LAW IN THE PROTECTION OF THE ENVIRONMENT: NATIONAL EXPERIENCES AND INTERNATIONAL COOPERATION

Background paper for the workshop on environmental protection at the national and international levels: potentials and limits of criminal justice

Summary

Over the years, the international community has become more and more alarmed by environmental damage and technological disasters, which have tended to become more destructive, affecting ever larger concentrations of population. International responses are primarily directed at relief action, but it is increasingly being realized that the actual and potential consequences of such disasters are so serious, and so global in scale, that much greater emphasis should be given to the prevention of environmental damage. Accordingly, the role of criminal justice in the protection of the environment is becoming more important. Furthermore, the consequences of some environmental disasters have gone far beyond national borders, underlining the international implications of such events. The Economic and Social Council, in its resolution 1992/22, section VI, determined that the role of criminal law in the protection of the environment should be included as part of one of the priority themes to guide the work of the Commission on Crime Prevention and Criminal Justice for the period 1992-1996. In its resolution 1993/32, the Council endorsed the programme of work for the Ninth United Nations Congress on the Prevention of Crime and the Treatment of Offenders, including the holding of, *inter alia*, a two-day workshop on environmental protection at the national and international levels: potentials and limits of criminal justice. The purpose of the present paper is to introduce the topic from a comparative and international point of view by presenting the results of an empirical study specifically developed for the workshop. The study, which covered 11 developing and developed countries, involved case-studies of criminal justice responses to (a) transboundary pollution, (b) the considerable environmental damage caused by the operation of large-scale enterprises involving inadequate risk management and (c) polluting behaviours resulting from everyday activities of small-scale enterprises, businesses or individuals. A wide range of proposals for projects enhancing international cooperation in the fields of technical assistance, research, training, advisory services and education are also provided in the present paper.

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INTRODUCTION

1. The General Assembly, in its resolution 45/121, welcomed the instruments and resolutions adopted by the Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders.[1] The Eighth Congress, in its resolution entitled "The role of criminal law in the protection of nature and the environment",[2] called on Member States, *inter alia*, to recognize the need to modify or enact, where necessary, and to enforce national criminal laws designed to protect nature and the environment. It also requested Member States, *inter alia*, to encourage the harmonization of national regional legislation of countries belonging to the same ecosystem and to cooperate in the prevention, investigation and prosecution of criminal acts against the environment.

2. On the recommendation of the Commission on Crime Prevention and Criminal Justice at its first session, the Economic and Social Council adopted resolution 1992/22. In section VI of that resolution, it determined that national and transnational crime, organized crime, economic crime, including money-laundering, and the role of criminal law in the protection of the environment should be one of the priority themes to guide the work of the Commission for the period 1992-1996. On the recommendation of the Commission at its second session, the Council adopted resolution 1993/32, in which it approved the provisional agenda for the Ninth United Nations Congress on the Prevention of Crime and the Treatment of Offenders, including as item 5 of the provisional agenda "Action against national and transnational economic and organized crime, and the role of criminal law in the protection of the environment: national experiences and international cooperation". Furthermore, in the same resolution, the Council endorsed the programme of work for the Ninth Congress, including the holding of a two-day workshop on environmental protection at the national and international levels: potentials and limits of criminal justice. The role of criminal law in the protection of the environment was also the subject of Council resolutions 1993/28 and 1994/15. In its resolution 1993/28, the Council requested the Secretary-General to include environmental crime as an issue for technical cooperation. In its resolution 1994/15, the Council invited Member States and relevant bodies to consider the recommendations concerning the role of criminal law in protecting the environment, made by the Ad Hoc Expert Group on More Effective Forms of International Cooperation against Transnational Crime, including Environmental Crime, held at Vienna from 7 to 10 December 1993.

3. The United Nations Interregional Crime and Justice Research Institute (UNICRI) is organizing the workshop, in cooperation with the European Institute for Crime Prevention and Control, affiliated with the United Nations,* the Asia and Far East Institute for the Prevention of Crime and the Treatment of Offenders, the Australian Institute of Criminology and the International Scientific and Professional Advisory Council and in collaboration with the Milan-based Istituto per l'Ambiento, the International Centre for Criminal Law Reform and Criminal Justice Policy and the Max Planck Institute for Foreign and International Criminal Law. Other institutes of the United Nations crime prevention and criminal justice programme network were consulted. A working group was created to develop the project methodology and to coordinate the preparatory work.

4. Considerable work has been done in this area by the workshop organizers** and many other institutions. Research on the use of criminal law in environmental protection has also been carried out, as evidenced by the extensive literature on the subject, especially in developed countries.[3] Examples of research projects by UNICRI and the Australian Institute of Criminology, the European Institute for Crime Prevention and Control and the Max Planck Institute will be available to participants in the workshop.[4]

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*Formally called the Helsinki Institute for Crime Prevention and Control, affiliated with the United Nations (HEUNI).

**For further information and bibliographical references, see United Nations Interregional Crime and Justice Research Institute, *Environmental Protection at National and International Levels: Potentials and Limits of Criminal Justice: Case Studies*, forthcoming.

5. The workshop has three main objectives:

(a) To provide information about the responses to pollution incidents in different countries and in different legal systems (presentation and discussion of existing measures; presentation and discussion of national case-studies);

(b) To promote research into the different strategies and effects thereof on the prevention and reaction to environmentally harmful or threatening behaviours (presentation and discussion of "research software");

(c) To discuss selected issues in the realm of criminal justice response from a comparative perspective and with a view to facilitating international cooperation (expert panel; examination of guiding principles in respect of developing research and international strategies in this field).

6. The results of an empirical study carried out specifically for the workshop will be presented, covering 11 developing and developed countries and including case-studies on criminal justice responses to (a) transboundary pollution; (b) the considerable environmental damage caused by the operation of large-scale enterprises involving inadequate risk management; and (c) polluting behaviours resulting from everyday activities of small-scale enterprises, businesses or individuals. In addition, during the workshop an expert panel will discuss the topic "Environmental protection through criminal law: limits of individual responsibility - potentials of collective liability?".

7. The 11 countries participating in the empirical study were Australia, Brazil, Canada, China, Germany, Italy, Japan, Nigeria, Poland, Sweden and Tunisia.* In each country, with the assistance of the collaborating institutes of the United Nations crime prevention and criminal justice programme network, an expert was chosen to carry out the fieldwork. The working group developed guidelines for data collection for the experts.[5]

8. In order to provide information on the way specific systems for environmental protection work, each expert was requested to provide three examples of each of the three categories of pollution described. The experts also collected information from prosecutorial, administrative and environmental agencies and environmental groups and movements (Greenpeace, Friends of the Earth etc.). In addition, for ongoing cases, other sources of information were newspapers and specialized journals. The complete set of case-studies from the 11 countries involved will be available to workshop participants.[6]

I. SUBSTANTIVE BACKGROUND

9. Over the years, the international community has become increasingly alarmed by environmental damage and technological disasters, which have tended to become more destructive, affecting ever larger concentrations of population. International responses are primarily directed at relief action, but it is increasingly being realized that the actual and potential consequences of such disasters have become so serious, and so global in scale, that much greater emphasis should be given to the prevention of environmental damage. Accordingly, the role of criminal justice in the protection of the environment is becoming more important. Furthermore, the consequences of some environmental disasters have gone far beyond national borders, underlining the international implications of such events.

10. The right to a healthy and safe environment was recognized in a number of United Nations and other international instruments and forums, such as the Universal Declaration of Human Rights (General Assembly

*In the present paper, specific references to those 11 countries are based on the data collected by the experts.

resolution 217 A (II)) and the United Nations Conference on the Human Environment, held at Stockholm from 5 to 16 June 1972. Similar concerns were also expressed in the International Covenant on Economic, Social and Cultural Rights (General Assembly resolution 2200 A (XXI), annex), in the report of the Experts Group on Environmental Law of the World Commission on Environment and Development[7] and in the report of the United Nations Conference on Environment and Development, held at Rio de Janeiro from 3 to 14 June 1992,[8] and have been entrenched in the constitutions of several countries.

A. The role of criminal law in environmental protection

11. Criminal law was one of the first mechanisms in many countries that directly, as well as indirectly, protected certain elements of the natural environment, such as air and water, although the objects of protection were human beings. It continues to play a role that varies in importance, depending on the jurisdiction. In many cases there has also been a move to introduce substantive criminal offences against the environment.

12. Some acts of pollution are so serious that they are considered to merit stigmatization as criminal; however, a mix of criminal, civil and administrative laws might be a more appropriate way to deal with the problem. One reason is that victims can usually institute civil proceedings but are not always empowered to institute criminal proceedings. Another reason is that frequently States themselves are the most significant polluters and state liability for criminal acts is not always recognized under international law.

13. A discussion of the role of criminal law in environmental protection must begin by defining environmental crime. To do that, the object of the protection must be defined. There is a certain level of agreement at the international level on the importance of defining (a) the environment as the scope of the protection, distinguishing it from property and public health or individual right to personal integrity; and (b) the components of the environment meriting protection.*

14. A "culture problem" might exist in dealing with environmental crime. Persons and bodies engaged in such activities tend not to be regarded as criminals in the traditional sense, although they usually are quite aware of the consequences of their actions. In this context, the term "crime against the environment" might be preferable to the term "environmental crime". This would be consistent with other criminal law concepts such as crimes against the person, crimes against property etc.

15. Criminal provisions devised to respond to environmentally harmful behaviour have to deal with the problem of drawing a clear and practically feasible line between crimes against the environment on the one hand and legitimate use of natural resources on the other. Efforts should be made to ensure sustainable utilization of natural resources in order to maintain a balance, for the sake of future generations.

16. The environmental consequences resulting from the recent conflict between Iraq and Kuwait demonstrate that States can seriously damage the environment by weapons of war, leading to a situation that may be irreversible or reversible only after a long period and at great expense. Declaring not only such aggressive acts, but also the deliberate dumping of hazardous chemical and radioactive wastes, or the scuttling of vessels carrying such cargo, to be international crimes and placing them on the same level as genocide would advance the international protection of the environment, benefiting both the present and future generations.

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*See, for example, Council of the European Communities directive 91/156/EEC, on waste (*Official Journal of the European Communities*, No. L 78, 26 March 1991, p. 32); see also F. Giampietro, "Models and types of environmental offences: preliminary considerations", *Criminal Law and the Environment*, H.-J. Albrecht and S. Leppä, eds. Publication Series No. 22 (Forssa, Finland, European Institute for Crime Prevention and Control, affiliated with the United Nations, 1992), pp. 142-151.

B. Limiting factors

17. The increased interest in using criminal law in environmental protection has brought about a serious debate on the appropriateness and effectiveness of criminal measures in preventing and redressing harm to the environment. One of the biggest concerns derives from the relationship between administrative and criminal law; it is feared that criminal law will be inflated, thereby diminishing its value since "both murder and mere disobedience of administrative orders are defined as criminal".[9] Similar concerns have been expressed about the danger of selective prosecution and lenient and inefficient sentencing practices, which can also lead to the derogation of criminal law. A further problem is the lack of strict standards in criminal law; while strict standards in administrative law make possible direct interaction between the administrative agency and the subject, criminal law without such standards is "soft" and will inevitably malfunction in this context unless appropriate corrections are made.

18. The high costs involved in using criminal law for environmental protection might also have a negative effect. Developing countries often lack resources needed to enforce criminal provisions. Poverty and environmental degradation, however, are closely interrelated. Environmental protection in developing countries must, in this context, be viewed as an integral part of development and cannot be considered separately from it.

19. Other weaknesses in the use of criminal law are the higher onus of proof required, the need to establish knowledge or intent, and the fact that in a number of jurisdictions it is not possible to convict corporations for criminal offences. Furthermore, the use of criminal law can also be a purely symbolic measure to show that "something has been done", in order to divert attention from ineffective environmental protection as a whole.

20. Evidential difficulties include establishing *mens rea*, proving pollution or deleterious effects, and linking the pollution, the substance and the polluter. Because of these obstacles, there has been a trend in some developed countries towards introducing devices that facilitate the attribution of criminal responsibility.[10]

21. In some Member States, 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 might be available. This might create problems, mostly because of the fact that one of the main purposes of criminal law is deterrence, and if criminal liability was assessed without fault there would be no deterrent effect.

22. The question of who is liable to be criminally sanctioned is also crucial. Natural persons may, of course, be subject to criminal sanctions. In some jurisdictions, legal persons, government entities and officials from environmental protection agencies may be criminally (as well as civilly) liable for environmental degradation resulting from breach of statutory duty. In most civil law countries, however, criminal liability cannot be assigned to legal persons. There have been some attempts to target corporations indirectly by penalizing responsible corporate employees. The different ways of dealing with harm done by corporations reflect a historical division between those societies where corporations have been liable to criminal sanctions and those where they have not been liable to such sanctions (i.e. those where the Roman law maxim *societas delinquere non potest* applies).[10]

23. Limitations can also be found in the use of criminal sanctions at the international level. Significant variations in national laws, coupled with the embryonic state of mutual assistance in criminal matters, severely inhibit the effective use of criminal law at this level. In addition, there is no comprehensive convention dealing with the environment and existing conventions deal only with certain aspects of damage to the environment.

24. An additional limitation to the effective use of criminal sanctions at the international level is the need in many countries either to pass domestic legislation or to undertake ratification procedures, in order to give effect to international obligations. Experience has shown that in many countries the process of transformation of international prescriptions into national law is very slow.*

C. Potentials

25. There are also advantages to utilizing criminal law. For example, the deterrent effect of exposure to conviction of a criminal offence can be perceived as greater than exposure to civil liability, particularly given the growing range of innovative sanctions that might be imposed.

26. Another strength of the use of criminal sanctions in relation to domestic conduct is that offences could be clearly defined in conformity with substantive and procedural domestic law, thereby ensuring compliance with the principle of legality. In addition, there is the possibility of domestic laws having extraterritorial application, and hence being capable of dealing with some transboundary conduct.

27. There are also good reasons for relying upon criminal law at the regional level, such as the likelihood of being able to reach an agreement on common definitions of the elements of the offences; the greater deterrent effect in relation to transborder conduct; the contribution towards achieving greater consistency in legal provisions; and the existence of regional arrangements for extradition and mutual assistance in criminal matters, which could contribute to effective investigation and prosecution.

D. Implementation

28. Typically, the penalty for an environmental offence is a fine and/or imprisonment. Fines are a traditional approach to penalizing environmental offenders. Recently, in some Member States, 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.

29. Most Member States have predominantly used civil or administrative sanctions to encourage compliance with environmental legislation, since a broad scope of sanctions are commonly seen as more appropriate, as well as more effective and speedier than the traditional penal sanctions of fines and imprisonment. The concern over more and more serious cases involving pollution, however, has increased the interest in criminal measures that also have a greater potential for deterrence. There is a trend in criminal law towards sanctions that have been used in administrative and civil law in the past. These new forms of penal sanctions include adverse publicity, forfeiture of illegal profits, reparation orders, and incapacitative and coercive measures such as interdiction of professional activities and closing down enterprises, in addition to community service and probation.

30. A comparison of sentencing instruments of a non-penal character shows that they are quite similar to criminal law measures. Most countries provide for administrative sanctions in the case of breaches of administrative orders or norms. The most common form of those sanctions is the administrative fine, which can partially be utilized in cases involving the forfeiture of profits or savings derived from illegal acts. In addition, compensative or restitutive, coercive and preventive provisions are made available in administrative legislation. Such provisions include clean-ups, the closing of enterprises, the revocation or alteration of permits, and confiscation. Civil law sanctions offer for the most part similar sorts of remedies.

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*In many countries these difficulties have been encountered in converting international treaties into national laws. For example, in Nigeria, of some 30 international conventions that had been signed, only 5 had been transformed into national laws.

31. At the level of environmental criminal law enforcement, it is important to keep in mind that administrative agencies, criminal justice agencies and the judiciary are independent organizations. If organizational independence is a value worth maintaining, specialized know-how is a necessary precondition for the work of the judiciary in the majority of environmental cases. A lack of such expertise must be remedied somehow. It can be done by increasing the skilled personnel and advanced technical resources of the judiciary. More often than not, however, that would entail duplicating existing resources within environmental administrations. The solution might be an integrated approach, with a high level of cooperation and communication between the competent authorities (e.g. technical assessors to aid the court in sentencing; a specialized environment court or an environment panel or chamber, as recently established by the International Court of Justice at The Hague).[11]

32. For a number of reasons, in many countries knowledge about law enforcement is incomplete. First, environmental protection laws may be so recent that it is impossible to draw conclusions about their implementation. Secondly, law enforcement data may not be collected or published. Thirdly, lack of public disclosure laws may make it difficult to obtain information even if it exists.

33. Jurisdictions vary considerably in the type of polluter who is sanctioned. In some countries it appears that small corporations and individuals are more likely to be sanctioned than large companies or government-run agencies. In others, corporations are more likely to be prosecuted than individuals. There are different views on whether prosecution profiles are representative of polluters. While some would 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-scale businesses.

34. There is a common misconception that failure to apply pollution laws indicates that either the legislation or its administrators are deficient.[12] However, there is the perception that statutes are being inadequately and sometimes inconsistently enforced, as evidenced by continuing (and sometimes alarming) pollution problems. One readily apparent reason relates to the desire to enhance industrial development, a desire common to both developing and developed countries. In developing countries, desire for the economic, social and political benefits of industrialization, coupled with inequalities of bargaining power and fear that foreign or transnational corporations may turn to other countries if environmental protection requirements are too rigorous, may play a part.

E. Other strategies and instruments facilitating compliance

35. Attitudes to pollution - held by governments, officials and members of the public - are also important in determining what statutory protection is given to the environment and how that protection is implemented. Political orientations may also have an impact on attitudes towards pollution. Societies that have made industrialization a priority at the expense of other goals have tended to consider pollution to be of negligible importance.

36. Compliance with legislative requirements may be sought through means other than law enforcement, with conciliation being another strategy. Traditional dispute resolution might be conciliation-based. Education is another compliance strategy that is used, often in conjunction with conciliation.

37. Another approach is the proactive method, which uses environmental compliance audits as a means of assuring management that the health, safety and environmental responsibilities of its corporation are being adequately discharged and that no significant non-compliance exists. Benefits for corporations thus include independent verification of compliance with environmental legislation, the identification of deficiencies in management or system-related problems, an added incentive for self-evaluation and an improved capacity to consider environmental issues in business planning.

38. Environmental protection officials in some developed countries have referred to the resource-intensiveness of criminal sanctions as one reason why other avenues are often tried first and have also emphasized the need for training in criminal investigation to be supplied to enforcement officers in their agencies. Resource constraints may affect the enforcement of environmental protection statutes, especially in developing countries.

39. Finally, most of the environmental protection efforts are aimed at pollution control, while hardly any resources are allocated to pollution prevention. The pollution prevention approach can be an effective and flexible alternative to the damage control approach. The pollution prevention approach can be followed by creating a framework that encourages pollution prevention choices in the best interest of the individual or entity concerned.

40. Since choices are generally made on the basis of cost-effectiveness, it is important that the total cost of breaching environmental laws (including liability) is clear to the regulated entities and that the alternative of preventing pollution exists. The savings that would result from adopting the prevention option should be manifest.

II. CRIMES AGAINST THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

A. Sustainable development: socio-economic issues versus environmental concerns

41. In 1987, *Our Common Future*, the report of the World Commission on Environment and Development, drew the world's attention to the concept of sustainable development, meeting "the needs of the present without compromising the ability of future generations to meet their own needs" (A/42/427, annex, Overview, para. 27).

42. The enforcement of environmental protection laws often raises difficult questions related to many of the issues contested in debates about sustainable development.[13] A number of factors have been identified as contributing to inadequate environmental laws and deficient enforcement. Among those factors are lack of priority accorded to environmental issues, lack of resources and, especially in developing countries, the desire to enhance industrial growth.

43. Unsustainable consumption and production patterns in the developed world not only degrade the environment, but also create imbalances between North and South and exacerbate poverty. Unsustainable consumption and production were identified in Agenda 21, adopted by the United Nations Conference on Environment and Development, as the "major cause of the continued deterioration of the global environment".[14]

44. Truly sustainable development is vital to achieving a better environment and fostering a criminal justice system that can be used vigorously and effectively to achieve environmental protection.

45. The industrialized world's traditions of consumption and economic growth have led many to equate development with economic growth; however, "to grow means 'to increase naturally in size by the addition of material through assimilation or accretion'. To develop means 'to expand or realize the potentialities of; bring gradually to a fuller, greater or better state'. In short, growth is quantitative increase in physical scale, while development is qualitative improvement or unfolding of potentialities. An economy can grow without developing, or develop without growing, or do both or neither".[15]

B. Public awareness and sensitivity

46. In most countries environmental issues are regularly dealt with in national newspapers. Media coverage of environmental issues was stimulated in the run-up to the United Nations Conference on Environment and Development. In addition, in many countries, major political parties have acknowledged the importance of environmental issues and "green" parties have been established and are proliferating.

47. "Green" parties have occupied positions of considerable power at the national level in some of the countries undertaking research for the workshop on environmental protection at the national and international levels.* In many countries, such parties have proliferated at the local level.

48. Public opinion surveys are another barometer of support for environmental issues in the community. Even during the current global recession, there are indications in some countries that issues such as pollution continue to be regarded as important and that pollution offences are regarded as extremely serious, even when compared with traditional crimes against the person.** Thus, in Australia, 57 per cent of respondents in a recent poll gave higher priority to environmental protection than to economic growth.[16]

49. Public awareness is a significant determinant in ensuring that environmental protection legislation is enacted and implemented and that sufficient budgetary resources are allocated to the administration and enforcement of environmental laws. In addition, if the criminal justice system is to be used to protect the environment, it is important that the public perceives environmental offences to be sufficiently serious to be regarded as "crimes".

50. The general public in many developing countries, however, may see the environmental issues in general as being less important and those environmental issues that are regarded as important are often different from those regarded as important in developed countries. Not surprisingly, environmental issues may be overshadowed in impoverished societies by "survival" issues such as health, sanitation and housing. In some countries, environmental protection has, in the past, been seen as an invention of the developed world. While the environment may now be a more important issue on the public agenda, many people in developing countries still ask what proportion of their scarce resources can they afford to devote to environmental protection.

C. The role of non-governmental organizations***

51. There was strong support for non-governmental organizations as partners in sustainable development at the United Nations Conference on Environment and Development. Agenda 21, the action plan of the Conference, dealt specifically with the role of non-governmental organizations, including formal and informal organizations and grass-roots movements. It identified their strengths as independence, credibility, expertise and experience; it noted that they were an important source of innovation and action; and it advocated increased support for them.[17]

52. In relation to crimes against the environment, non-governmental organizations have a role to play that involves detection, prevention and sanctioning. As a by-product of those activities, and in addition to them,

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*Die Grünen in Germany is a prime example.

**For example, in two surveys conducted in Australia, 2,500 persons were asked to rank 13 offences and to select appropriate sentences for each. A pollution offence in which a factory knowingly polluted the water supply and caused the death of one person was ranked as the third most serious offence. (See P. Wilson, J. Walker and S. Mukherjee, "How the public sees crime: an Australian survey", *Trends and Issues in Crime and Criminal Justice*, No. 2, October 1986; J. Walker, M. Collins and P. Wilson, "How the public sees sentencing: an Australian survey", *Trends and Issues in Crime and Criminal Justice*, No. 4, April 1987.)

***Reference is also made in the present subsection to individual citizens and grass-roots organizations.

non-governmental organizations can keep environmental issues on the public and political agendas. As a result, Governments may be stimulated to deal with environmental degradation through the criminal justice system as well as by other means.

53. Non-governmental organizations such as Greenpeace International have been important in exposing transboundary pollution, maritime pollution and the transport of hazardous wastes. In addition, they have acted as a conduit for information. Their networks at the local, national and international levels, their connections with other organizations and their skill in using the media have been important in obtaining information about pollution and hazardous waste incidents, in publicizing these matters and in elaborating resolutions, using legal, administrative or political means.

54. Non-governmental organizations have also been active in exposing domestic pollution resulting from rapid and unchecked industrial development.* In one case, evidence of the scale and nature of the pollution was provided by local citizen groups who documented the pollution, publicized it and established a system for monitoring emissions from industrial plants.

55. In some countries, non-governmental organizations have been important information providers in compiling and issuing of state of the environment reports. Regular and independent reporting on the state of the environment is crucial to identifying problems and monitoring progress made towards environmentally sustainable development.

56. Individual citizens and grass-roots organizations have stimulated government authorities or the police to investigate and apply sanctions for pollution incidents. Citizens are often in the best position to uncover pollution incidents; administrative agencies and the police simply do not have the resources to monitor all potential polluters at all times.

57. Citizens and non-governmental organizations can play an important role in stimulating Governments to reassess and reform their environmental policies and environmental laws and, in doing so, can be a powerful force in the prevention of crimes against the environment and in the protection of the environment.

58. Non-governmental organizations have themselves played a direct role in the sanctioning of offenders - both extra-legally and by recourse to conventional legal channels. In some countries, such as Australia and China, there have been reports that non-governmental organizations have taken direct action against polluters, ranging from temporary interference with discharge pipes to the sabotaging of polluting industries. Such action is commonly taken when pollution is known to government authorities but continues unabated. Non-governmental organizations have also instituted legal action against polluters and government agencies.**

59. A final role for non-governmental organizations and citizens may be to participate directly in the criminal justice system as initiators of prosecutions against environmental offenders. This is a contentious issue for many legal systems, but it is one that is particularly important for environmental protection groups and pollution victims.

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*In, for example, Cubatao, Brazil, in the 1970s, action by non-governmental organizations played an important role in improving the environment (see J. Hardoy, D. Mitlin and D. Satterthwaite, *Environmental Problems in Third World Cities* (London, Earthscan, 1992)).

**In some countries, non-governmental organizations and individuals have been allowed to file suit on behalf of an entire community. For example, the Swedish Society for Nature Conservation has been given standing to sue in a civil case involving pollution of the Swedish coastline; public interest litigation has been recognized by the Indian supreme court; and the Philippine supreme court granted standing to sue to prevent further logging operations in forests.

III. TRANSBOUNDARY POLLUTION

60. Transboundary pollution stems from three significant sources:

(a) Industrial plants and other land-based sources emitting or discharging pollutants into the sea or transporting them to the territory of another State or to the global commons (atmosphere, oceans);

(b) Movement and disposal of hazardous chemical, medical and radioactive wastes;

(c) Pollution by oil or other noxious substances from vessels sailing on the high seas or in territorial waters.

61. The present paper deals exclusively with these three sources, although there have also been documented reports of "natural pollution"* and of pollution where the only transboundary element was that the plant discharging toxic fumes was owned by a foreign company.**

A. Transboundary emissions and discharges

62. Pollution originating in one State and damaging the ecosystem of another State or the global commons has had a relatively longer history than the other two types of pollution. International law in this area has developed through bilateral treaties, starting with the Canada-United States boundary waters treaty (1909).*** The Declaration of the United Nations Conference on the Human Environment (the Stockholm Declaration)[18] (1972) marked the beginning of a global attempt to develop international law. Since then important conventions have been concluded, e.g. the Convention on Long-range Transboundary Air Pollution[19] (1979), the Vienna Convention for the Protection of the Ozone Layer (1985), the United Nations Framework Convention on Climate Change (A/AC.237/18 (Part II)/Add.1 and Corr.1, annex I) and the Convention on Biological Diversity.[20]

63. Despite these bilateral treaties and multilateral conventions, transboundary pollution continues unabated. The situation is complicated by the fact that States are often both polluters and recipients of pollution from other countries. This is evident from cases of acid rain damaging the ecosystems in, for example, Canada, Japan, Poland and Sweden.

64. National criminal laws can be given extraterritorial application by virtue of the principle that States may consider an offence to be committed both where the act was perpetrated and where harm was suffered. Without the cooperation of the authorities in the State that is the polluter, however, any prosecution is likely to be futile and may strain international relations.

65. Alternatives to criminal justice have far greater potential. They include:

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*Involving, for example, water hyacinth weeds in Nigeria and the locust plague in Tunisia.

**In China.

***And including the Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden (1974), the border rivers agreement (1971), the Convention on the Protection of the Rhine against Chemical Pollution (1976), the Convention concerning the Protection of the Rhine against Pollution by Chlorides (1976) and arbitral awards, the most important of which have been Trail Smelter (1938) and Lac Lannoux (1957).

(a) Commitments to reduce or eliminate pollution through bilateral treaties and multilateral conventions;*

(b) Negotiations (such as those in Japan concerning transboundary pollution derived from acid rain);

(c) Disputing resolutions through arbitration, mediation etc. (such as proposals made by bar associations in Canada and the United States of America to their Governments; recommendations of the Organization for Economic Cooperation and Development (OECD); and provisions in some recent conventions);

(d) Equal access to courts and administrative processes to nationals of other countries to commence civil proceedings to obtain compensation and redress and to facilitate mutual enforcement of judgements etc. (OECD recommendations; transboundary pollution reciprocal access laws in several Canadian provinces; the North American Free Trade Agreement between Canada, Mexico and the United States etc).

66. A prerequisite for the success of these mechanisms is the existence of a friendly atmosphere between States. International cooperation produces better results than confrontation. International efforts aimed at combating criminality can be further strengthened by giving non-governmental organizations the right to commence prosecution and standing to sue. Giving victims or private organizations representing them, as well as organizations whose primary objectives are protecting the environment, standing to commence legal proceedings, including prosecution, and to ensure that the resulting judgements are enforced, can be effective in combating transboundary pollution.

B. Hazardous waste

67. The development of international law in the area of hazardous waste began with the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter[21] (1972), usually referred to as the London Dumping Convention, which prohibited the dumping of hazardous waste in the oceans, and the United Nations Convention on the Law of the Sea (1982), in which the signatory States agreed to protect the marine environment by, among other measures, dealing with pollution of the marine environment, and minimizing to the fullest extent possible the release of toxic, harmful or noxious substances.[22]

68. The growing amount of waste exported by developed countries to developing countries in Africa, East Asia and Latin America put pressure on the international community to call for the control of such trade. With OECD taking a lead role by adopting a recommendation in which OECD member States were asked to notify the authorities of the importing State before exporting hazardous wastes to States not members of OECD, the international community responded by concluding in 1989 the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal,[23] in which signatory States agreed to prohibit the illegal transportation of hazardous wastes to and their disposal in other States without the prior informed consent of those States, to take back illegally shipped wastes and to punish offenders with criminal sanctions. It was followed by the adoption in 1991 of the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement of All Forms of Hazardous Wastes within Africa, in which the import of hazardous wastes into Africa was declared illegal and a criminal offence. The Council of the European Communities also issued a set of rules on the transport of waste.**

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*For example, the Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden; the Convention on the Protection of the Rhine against Chemical Pollution; the Convention concerning the Protection of the Rhine against Pollution by Chlorides; the Convention on Long-range Transboundary Air Pollution and its protocols; and the Vienna Convention for the Protection of the Ozone Layer and its protocols.

**See Council regulation (EEC) No. 259/93, on the supervision and control of shipments of waste within, into and out of the European Community (*Official Journal of the European Communities*, No. L 30, 6 February 1993, p. 1).

69. Despite national criminal laws and international conventions, trade in hazardous wastes is still a serious problem. Because of the high cost of legal disposal of hazardous wastes in developed countries, there is a great temptation for producers to lure poor, cash-strapped countries to import such wastes by providing attractive financial inducements and even by bribing officials. Transport documentation, laboratory analyses and consent documents are often doctored by shippers and transporters, thus escaping scrutiny by customs and border officials.

70. Some of the above-mentioned practices occur because of the imprecise language used in the conventions, such as the definition of waste (whether waste destined for recycling is waste), the definition of parties (whether brokers or international facilitators are covered by the Basel Convention and whether the consent of transit countries is necessary).

71. More serious weaknesses in combating this type of criminality, however, are the difficulties in detecting, investigating and tracking vessels sailing the oceans and vehicles criss-crossing international borders. In this respect, developing countries lack the infrastructure and laboratory and testing facilities for determining whether the "goods" they receive from developed countries are prohibited wastes.

72. Criminal sanctions have the greatest potential in the area of the illegal transportation and disposal of hazardous wastes, which organized crime appears to have penetrated. International non-governmental organizations, such as Greenpeace International, or an international team of investigators, such as the "green helmets" proposed by the Norwegian Government, could assist governmental efforts in combating midnight dumping in remote areas and on the high seas. Furthermore, where national criminal courts are powerless to deal with such criminality, the idea of giving criminal jurisdiction to an international tribunal might have considerable merit.

73. Vigorous implementation and enforcement of international conventions, such as the Basel Convention, using national laws, with stiff criminal penalties for contravention, are needed to achieve success in combating cross-border and international criminality. International cooperation in the form of information, notification of movement of cargo, and mutual assistance in investigation and prosecution would also be of considerable assistance.

74. Providing assistance to developing countries that lack administrative infrastructure, investigative techniques and laboratory facilities to analyse samples of shipments, in the form of technical assistance provided by developed countries, would significantly improve enforcement efforts at the international level.

75. Treating as an international crime the illegal dumping of toxic hazardous chemical and radioactive wastes, which create serious danger to the ecosystem of another State or to the global commons, might deter this type of criminality. The proposals of the International Law Commission to include deliberate and serious damage to the environment in the category of crimes against the peace and security of mankind, if adopted by the community of States, will go a long way towards eradicating the crime, especially if the concomitant Commission proposals on an international tribunal and international investigative and enforcement machinery are adopted.

C. Marine pollution

76. Marine pollution has been regulated by both national shipping and port and harbour laws and, since the establishment in 1948 of the International Maritime Organization, by international conventions such as the International Convention for the Prevention of Pollution of the Sea by Oil[24] (1954), the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties[25] (1969), the International Convention on Civil Liability for Oil Pollution Damage[26] (1969) and its protocols, the Protocol

of 1978 Relating to the International Convention for the Prevention of Pollution from Ships and, more recently, the United Nations Convention on the Law of the Sea.

77. Most pollution incidents can be handled through national marine protection laws, but, the fines provided in such laws are often unrealistically low when dealing with foreign vessels that pollute the territorial waters of developing countries. Conventions such as the United Nations Convention on the Law of the Sea,[27] however, prohibit discrimination against foreign vessels. In the case of the United Nations Convention on the Law of the Sea, monetary penalties only may be posed in respect of violations committed by foreign vessels in the territorial sea, except in the case of a wilful and serious act of pollution in the territorial sea.[28]

78. Victim States are primarily interested in ensuring expeditious clean-up as well as deterrence. Alternative sanctioning strategies such as plea bargaining and compensation agreements can sometimes ensure speedy clean-up. In some cases, innovative sanctioning strategies, such as resort to the deep pockets doctrine, where the financial penalty is intended to be, and ultimately is, borne by insurers, can produce successful results.

79. The prosecution of owners of foreign flag vessels that discharge pollutants on the high seas that then enter and pollute territorial waters poses problems. If they are not within the jurisdiction of the country that has been harmed by such pollution, their authorities have to rely on the national authorities of the countries to which they belong to prosecute those owners. Such reliance has been found to be unsatisfactory in several instances.

80. International efforts to combat marine pollution should be directed at ocean tramps that are often used to transport hazardous wastes. Such vessels, which tend to be unseaworthy when they start their voyages, may break up in stormy weather. It may also pay for owners of such vessels to scuttle them rather than deliver the cargo of hazardous wastes to its destination. International conventions should be strengthened, making it a criminal offence to commit such an act, whether deliberately or out of negligence.

IV. POLLUTION ORIGINATING FROM THE OPERATION OF LARGE-SCALE PLANTS

A. Developmental and political factors

81. The obstacles to effectively influencing enterprises by criminal law are different in common law and civil law countries. Furthermore, the role of criminal law depends on complex legal, economic, technical and social factors. Therefore, the law established in a system has to be interpreted according to a broad range of different elements. As a rule, the multitude of interests in this field favours flexible strategies. To this must be added the social power of enterprises. An important factor for the implementation of the law is whether the enterprises are private or State-owned, especially in developing countries. In cases involving State-owned enterprises, it is a fact that, despite the principle of separation of powers, law enforcement is rendered more difficult. Different levels of development of administrative law are established and different standards are set which strongly influence the effectiveness of imposing criminal liability on enterprises. Last but not least, there is a trend in a number of countries towards establishing new criminal laws after spectacular pollution incidents have occurred. As a rule, there is uncertainty in interpreting the new laws for a long period of time. Special problems arise in countries that lack norms regarding implementation. For example, in China there was a case involving environmental pollution of property in a rural region in which the population resorted to self-help since the law did not stop pollution.

B. Problems of criminal responsibility

82. It is a continuing problem for criminal law, which normally punishes the wrongful decision of a person in a specific situation, to deal with faulty developments over time, complex structures of enterprises, unclear liability of enterprises and agencies, and the complex interests involved.

83. In all countries there is a trend towards broadening the criminal responsibility of individuals. This is particularly the case in civil law countries in which liability of enterprises is alien to criminal law. The principle of making the acts of a single individual criminal in order to hit the enterprise through its employees, thereby influencing it to avoid committing further crimes, has been shown to have several limitations. One reason is that the functioning of a large-scale enterprise depends on different systems, departments or substructures and not only the guidance of a single individual. Another reason is that in many countries there are limits to the responsibility of a single individual.

84. This widening of individual responsibility can even be found in countries that have considerable experience with corporate liability. The axiom of corporate liability is that the enterprise must identify itself with the persons in charge of it, upon whom it depends for its activities, that is, on the basis of vicarious liability for employees. In Canada, for example, no problems exist in that common law jurisdiction in dealing with "organized irresponsibility" or faulty decisions over time. Although this may function on the basis of specific legal and social conditions prevailing in Canada, it is unlikely to serve as a model for all countries. From the standpoint of many other countries, an important principle of individual criminal law is endangered: the delimitation of the realm of responsibility of individuals in the face of exaggerated claims of the state repressive apparatus. The more a sanction is alienated from certain principles of blameworthiness, the more it loses its punitive character. In the end, many civil law countries fear that the introduction of corporate criminal liability would decrease the effectiveness of punishing natural persons under the criminal law, by reducing the distinctions between criminal, civil and administrative law penalties.

85. Another problem is that in many countries only classical criminal sanctions have been provided for. Often only fines are available, especially in cases involving non-compliance with administrative regulations and orders.

86. In modern societies, the task of determining what risks are acceptable is being delegated more and more to administrative agencies. Criminal law is only considered useful in cases involving resistant polluters who are unwilling to cooperate with the administrative authorities. In other countries there is a tendency to reduce administrative regulations according to the principle of "controlling the controllers".

87. Criminal law has produced effective results in a few countries. The influence of criminal law in, for example, Australia and Canada seems to be more significant than in certain other countries, where criminal law plays a minor role in dealing with large-scale enterprises. Sentences usually take the form of fines.

C. Models of criminal responsibility of corporations

88. At present, there are three reasons for the launching of an international discussion on corporate liability: first, to encourage members of the international community to be more responsible in their management of risks to the environment; secondly, to explore adequate methods of imputing responsibility to individuals; and, finally, to prevent a reduction of individual liability in criminal law.

89. In the light of the potential dangerousness of high-risk enterprises, it seems even more necessary to agree on a common approach and terminology. The discussion that follows is a step in that direction. There are three main models of criminal responsibility of corporations: an act of management as the enterprise's own misconduct; defective corporate organization; and the principle of causality (initiation).

90. *An act of management as the enterprise's own misconduct.* An enterprise must identify itself with its management, upon which it is dependent for its activities (that is on the basis of vicarious liability for employees). Although many options exist to impute liability to enterprises, the legislative and judicial organs find themselves compelled to a step-by-step broadening of individual criminal liability in order to facilitate corporate liability.

91. *Defective organization of the enterprise.* An incident, such as environmental pollution, is linked to defective organization of an enterprise. It is no longer a question of personal responsibility for a single faulty decision (which may be almost impossible to detect since it is the result of developments over a long period of time in the enterprise), but rather a type of organizational blame of the entity for neglecting its duty to concern itself with the adequate balancing of the risks involved in opening and operating a complex system.

92. *The causation (initiation) principle.* Proof of actual deficits in corporate organization is completely dispensed with. The creation of an organization with complex operational structures and the carrying out of intrinsically dangerous processes *per se* are instead deemed to be sufficient. Prerequisites of corporate liability are only specific results (serious damage to the environment, violation of emission standards) and economic benefit to the enterprise.

D. Perspectives

93. The international trend encourages the liability of enterprises, especially in cases involving large-scale enterprises and faulty risk management over time. Comparative analysis has also opened a broad spectrum of options. To think that one or the other could quickly solve a country's problem, however, ignores the fact that the domestic structures and conditions of implementation must first be analysed. Only then can it be decided (in conformity with criminal, administrative, civil and constitutional law) whether and to what extent one or the other concepts of collective responsibility may be recommended.

94. All attempts to reduce the responsibility of individuals and organizations to a common denominator (such as a social concept of guilt) suffer from the fact that the spheres of responsibility of individuals and organizations may coincide but must diverge for the simple reason that the elements for potential culpability of an enterprise are completely different. Thus, equating collective responsibility and individual responsibility inevitably leads to an overtaxing of the concept of liability of enterprises and an overall weakening of the concept of individual criminal liability.

95. Therefore, the establishment of a separate criminal system for enterprises could be recommended,* in which rules, similar to those establishing individual criminal liability, are applied to enterprises, while still taking into account the differences between these two classes of offenders. Individuals and enterprises have different forms of liability arising from their differing goals, structures and functions. Individuals employed in enterprises act collectively as the firm, have collective knowledge that is deemed to be that of the firm, but the "guilt" associated with criminality is the responsibility of the enterprise.

96. This concept facilitates the identification and the solution of new problems of modern societies, where more individual liability no longer seems appropriate. And it offers options corresponding to the status of the domestic legal system in developed or developing countries, in civil law or common law countries. Thus, laws that are not merely symbolic but also effective can be introduced.

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*See, for example, D. Cotic, "Protection of the environment through penal law in Yugoslavia", *Protection of the Environment and Penal Law*, C. Zanghi, ed. (Bari, Cacucci, 1993), pp. 197-204. For further details, see G. Heine, *Die strafrechtliche Verantwortlichkeit von Unternehmen* (Baden-Baden, Nomos), forthcoming, pp. 218 ff.

V. SMALL-SCALE ENTERPRISES AND INDIVIDUAL POLLUTERS

A. Small-scale enterprises, individual polluters and environmental degradation

97. The hallmark of the stereotyped picture of pollution and natural resource degradation is its large scale: powerful polluters, large areas affected, numerous victims and irreversible damage. In reality, however, environmental degradation is not caused solely by the big and powerful. It results from a combination of multiple attacks in which small polluters play a relevant role.

98. Particularly in less developed countries, individuals and small-scale enterprises are largely responsible for the unsustainable use of environmental resources. Contrary to popular opinion, the polluting behaviour of an individual or a small-scale enterprise* may have an environmental impact greater than that of a large-scale enterprise. "Small-scale" polluters (individuals or small-scale enterprises) are often "large-scale" polluters from the standpoint of the damaging effects caused by their behaviour to the environment.**

99. The impact of environmentally harmful activities carried out by small-scale polluters can be substantial in two ways: either the damage is relevant *per se* or minor damages may become relevant due to their cumulative effects. Pollution by small-scale enterprises, businesses and individuals, however, may account for only a minor portion of environmental degradation in some countries.

B. Challenges for control of environmentally harmful activities of individuals or small-scale enterprises

100. The problems covered by the present subsection are related to illegal hunting, deforestation, the disposal of toxic and dangerous waste, and individual mining, particularly in developing countries. Provisions to protect the environment against types of individual behaviour are mostly designed to protect public health. The activities of small-scale enterprises can also be dangerous to the environment because they are widespread and often do not have adequate systems of control.

101. At first sight, the environmental degradation caused by small-scale enterprises and individuals appears to be more easily controllable by law enforcement. Viewed individually, small-scale enterprises and persons that are polluters, being neither big nor powerful, usually have little political or economic strength*** and are not able to manipulate the media. In short, they do not have the funds necessary to hire lobbyists or top law firms.

102. Monitoring major corporate polluters involves a series of unique enforcement constraints (such as their economic and political power, their ability to secure expert opinions and the services of reputable lawyers).

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*For example, in Poland, a farmer dumped a barrel of fecal matter on a water-bearing area, leaving an entire community without its regular water supply for 17 days. And in Germany, a small chemical plant polluted the drinking water of a community of 20,000 people with carcinogenic substances.

**An example of the environmental impact of small-scale polluter behaviour is found in the Brazilian Amazon, where deforestation is considered to be among the world's most significant ecological disasters (see A. Alvazzi del Frate and J. Norberry, "Rounding up: themes and issues", *Environmental Crime, Sanctioning Strategies and Sustainable Development*, A. Alvazzi el Frate and J. Norberry, eds. (United Nations publication, Sales No. E.93.III.N.4, p. 3)). It is estimated that between 1980 and 1988, gold-panning, which is practised by thousands of individuals, resulted in around 855 tonnes of mercury being dumped into the environment (see José Francisco da Fonseca Ramos, "Garimpagam: poluiçao quimica e física", Seminário Internacional sobre Meio Ambiente, Probreza e Desenvolvimento da Amazônia, Belém, Brazil, 16-19 February 1992, p. 86).

***As a group, however, such individuals may have substantial political and economic power. The representative body of the *garimpeiros* (gold prospectors) of the Brazilian Amazon has free access to federal legislators native to the region and plays a major role in keeping them in office.

Control of small-scale enterprises and individual polluters, however, poses problems of another nature, problems that have to do with the enforcement of laws against polluting behaviour rather than with the legal regulation of such behaviour.* First of all, it is extremely difficult to detect some behaviour of this type because it is not as visible as the polluting behaviour of large-scale enterprises and it often occurs in remote, hard-to-reach areas. Secondly, such behaviour is far more numerous, and is rarely concentrated at any specific site or in any one region, and it does not attract the attention of the mass media. Thirdly, because it involves ordinary citizens, it elicits less social disapproval than degradation caused by large corporations. Fourthly, especially in less developed countries, such behaviour is often not "profit-oriented" but "survival-oriented". It often involves millennia-old traditions or is crucial - being the sole means of sustenance - to human survival. In Latin America, for example, the efficacy of any legal model, and more so the criminal law model, is highly questionable in the event of mass violation where the forbidden behaviour is deeply rooted in the social fabric. "This legislation ignores the fact that the behaviour it attempts to correct through these sanctions does not normally involve individual deviations from an imposed legal order, but generalized social behaviour which is deeply rooted in society as a result of the predominant style of development based on production and consumption patterns that often clash with environmental protection."[29]

C. The role of criminal law

103. Any objective assessment of the issue of pollution caused by individuals and small-scale enterprises shows that, with a few exceptions, law plays an insufficient controlling role. Administrative laws run the risk of never being implemented in practice because, especially in developing countries, there are almost no agencies to enforce the set of administrative environmental rules and when they do exist, they lack the material means and scientific expertise. The situation is not much better in the area of civil law. On the one hand, there are no efficient and expeditious mechanisms for providing access to justice; and on the other, seldom do individuals and small-scale enterprises have the funds to remedy or mitigate the environmental damage they have caused. This failure of administrative and civil law generally gives rise to a familiar and much criticized phenomenon: laws that "don't catch on".

104. The issue of the role of criminal law in environmental protection should be viewed in the context of ineffective legal models. Large-scale and small-scale polluters do not react to civil and administrative sanctions in the same or even similar fashion. In other words, deterrence is different for the two groups. Big corporations fear not just administrative sanctions (administrative restraining orders can be catastrophic to a large industrial complex), but also the negative effects - image deterioration and the heavy cost of damage payments - of civil suits seeking a remedy for environmental damages.** Small polluters see administrative and civil law from a different angle. Administrative sanctions (such as fines and interdiction) have less of an impact on small polluters because they enjoy greater flexibility in moving from one activity to another. In certain cases, such as deforestation and private mining, all they need to do is "pack up" and move to another region or State. Furthermore, if convicted persons cannot be found, court orders requiring them to pay environmental damages would not be enforceable.

105. When environmental regulations and law enforcement are implemented, criminal law has some advantages over civil and administrative law. Criminal sanctions are feared both by big corporations (even

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*It should be noted that enforcement problems are generalized in developing countries both for large-scale and small-scale polluters. For example, in Latin America and the Caribbean, the enforcement of environmental legislation has faced widespread problems of efficiency and efficacy (see R. Brañes, *Institutional and Legal Aspects of the Environment in Latin America, Including the Participation of Non-Governmental Organizations in Environmental Management* (Washington, D.C., Inter-American Development Bank, 1991), p. 7).

**Not to mention the matter of estimating environmental damages, particularly in the case of natural resources; normally, in environmental offences *per se*, criminal law waives exact assessment of damages to the environment.

in systems lacking criminal liability for corporations) and by individuals and smaller companies.* In addition, countries generally have more comprehensive and nationwide criminal law enforcement systems than administrative and environmental law enforcement systems. Judges, public prosecutors and police forces are empowered to enforce the law in a variety of situations. Finally, complex legal issues involving collective behaviour - common in the case of large corporations - hardly ever arise with regard to small polluters.

106. There are, however, disadvantages or limitations to using criminal provisions. In addition to issues involving the burden of proof that are mentioned by many authors,** criminal law is notoriously *ultima ratio* and does not apply to all environmental degradation modalities.*** Furthermore, particularly regarding the actions of small polluters, application of a criminal sanction requires far stronger cultural and social support than the mere enforcement of an administrative measure (for example, a fine) or a civil sanction (an order to remedy the damage). Small polluters have a greater chance of successfully alleging ignorance of criminal legislation. In addition, arguments such as state of necessity and poverty are much more powerful in cases involving small polluters than in cases involving large corporations. Environmental legislation is often not enforced in developing countries because of a perceived scarcity of resources. The poverty rationale has a major impact in criminal law. In many cases, small polluters invoke the "state of necessity", which is frequently used in criminal law to acquit the offender.

107. Finally, the fact that judges, public prosecutors and police are accustomed to enforcing criminal law does not make it any easier to enforce environmental criminal provisions, as the problems that may be encountered are of great technical complexity and, as a rule, have no precedent in the legal system.

D. Trends and issues

108. In developing countries there are problems concerning individuals and behaviour that might not occur in more developed areas or countries. For example, the Amazon is not being contaminated solely by corporations; it is mostly being contaminated by individual mining, though the damage might amount to millions of dollars and might be irreversible. Hunters who endanger wildlife species should also be considered individual polluters.

109. One major problem typical of large-scale pollution is corporate liability. At the legislative level there might be problems with the values to be protected in developed and developing countries. In less developed countries, cases involving small-scale pollution might be the most important ones. In many developed countries minor offences are decriminalized. Although decriminalization does not mean that the conduct goes unpunished (it is still subject to penalties of a non-criminal nature), there is currently a trend in some countries towards making pollution by individuals (which is perceived as a major problem) a criminal offence and a trend in other countries towards decriminalization of pollution by individuals. These two different trends make it difficult to present a single model and to propose a long-term strategy in this area.

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*It is no wonder that some countries have found it easier to include hard sanctions (such as objective civil liability) rather than environmental offences in their environmental laws. Such was the case in Brazil with law No. 6938/81 (the national environmental policy act), when the national congress barred the inclusion of any criminal provision whatsoever (see Paulo Offonso Leme Machado, *Direito Ambiental Brasileiro* (São Paulo, Malheiros, 1992), p. 398).

**See A. Alvazzi del Frate and J. Norberry, eds., *Environmental Crime, Sanctioning Strategies and Sustainable Development* (United Nations publication, Sales No. E.93.III.N.4), p. 11. Even in offences committed by small-scale enterprises or individuals, there are problems in establishing causation, particularly when the legal provision requires evidence of damage to the environment to be proved.

***In, for example, Italy and Poland, criminal sanctions tend to be applied only in more serious cases involving environmental degradation.

110. Developing countries often lack the necessary resources to enforce environmental provisions, whether criminal, civil or administrative. The protection of the environment, however, is an integral part of development and is affected by any failure in the justice system. Criminal environmental provisions might provide the judiciary with a direct role by making it responsible for environmental protection.

111. Two major problems emerge from an analysis of cases involving pollution by individuals or small-scale enterprises: (a) the "over-criminalization" of everyday activities of small-scale enterprises and individuals; and (b) the consequential loss of credibility of control activities through criminal environmental laws. The type of punishment that is considered more appropriate in cases involving small-scale enterprises or individuals is not applicable or does not work in cases involving large-scale enterprises and vice versa. In countries with a federal system, the control of such offences committed by small-scale enterprises or individuals is carried out by the local government. This might result in more prompt and effective action and in a smaller number of failed cases involving pollution by larger-scale enterprises. Where the local culture favours the illegal behaviour, however, it might be necessary to have some sort of federal or national jurisdiction over some of those cases.

112. In the light of principle 11 of the Rio Declaration on Environment and Development, which states that "environmental standards, management objectives and priorities should reflect the environmental and development context to which they apply",[30] there might exist differences for the category of small-scale polluters, since it is here that the poverty issue is of greatest importance. In other words, in developing countries sanctions might need to address issues and difficulties that are rarely or not at all known in developed countries. In any case, criminal environmental law does have a role to play in dealing with small-scale enterprises or individual polluters. As it happens in other areas of environmental law, no "illusions about 'quick-fix' solutions" (A/42/427, annex, chap. 12, para. 5) can be cultivated and criminal law is just part of a broader set of solutions.

VI. CONCLUSIONS

113. Criminal law has an indispensable role to play in the protection of the environment. Especially in certain cases, such as those involving the deliberate dumping of toxic waste for profit, it should be the primary tool used to combat crimes against the environment. The reasons for this include the potential of criminal law to enhance self-responsibility for environmental protection; to support risk-balancing by the State; to prevent further environmental destruction; and to avoid overburdening civil and administrative law with criminal provisions.

114. Criminal law must be viewed as only one of a number of means of achieving environmental goals. Protection of the environment cannot succeed in the absence of truly sustainable development. Public awareness and vigorous activity on the part of non-governmental organizations are important in placing the environment on the political agenda and keeping it there; in addition, they can be influential in obtaining criminal justice or other interventions - political, administrative or civil - to protect the environment.

115. Reforms in legislation, including the recognition of rights and obligations of citizens in national constitutions, and a wider range of judicial and administrative sanctions and procedures are necessary to enhance the potential of criminal law. In particular, States should be encouraged to modify rules of corporate responsibility where necessary in order to establish effective corporate liability, especially in cases involving faulty or negligent development over time within an enterprise. That would facilitate improved risk management, thereby reducing the risk for people and the environment; assist administrative agencies in risk-balancing; avoid the erosion of individual criminal law; and engender a "corporate culture" of compliance.

116. The workshop on environmental protection at the national and international levels may wish to consider whether Member States should establish minimum standards in environmental criminal law. While in some countries, especially developing countries, criminal law does not play a great enough role in protecting the environment, in others criminal law play too great a role.

117. On the procedural side, classical guarantees established for individuals are dysfunctional for new circumstances and questions. There is a need for more flexibility, especially in the prosecution of collective entities. Possibilities include:

(a) Making available preliminary injunctions such as warning and the closure of a part of a plant;

(b) Changing requirements as to the burden of proof;

(c) Establishing specialized investigative units and prosecutors;

(d) Providing more flexibility in standing to sue and to intervene in prosecutions;

(e) Providing better access to information about pollutants, enterprise activities and the activities of relevant administrative and enforcement agencies.

118. Classical criminal sanctions alone (such as fines and imprisonment) are insufficient to meet the challenges presented by crimes against the environment. A broader spectrum of sanctions is needed. To enhance the role of criminal law, States should provide the following sanctions, especially in respect of corporate wrongdoing:

(a) Closure of the enterprise;

(b) Sequestration (removal of managers, installation of experts for a specified period);

(c) Compliance programmes, including environmental audits;

(d) Compensation, confiscation and restitution;

(e) Clean-up or restoration orders;

(f) Prohibition of particular activities, exclusion from fiscal advantages, annulment or suspension of licences;

(g) Adverse publicity orders;

(h) Exclusion from government contracts.

In addition, sanctions such as community service orders and probation should be extended to environmental cases.

119. Sanctions and procedural reforms must be supplemented by factors facilitating their implementation. These factors include adequate material and human resources; adequate financing; and timely and quality training for criminal justice and administrative agency personnel.

120. In cases involving transboundary pollution or illicit traffic in endangered species, or in hazardous radioactive materials, however, it appears that international cooperation in the prevention and monitoring of

risk development has far greater potential. Such cooperation might include bilateral and regional agreements and treaties, negotiated solutions to common problems, joint fact-finding and mutual assistance in investigation, giving Governments as well as citizens equal access to the judicial and administrative process, alternative dispute resolution, and binding arbitration. It should be recognized, however, that some acts of aggression, such as the deliberate dumping of toxic and nuclear wastes in the oceans and environmental terrorism, should be treated as international crimes.

121. The United Nations system has a crucial role to play in protecting the environment by facilitating technical assistance, research, training, advisory services and education. It should also facilitate interaction between all those involved in innovative thinking in the field, including academics, non-governmental organizations, the private sector and government bodies. In addition, coordination with other intergovernmental organizations should be further enhanced by joining forces with other United Nations entities, such as the United Nations Environment Programme, the United Nations Institute for Training and Research and the Commission on Sustainable Development.

122. The workshop may wish to consider the following proposals for projects involving international cooperation:

(a) Enhancement of the gathering and exchange of intelligence, by cooperation with and greater use of the machinery provided by the International Criminal Police Organization (ICPO/Interpol), in the light of the decision on illicit traffic in hazardous wastes and other wastes, adopted in March 1994 by the Second Meeting of the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, in which the Conference requested the secretariat of the Basel Convention to explore the possibility of cooperation with ICPO/Interpol in cases of illegal traffic in hazardous wastes and other wastes;

(b) Criminal law in international environmental conventions (including the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Convention on International Trade in Endangered Species of Wild Fauna and Flora[31] (1973), and the United Nations Convention on the Law of the Sea); and the examination and evaluation of national laws, in particular:

(i) The potential for and existence of criminal provisions in international environmental conventions;

(ii) The implementation of criminal provisions from international conventions in national legislation to assess whether these laws are sufficiently harmonious to satisfy the "double criminality" threshold for extradition and mutual assistance obligations;

(c) The development of a standard-setting manual for practitioners;

(d) Enhancement of the awareness of policy makers by organizing a parliamentary conference to promote the exchange of information on environmental legislation and to facilitate the introduction and implementation of such legislation;

(e) Comparative research on serious environmental crime, aimed at assessing and enhancing public awareness of the seriousness of deliberate acts involving pollution;

(f) Provision of technical assistance, in the form of advisory services (such as needs assessments and consultations);

(g) Organization of training courses for criminal justice and administrative agency personnel, who often lack the type of expertise and specialization in environmental protection needed to effectively carry out their work, including the provision of scientific and technical information on how to identify or detect various environmental offences; coordination with environmental protection agencies, environmental legislation, forms of cooperation between administration and courts; and the provision of examples of cooperation involving different types of government (for example, countries with a centralized ministry of environment and other systems for distributing responsibility);

(h) Development of guidelines facilitating compliance, including access to information and risk assessment, in order to enhance public awareness of how to respond to, as well to prevent, pollution incidents;

(i) Research on the effectiveness of regulatory and criminal justice action, including development of effectiveness indicators;

(j) Comparative study on the system of agencies to enforce environmental legislation, their organization and coordination and their mutual relationships.

Notes

[1]*Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders, Havana, 27 August-7 September 1993: report prepared by the Secretariat* (United Nations publication, Sales No. E.91.IV.2), chap. I.

[2]Ibid., sect. C.2.

[3]See D. Chappell and R. Moore, *The Use of Criminal Penalties for Pollution of the Environment: A Selective and Annotated Bibliography of the Literature* (Ottawa, Department of Justice of Canada, 1989).

[4]See United Nations Interregional Crime and Justice Research Institute, *Selected Research Material*, forthcoming.

[5]See United Nations Interregional Crime and Justice Research Institute "Guidelines for the experts", *Environmental Protection at National and International Levels: Potentials and Limits of Criminal Justice: Case Studies*, forthcoming.

[6]United Nations Interregional Crime and Justice Research Institute, *Environmental Protection at National and International Levels: Potentials and Limits of Criminal Justice: Case Studies*, forthcoming.

[7]See *Environmental Protection and Sustainable Development: Legal Principles and Recommendations* (London, Graham and Trotman, 1987).

[8]See *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992* (United Nations publication, Sales No. E.93.I.8 and corrigenda), vol. I: *Resolutions Adopted by the Conference.*

[9]G. Heine, "Elaboration of norms and the protection of the environment", *Protection of the Environment and Penal Law*, C. Zanghi, ed. (Bari, Cacucci, 1993), pp. 78-79.

[10]A. Alvazzi del Frate and J. Norberry, eds. *Environmental Crime, Sanctioning Strategies and Sustainable Development* (United Nations publication, Sales No. E.93.III.N.4), p. 11.

[11]See, for example, H. Lefèvre and H. Wattel, "Enforcement of environmental law in the Netherlands", *Criminal Law and the Environment*, H.-J. Albrecht and S. Leppä, eds. Publication Series No. 22 (Forssa, Finland, Helsinki Institute for Crime Prevention and Control, affiliated with the United Nations, 1992), pp. 112-126.

[12]K. Webb, *Pollution Control in Canada: the Regulatory Approach of the 1980s* (Ottawa, Law Reform Commission of Canada, 1988).

[13] Alvazzi del Frate and Norberry, *Environmental Crime, Sanctioning Strategies and Sustainable Development* ..., pp. 14-18.

[14]*Report of the United Nations Conference on Environment and Development* ..., resolution 1, annex II, para. 4.3.

[15]H. E. Daly, "Toward some operational principles of sustainable development", *Ecological Economics*, vol. 2, 1990, pp. 1-6.

[16]Saulwick Opinion Poll, *Sydney Morning Herald*, 12 April 1994.

[17]*Report of the United Nations Conference on Environment and Development* ..., resolution 1, annex II, chap. 27.

[18]*Report of the United Nations Conference on the Human Environment* (United Nations publication, Sales No. E.73.II.A.14 and corrigendum), chap. I.

[19]United Nations, *Treaty Series*, vol. 1302, No. 21623.

[20]See United Nations Environment Programme, *Convention on Biological Diversity* (Environmental Law and Institutions Programme Activity Centre), June 1992.

[21]United Nations, *Treaty Series*, vol. 1046, No. 15749.

[22]*Official Records of the Third United Nations Conference on the Law of the Sea* (United Nations publication, Sales No. E.84.V.3), art. 194.

[23]See UNEP/IG.80/3.

[24]United Nations, *Treaty Series*, vol. 327, No. 4714.

[25]Ibid., vol. 970, No. 14049.

[26]Ibid., vol. 973, No. 14097.

[27]*United Nations Convention on the Law of the Sea* ..., art. 227.

[28]Ibid., art. 230, para. 2.

[29]R. Brañes, *Institutional and Legal Aspects of the Environment in Latin America, Including the Participation of Non-Governmental Organizations in Environmental Management* (Washington, D.C., Inter-American Development Bank, 1991), p. 37.

[30]*Report of the United Nations Conference on Environment and Development* ..., resolution 1, annex I.

[31]United Nations, *Treaty Series*, vol. 993, No. 14537.

Annex

DRAFT PROGRAMME OF THE WORKSHOP ON THE TOPIC "ENVIRONMENTAL PROTECTION AT THE NATIONAL AND INTERNATIONAL LEVELS: POTENTIALS AND LIMITS OF CRIMINAL JUSTICE", TO BE HELD WITHIN THE FRAMEWORK OF THE NINTH UNITED NATIONS CONGRESS ON THE PREVENTION OF CRIME AND THE TREATMENT OF OFFENDERS

The two-day workshop on the topic "Environmental protection at the national and international levels: potentials and limits of criminal justice" will be held during the second week of the Ninth United Nations Congress on the Prevention of Crime and the Treatment of Offenders. It will consist of four three-hour meetings.

First day

Morning

1. Presentation of the position paper and discussion guidelines.

2. Results of the empirical study on pollution produced by small-scale industries and individuals. Discussion.

Afternoon

3. Large-scale enterprises. Discussion.

4. Transboundary pollution. Discussion.

Second day

Morning

5. Expert panel discussion on the topic "Environmental protection through criminal law: limits of individual responsibility - potentials of collective liability?".

Afternoon

6. Presentation of research: methodology and results of comparative studies in environmental issues.

7. International cooperation strategies.