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**COMMUNICATION FROM THE COMMISSION
TO THE COUNCIL AND PARLIAMENT
AND THE ECONOMIC AND SOCIAL COMMITTEE :
GREEN PAPER ON REMEDYING ENVIRONMENTAL DAMAGE**

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1.0 Introduction

Seveso, Amoco Cadiz, Sandoz, Corunna and the Braer are names that conjure up memories of major environmental accidents within the European Community. They aroused public outrage and dramatized the need to clean up and restore damaged environments. However, damage from industrial accidents forms only a small part of the environmental damage occurring within the Community today. Emissions from industrial facilities and motor vehicles pollute the air, causing forests to die. Waste waters from cities and farms pollute surface and ground waters. Hazardous substances deposited in the past contaminate soils. The damage caused by these non-accidental activities may be less spectacular than damage from headline-grabbing accidents, but it is more extensive, and no less in need of remedial action.

The questions raised by the content of this **Green Paper** are posed to provoke the wide-ranging discussion which the Commission seeks on this subject of remedying environmental damage in order better to inform its future actions in this area. To facilitate this debate and discussion, the Commission will convene formal consultations, including hearings, with experts from the Member States as well as with other interested parties such as industry and agriculture. Any proposal for possible action presented by the Commission should be in accord with the principle of subsidiarity, should be the subject of a cost-benefit analysis and should take account of its coherence with other propositions (such as taxes etc.)

This **Green Paper** considers first the usefulness of civil liability as a means for allocating responsibility for the costs of environmental restoration. Civil liability is a legal and financial tool used to make those responsible for causing damage pay compensation for the costs of remedying that damage. By requiring those responsible to pay the costs of the damage they cause, civil liability also has the important secondary function of enforcing standards of behaviour and preventing people from causing damage in the future. The subject is on the environmental protection agenda of the European Community today for several reasons:

(a) The public demand for systems of accountability and compensation that becomes strongest whenever environmental accidents occur, like the industrial accident at Seveso or the poisoning of the Rhine during the Sandoz fire.

(b) The pledge of the Council of Ministers to take action in the area of civil liability when it adopted the Fourth and Fifth Environmental Action Programmes and other legislation.⁽¹⁾ Furthermore, the request of the Joint Transport and Environment Council of 25 January 1993 for an "examination of the feasibility

(1) OJ No C 328, 7.12.87, p. 15, paragraph 2.5.5; Council Directive 84/631/EEC on the supervision and control within the European Community of the transfrontier shipment of hazardous waste, OJ No L 326, 13.12.84, p.31.

of developing a system of penalties and civil liability for pollution of the environment". The Commission has already responded to part of this request of the Council by adopting, on 24 February 1993 a Communication on "A Common Policy on Safe Seas"⁽²⁾

(c) The Council of Europe has drawn up a Convention concerning strict liability for damage resulting from activities dangerous to the environment; other international organizations are making efforts to set international conventions in place establishing liability regimes for environmental damage.

(d) The use of different systems of civil liability for remedying environmental damage among the Member States could lead to distortions of competition and the single market.

A Community-wide system of civil liability for environmental damage would draw on a basic and universal principle of civil law, the concept that a person should rectify damage that he causes. This legal principle is strongly related to two principles forming the basis of Community environmental policy since the adoption of the Single Act, the principle of prevention and the "polluter pays" principle.

The "polluter pays" principle is evoked, because civil liability is a means for making parties causing pollution to pay for damage that results. The prevention principle is involved in that potential polluters who know they will be liable for the costs of remedying the damage they cause have a strong incentive to avoid causing such damage.

If civil liability for environmental damage operates differently in Member States, industries in some Member States will be required to pay the costs of the damage they cause, while industries in other Member States will be able to avoid those costs, because restoration is not required or the cost is passed on to taxpayers. Industries not required to pay restoration costs receive, in effect, a competitive advantage.

A general system for environmental damage represents for sectors such as transport a way of internalising certain external costs.

The Green Paper seeks secondly to investigate the possibility of remedying environmental damage not met by the application of civil liability principles. Details of existing joint compensation schemes, their problems and limitations are therefore canvassed.

It should be noted that despite the importance of the question of penalties, these are not the subject of this Communication.

(2) Com(93)66 final

2.0 Remediating environmental damage using mechanisms of civil liability:

2.1 The problems

The legal doctrine of civil liability provides a way for the injured party to obtain compensation for the damage he has suffered. It was developed to cover situations where it was more just to make the person responsible for the act or incident causing the damage to bear the consequent costs, either because that person was at fault or should for other reasons be held liable for losses resulting from the damage.

Civil liability arises under private law, distinguishing it from obligations arising under public law, such as criminal liability and administrative liability.

There are two possible approaches to civil liability, with fault and strict liability.

2.1.1 Fault-based liability

Liability because of fault requires proof that the liable party committed a negligent or otherwise wrongful act which caused damage. A finding of fault depends on whether the party had a duty to behave according to a certain standard of care or rule of law, and breached that duty.

In the field of environmental liability, there is a strong interplay between fault-based liability and environmental regulations. The standards and the procedures set down in environmental statutes can provide guidance for determining whether a party's actions were reasonable or negligent under the circumstances. Non-compliance with environmental laws can provide evidence of fault. On the other hand, compliance with regulations and permits can indicate the reasonableness of a party's behaviour. As environmental protection laws are enacted, new obligations arise that could lead to potential liability.

Under fault-based liability, the victim may have difficulty proving the other party's act was wrongful.

The vigorous use of fault-based liability by government authorities can thus play an important role in ensuring that environmental legislation is respected, as well as providing a means of recovering the costs of repairing environmental damage caused by wrongful acts. Liability for fault does not, however, provide a means to recover costs where fault cannot be shown.

2.1.2 Strict liability

Strict liability, or liability without fault, eases the burden of establishing liability because fault need not be established. However,

the injured party must still prove that the damage was caused by someone's act. Strict liability provides an incentive for taking measures to prevent damage from occurring in the first place.

Defining the scope of a strict liability regime for damage to the environment is a difficult but essential step. Potentially liable parties need to know the scope of the costs they would be expected to pay in case of damage. This need for legal certainty conflicts with the need for flexible definitions that can take account of new technologies or other unforeseeable developments.

Some major difficulties can arise in applying civil liability concepts to obtain compensation for environmental damage. Conclusive scientific evidence is often unavailable, for example, regarding the long-term effects of a given pollutant on the environment. Concepts such as "liability," "damage," and especially "environment" are vague and ambiguous, and interpretations vary from one legal system to the next. A strict liability regime that is too broad in scope may come to be regarded, in certain cases as too expensive for the sectors concerned. Some argue, for example, that strict liability can stifle investment in industry. On the other hand, a regime that is too narrow in scope runs the risk of not covering all the activities it should and thus improperly allocating costs of restoring damage.

The critical step is to decide which activities and processes should be subject to such a regime. Some of the factors that could be considered in determining the appropriateness of strict liability for a particular sector or type of activity include:

- the types of hazard posed by a particular activity;
- the probability that damage might occur from the activity, and the possible extent of that damage;
- the incentive that strict liability would provide for better risk management and prevention of damage;
- the feasibility and cost of restoring the damage that would be likely to occur; and
- the potential financial burden of strict liability on the economic sector involved.
- the need for and availability of insurance.

2.1.3 Channelling Liability

Determining who should bear the liability can also be difficult. Imposing liability on a specific party, known as "channelling," can be an efficient and equitable way of cost internalization. It can also promote the prevention aspect of strict liability, if liability is channelled to the party having the expertise, resources, and operational control to carry out the most effective risk management.

2.1.4 Multiplicity of liable parties

Where more than one party may have been responsible for the damage, or for a share of the damage, problems in how to apportion liability for the damage may arise. To ease the injured party's burden of bringing suit against multiple parties, legal systems often permit the case to be presented against more than one potentially liable party at the same time. How the liability is then apportioned among the liable parties depends on whether liability is joint or joint-and-several. Under joint liability, the liable party must pay compensation only for that amount of damage which can be actually attributed to his particular activity. In the case of aggregate pollution, precise determinations may be impossible.

Under joint-and-several liability, each party is liable for the entire amount, but may often proceed in turn to seek contribution from other liable parties. This can cause several problems, including congestion in the courts. Inequity results if the injured party sues the party with the most financial assets first, instead of the party who caused the most damage. This is known as the "deep pocket" effect. Joint-and-several liability may also lead to "forum-shopping," if parties are from different countries and one country's laws are more favourable to the injured party.

As liable parties sort out among themselves how the costs of compensation should be shared, litigation becomes complex. This can make civil liability a compensation mechanism with extremely high transaction costs. A way to alleviate such problems is to allocate responsibility in advance by designating the order in which potentially liable parties should be sued or by the channelling of liability.

2.1.5 Who and what is damaging the environment

If the act that causes damage can be characterized as a fault or if there are other circumstances creating a responsibility, the person causing the damage becomes liable for the consequences. Fault can consist of an intention to cause damage, or carelessness which results in a damage. The law of civil liability generally has few problems dealing with damage caused by the wilful or negligent act of a particular party, if the liable party is identifiable and the damage can be causally linked to the wrongful act.

However, problems arise where these elements are not clear:

1) Chronic pollution

Environmental damage may occur because of the aggregate effect of a number of polluting acts spread out over time and place. Where the damage has been caused by the cumulative impact of the activities of many operators, it is not possible to determine which actor's actions caused the particular damage. This is the case with discharges to the atmosphere which result in acid rain. Sometimes none of the acts are such that they would incur damage resulting in liability. For example, a single authorized discharge of pollutants into a river may not cause identifiable damage, but the combined impact of all the authorized discharges is to damage the river.

In the case of damage caused by cumulative pollution it is difficult to attribute damage to the act or responsibility of a particular party and it becomes necessary to explore more collective ways of sharing the responsibility for the costs of restoration, such as joint mechanisms of compensation. (See section 3.0 below)

ii) Emissions under government authorization

The purpose of environmental permits is to enable government authorities to limit the total amount of pollutants to a level that will not cause unacceptable impact or damage. This requires a determination of the level of pollution at which damage occurs, then an allocation of permits restricting total emissions to below that level. However, it is often difficult to foresee, let alone assess, all the immediate or long-term effects of pollutants and the margin of safety needed to prevent damage. Consequently the situation can arise where damages to the environment do occur, in spite of the fact that all relevant emissions are authorized.

If the operator exceeds the limit values set in the permit or carries out other activities not foreseen in the permit, the operator should be held liable for any resulting damage. On the other hand, if the operator has fully disclosed all relevant data for evaluation by the permitting authority and complied with the standards set in the permit, there may be reasons for holding the public authority -- and ultimately the taxpayer -- responsible for ensuing damage. It would provide the operator with an incentive for full disclosure and compliance with the permit, so as to avoid liability. It would provide the government authority with an incentive to make responsible decisions, including setting precise and clear restrictions in permits.

iii) Damage from the past

Deposits of hazardous substances from long ago pose one of the most significant types of environmental damage within the Community. Other types of damage from the past, such as acid-rain devastated forests, are also in urgent need of cleanup or other remedial action.

Civil liability may not, however, provide a way to recover the costs of restoring such damage. Sometimes the damage is from so far back in time that no liable party is identifiable. Sometimes the party can be identified but is not liable, because liability was not established when the damage occurred. Or the party may be identifiable, liable, but insolvent.

2.1.6 Limitation of liability

There is debate on whether strict liability should be limited. Some argue that if a liable party has taken all reasonable measures of prevention and has insured against the cost of foreseeable accidental damage, it does not make sense to drive him out of business if unforeseeable and unpreventable damage occurs. The desired result, after all, is to recover restoration costs and to prevent future

damage, not bankruptcy. On the other hand, limits on liability could reduce incentive for prevention and transfer the burden of restoration costs above those limits to the taxpayer, thus interfering with the "polluter pays" principle.

Any limits on liability would have to be set at a high level so as not to undermine the prevention function of strict liability. An OECD draft recommendation on compensation for victims of accidental pollution⁽³⁾ suggests that, if limits are set, potential polluters might also be required to contribute to a compensation fund to cover the portion of costs over the limits paid by liable parties.

2.1.7 Defining environmental damage

A legal definition of damage to the environment is of fundamental importance, since such a definition will drive the process of determining the type and scope of the necessary remedial action -- and thus the costs that are recoverable via civil liability. Legal definitions often clash with popularly held concepts of damage to the environment, yet are necessary for legal certainty. But the debate over how to define the object of environmental damage, the degree of impact considered damage, and who has the right to decide these issues has not yet been resolved.

Regarding the definition of "environment," some argue that only plant and animal life and other naturally occurring objects, as well as their interrelationships, should be included. Others would include objects of human origin, if important to a people's cultural heritage. The draft Council of Europe Convention, for example, puts forward the following broad definition of the environment: "Environment includes natural resources both abiotic and biotic, such as air, water, soil, fauna and flora and the interaction between the same factors; property which forms part of the cultural heritage; and the characteristic aspects of the landscape."

Another debate centres on the degree of impact that should be considered environmental damage. The amended Commission proposal for a Council Directive on civil liability for damage caused by waste defined "impairment of the environment" as meaning "any significant physical, chemical or biological deterioration of the environment"⁽⁴⁾. Actual physical destruction or gross contamination is generally considered damage, but what about lesser impacts? All human activities result in emissions, but the point at which these emissions are to be considered "pollution" is not clear. Nor is it clear at which point "pollution" causes actual damage.

2.1.8 Problems in proving causation

To obtain compensation for damage, the injured party must prove that the damage was caused by an act of the liable party, or by an incident for which the liable party was responsible. Special problems arise in the case of environmental damage. As discussed in the section on

(3) C(91) 53, August 1991 (OECD).

(4) Com(91)219 final OJ N° C 192, 23.07.91, p. 6

chronic pollution, establishing a causal connection may not be possible if the damage is the result of activities of many different parties. Difficulties also arise if the damage does not manifest until after a lapse of time. Finally, the state of science regarding the causal link between exposure to pollution and damage is highly uncertain. The liable party may try to refute the injured party's evidence of causality with alternate scientific explanations for the damage.

2.1.9 The right to bring a legal action

In a civil liability case, the right to sue is normally given only to the party with a legal interest in recovering compensation. Where damage occurs to property that is not owned, no injured party with the right to bring a legal action can be identified. With no legal or natural person to sue on behalf of the environment, the costs of restoring environmental damage cannot be recovered via civil liability. There exist several different approaches to the question of access to Justice for environmental matters among the Member States.

2.1.10 The question of adequate remedy

The traditional aim of civil liability is to compensate the injured party by requiring the party responsible for the damage to pay the costs of any resulting loss. The loss is generally computed in terms of the depreciation in economic value of the damaged property or the actual cost of repairing the damage. Damage to the environment which does not in itself have an economic value but may have great value in other terms -- such as the loss of a species or of a picturesque landscape -- cannot be compensated directly in terms of economic loss.

However, if there is an obligation to maintain those elements of the environment in a healthy state, a concurrent obligation arises to restore these elements to that state whenever they are damaged. This obligation carries with it the right to claim the costs of restoration from the party who caused the damage. The amount of compensation the liable party is obliged to pay is computed in terms of the actual cost of environmental restoration.

The objective of environmental protection efforts is to maintain the environment at the level of quality that society determines. Where environments are damaged below that standard, restoration is the only environmentally sound remedy. In order for civil liability to function effectively as a legal remedy, a base of legal duty and economic assessment must also be in place.

2.1.11 The problem of insurability

Discussions of civil liability inevitably raise questions about insurability, since insurance is a means of controlling the risk of economic loss.

Insurance serves as an important compensation mechanism where damage occurs accidentally and restoration costs are covered by the insurance policy. If an insurer links availability of insurance to the quality

of an enterprise's risk management, it may have a deterrent effect in promoting better accident prevention and other environmental protection controls over the economic activity.

The uncertainties which make civil liability a difficult fit for environmental damage also create problems with regard to insurance. Insurers are hesitant to provide coverage if they are uncertain about the types and probabilities of damage that may occur, or if unpredicted losses drain the pool of money. The civil liability regime established, the absence of limits on liability, and the coverage of particular risks such as gradual pollution are some of the factors which make it hard for insurers to determine the insurability of what are already extremely complicated risks and, in some cases, to decide how much cover they are able to provide. They react by raising the prices of premiums or by withdrawing from the market of environmental liability insurance altogether.⁽⁵⁾

Today, insurance coverage for pollution-related damage can be difficult and even impossible to obtain in some cases. It is a relatively new service and not all insurers have the technology or capacity yet for providing it. At present there are many cases where studies on the insurability of these risks are preceded by preliminary technical studies. Insurers may limit their potential losses contractually by excluding specific risks from coverage or by lowering the maximum amount of coverage. They may involve the policyholder financially in the effort to avoid loss by applying sizable deductibles to each loss. Insurers have also sought to limit coverage of accidental losses to damage occurring by a "sudden" event, a definition which excludes damage caused gradually, such as a slow leak from an underground tank. France, Italy, and the Netherlands have intervened to set up pools of insurance to cover gradual as well as sudden pollution.

There is some movement today to require certain industries or activities posing particular hazards to cover their potential liability through some kind of financial security. For example, the recent German Environmental Liability Act requires specific installations to ensure security to cover liability. The proposed Directive for civil liability for damage resulting from waste would require the liability of the producer and the eliminator to be covered by insurance or any other financial security.

A number of concerns arise when insurance is required. If insurance is compulsory, enterprises must be able to obtain coverage on the market for the required amount. Such coverage may not be available. If it is available and the cost of restoring the environmental damage is above the policy amount, the liable party must still pay the additional amount.

(5) A rise in tort liability claims for pollution-related damage is one reason cited for the liability insurance crisis in the United States in the 1980s. Other explanations for the dislocations within the U.S. insurance market at that time include recurrent historical cycles of hard and soft insurance markets and changes in the supply of capital available to insurers.

Under compulsory insurance, insurers might become "licensors" of industry, by providing or withholding insurance coverage according to whether the industry member seeking coverage was a "good" or a "bad" risk. Some insurers already evaluate the quality of a firm's risk management and loss prevention measures, before providing environmental liability coverage. From an environmental protection point of view, risk evaluation by the insurance industry is beneficial, since it reduces the risk of environmental damage at the same time that it reduces the insurers' risk of economic loss. However, the problem of the "bad risk" who cannot obtain insurance coverage remains.

Imposing liability insurance on firms and activities which represent a danger to the environment presupposes that the insurability of such risks will be determined and if, with due regard to the nature of the risk, insurance is made available, the conditions of coverage and the system of civil liability envisaged will have to be established. State intervention may be necessary if private insurers do not provide insurance coverage adequate to cover the risk of environmental damage, or if premiums are too high for SMEs. One feature of such intervention might be to avoid creating unjustified discrimination between firms or imposing obligations which vary according to company size.

Consideration must be given to the experiences of countries such as France, Italy and the Netherlands, which have already set up insurance pools for covering pollution damage, and the lessons to be learned from the German law on environmental liability, which contains specific provisions on insurance.

It is possible to require insurance cover to be taken out by operators but many industry members oppose compulsory insurance because they fear it would make them captive to high premium demands from insurers. Larger companies are already leaving the insurance market because they find it more economical to self-insure. This creates problems for small and medium sized enterprises (SME) -- those most in need of liability insurance for environmental damage -- because it leaves them with less economic leverage to fight expensive premiums.

2.2 The General Trends in the law on environmental liability

It is important to evaluate the position regarding civil liability in the Member States and in the framework provided by international conventions to identify the trends which they reveal, taking account of the problems raised in relation to reparation of damage to the environment.

2.2.1 General view of the trends at national level

Concepts of liability for damage to the environment are relatively recent. The need to develop specific rules has not been felt by all Member States since a number of cases where damage was caused to the environment could fall under the more traditional types of liability. Most legislation which has been developed has been based on these concepts and has tried to adapt them in order to cover the specific nature of damage to the environment.

In general civil liability for environmental damage in the twelve Member States rests upon fault on the part of the person who causes the damage.

In the absence of specific legislation on civil liability for environmental damage, the courts of law have tended, where damage has occurred, not always to ask for full evidence of the fault of the wrongdoer, or to find other ways of easing the victim's burden of proving damage, or the link of causation between that damage, the wrongful act and the fault. This has been done within the limits for judicial interpretation existing in the Member States and with considerable variations from one Member State to another.

This general approach (fault-based liability) is associated with another trend, the development of a strict liability regime. Several laws have introduced liability without fault for damage caused by specific activities which were deemed to be dangerous. Thus, liability for damage caused during air or railway transport (most Member States), for damage caused by pipelines for hydrocarbons (Denmark), dangerous activities in general (Italy, Portugal), the handling of dangerous substances (Netherlands), nuclear energy (several Member States), or biotechnology (Germany) has been introduced by legislation.

It appears that there is not within the Member States any recent legislation on environmental damage which does not provide for strict liability. In the Annex is a list of certain of the Member State legislation which has adopted this approach. Within this legislation, certain characteristics can be identified.

From these general trends in national legislation for the restoration of damaged environments it is possible to identify certain common characteristics.

The question of what constitutes damage to the environment is scarcely addressed by the different pieces of national legislation. The different pieces of national legislation refer, rather, to general principles of law and provide for compensation for death, bodily injury or for damage to an attributed item of property.

The legislation does not normally contain rules on the burden of proof or the link of causation. Here the general principles of law of each Member State apply as they have evolved through legislation and court jurisprudence. However, the solutions contained in the German

Environmental Liability Law of 1990 should be emphasised. For example the law defines environmental damage by reference to death, personal injury and property damage resulting from modification of the environment. This is defined in Article 3.1 as being the entry into soil, air or water of products, vibration, noise, pressure, rays, gas, steam, a change in temperature or other similar phenomena. This modification of the environment has to arise from an installation listed in the annex to the law. Channelling of liability is towards the person in charge of the installation. Provision is also made for lightening the burden of proving a link of causation. The law establishes a presumption of causation under certain conditions by stating that if an installation is capable of creating the damage it is presumed that that installation caused the damage. The defendant can reverse this presumption. As regards the question of insurance the owners of installations which are capable of causing significant damage are required to take out liability insurance or to have sufficient financial guarantees in case of litigation.

In some instances, the environmental legislation of Member States has gone beyond the traditional rules of liability. For example the Danish legislators considered it necessary, as regards waste sites, to provide a system which authorised the government to recover the costs of clean-up of abandoned contaminated sites from the person who caused the contamination (Act of 1983). A similar system exists in the Netherlands under the Soil Clean-Up Interim Act of 1983.

The general legislative framework existing in each Member State concerning civil liability is far from presenting a homogenous approach to the mechanisms for remedying environmental damage, even if there is a recent legislative trend towards the creation of strict liability regimes for certain activities dangerous to the environment.

However, this clear orientation does not resolve the differences which exist between Member States which stem from the different fields of application chosen made subject to strict liability. Areas covered by strict liability (waste, water resources, industrial installation dangerous to the environment, GMOs) vary from one Member State to another. This disparity cannot evidently guarantee a remedying of environmental damage in identical conditions and does not produce the same results as regards effective environmental restoration.

2.2.2 Solutions adopted at an international level

The need to redress damage resulting from transboundary pollution has led to the development of international liability for damage to the environment.

Under principles of international law, states are held responsible for preventing any activities carried out on their territories from having adverse effects on other states. If transboundary damage does occur, the injured state can seek compensation from the state which failed to meet this international obligation. The famous "Trail Smelter" verdict

of 11 March 1941 formally recognizes the liability of the state on whose territory the activities causing the transfrontier damage take place.(6)

Civil liability for environmental harm is dealt with in a number of international instruments. Table I in the Annex sets out international conventions dealing with liability and compensation which are either already existing or under negotiation. Table II lists a number of conventions, either already existing or under negotiation which contain provisions relating to civil liability.

It is possible to discern a number of common points between the Convention on Third Party Liability in the Field of Nuclear Energy (Paris 1960), the International Convention on Civil Liability for Oil Pollution Damage (Brussels 1969), and the Council of Europe Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment.

All establish a system of strict liability, with provision for certain number of exemptions or defences.

As regards the channelling of responsibility, liability attaches to the operator (Paris Convention Article 3, Brussels Convention Article 3.1, Council of Europe Convention Articles 6 and 7). It should be noted that the Brussels Convention channels liability to the owner of the ship at the moment of the incident, and expressly excludes action against any other person, such as agents of the owner, captain etc, unless such a person has acted with the intention to cause damage or knowing that damage would result from their action (Article 3, amended in 1984). Nevertheless the owner of the ship is not liable if they can show that the pollution damage results from an act of war, from hostilities, civil war, or insurrection, or from a natural phenomenon which is exceptional, inevitable and unavoidable.

In the Brussels Convention, damage to the environment has the following definition: "pollution damage" means "loss or damage caused outside the ship carrying oil by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, and includes the cost of preventative measures and further loss or damage caused by preventative measures" (Article 1). The Convention provides that the liability of the owner may be limited, unless the incident occurs as a result of the fault of the owner.

In the Council of Europe Convention the problem of channelling of liability is resolved as follows: The Convention channels liability to the operator, defined as "the person who exercises the control of a dangerous activity" (Article 2.5). Dangerous activities are defined as activities performed professionally and involving dangerous substances, genetically modified organisms, or micro-organisms.

The definition of damage in the Convention includes impairment of the environment insofar as this is not covered by damage to persons or property "provided that compensation for impairment of the environment,

(6) Trail Smelter Case (United States v. Canada), 3 R. Int'l Arb. Awards 1905 (1941).

other than for loss of profit from such impairment, shall be limited to the costs of measures of reinstatement actually undertaken or to be undertaken".

Concerning the scope of liability, for the majority, these instruments are limited to damage caused by specific economic activities. (Nuclear energy, carriage of dangerous goods, hydrocarbons, operations involving dangerous substances etc.)

Article VII(1) of the Brussels Convention provides, as regards insurance that "the owner of a ship registered in a Contracting State and carrying more than 2000 tonnes of oil in bulk as cargo shall be required to maintain insurance or other financial security, such as the guarantee of a bank or certificate delivered by an international compensation fund, in a sum fixed by applying the limits of liability prescribed (in the Convention) to cover his liability for pollution damage under this Convention".

As regards limitation of liability the Brussels Convention provides that a shipowner can limit liability to an aggregate amount of 2000 francs per tonne not exceeding 210 million francs (franc is defined in the Convention).

Concerning the question of risk insurance the Council of Europe Convention provides for a compulsory financial security scheme, taking account of the particular risks posed by the activity, without a specifically identified limit on liability.

2.2.3 The position taken at Community level

Community-wide action involving the doctrine of civil liability has been taken primarily in the area of product safety and consumer protection. In 1985, the Council adopted Directive 85/374/EEC instituting strict liability for the producer of defective products.⁽⁷⁾ The Directive is based on the concept of the "defective product," i.e. a product which does not provide the safety which a person is entitled to expect. It provides that the manufacturer of the defective product is liable for the damage, even where not at fault, unless he can prove that the product's defect is due to compliance with mandatory regulations issued by public authorities. The Directive covers only losses suffered by a private

(7) Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products (OJ No L 210, 7.8.85, p. 29).

consumer. It does not cover damage to the environment, if that damage is not damage to property owned by a private person. The question of insurability is not addressed in the framework of this Directive.

Applications of civil liability for environmental protection purposes have been discussed for some time. In 1984, for instance, the Council adopted Directive 84/631/EEC on the supervision and control within the European Community of the transfrontier shipment of hazardous waste.⁽⁸⁾ The 19th recital called for a defining of the liability of the producer and any other person accountable for damage "in order to guarantee effective and fair compensation for damage which may be caused during the shipment of dangerous waste." Article 11(3) expressly provided for the Council to determine the conditions for implementing civil liability for the producer.

In 1986, following the Sandoz fire which resulted in the poisoning of the Rhine River, the Council declared that the key to more effective protection of Community waterways lay in, inter alia, prompt cleanup and restoration, coupled with equitable arrangements for liability and compensation by the polluters for any damage caused.⁽⁹⁾ It called on the Commission to review the Community's existing measures for preventing pollution and for remedying damage caused by pollution and, if necessary, to submit appropriate proposals. Two weeks later the European Parliament adopted a complementary resolution calling expressly on the Commission to "put forward proposals for a Community system governing fault [sic] liability for accidents connected with all chemical and high risk activities."⁽¹⁰⁾

The adoption of the Single Act in 1986 and the insertion of Art. 130r into the EEC Treaty provided impetus for further discussion of civil liability for environmental damage. This article provides that action by the Community relating to the environment shall be based, inter alia, on the principle that the polluter should pay. The "polluter pays" principle seeks to properly attribute external costs of pollution. Community applications to date have aimed at making operators bear the costs of environmental protection measures imposed by the public authorities.⁽¹¹⁾ In addition, the Directives on waste, waste oil, and toxic and dangerous waste⁽¹²⁾ make express reference to the "polluter pays" principle as the basis for a system making the holder and/or the producer of waste responsible for the costs of safe disposal. Civil liability for the cost of cleaning up environmental contamination would be a concrete application of this principle.

(8) OJ No L 326, 13.12.84, p. 31.

(9) Bull. EC 11-1986, point 2.1.146.

(10) Doc. B 2 - 1259/86, OJ No C 7, 12.01.87, p. 116. The French text calls for "responsabilite civile sans faute."

(11) An elaboration of the "polluter pays" principle can be found in Council Recommendation 79/3/EEC, OJ No L 5, 9.1.79, p.29.

(12) Council Directive 75/442/EEC, OJ No L 194, 25.7.75, p. 39;
Council Directive 75/439/EEC, OJ No L 194, 25.7.75, p. 23;
Council Directive 78/319/EEC, OJ No L 326, 13.12.84, p.31.

In response to these developments, the Fourth Environmental Action Programme,⁽¹³⁾ released in 1987, declared that the Commission would consider the scope for arriving at a better definition of responsibility in the field of the environment, and envisaged the possibility that the polluter should assume greater liability for damage caused by products or processes. In addition, after requests in 1989 and 1990 from the European Parliament for an absolute liability regime for damage resulting from the release into the environment of genetically modified organisms, the Commission pledged to consider the issue of civil liability for damage to the environment horizontally.⁽¹⁴⁾

In October 1989, the Commission presented a proposal for a Council Directive on civil liability for damage caused by waste.⁽¹⁵⁾ This proposes a no-fault liability regime. As regards the channelling of liability the Directive states that the producer of waste shall be strictly liable for damage and impairment of the environment caused by waste. The party bringing the action must demonstrate the causal link between the waste and the damage. The draft Directive extends the notion of damage to "impairment of the environment" as set out in section 2.1.7 above. This definition of impairment is capable of including cases where the environment is affected in a continuing manner. Regarding the question of insurance the draft Directive requires the producer and eliminator of waste to be covered by insurance or other financial security. Article 3(2) of the proposed Directive states that the producer must include in his annual report the name of his insurers for civil liability purposes. The draft Directive also authorizes the Commission to study the feasibility of setting up a compensation fund for damage and impairment to the environment caused by waste in cases where the person liable cannot be identified or is insolvent. The initial proposal for a Directive has been amended to incorporate proposals made by the Parliament,⁽¹⁶⁾ and is under consideration by the Council.

In the Commission proposal for a Council Directive on the Landfill of Waste Article 14 provides that "the operator shall be liable under civil law for the damage and impairment of the environment caused by the landfilled waste, irrespective of fault on his part."⁽¹⁷⁾

(13) Resolution of the Council and of the representatives of the Governments of the Member States, meeting within the Council of 19 October 1987, on the continuation and implementation of a European Community policy and action programme on the environment (1987-1992), OJ No C 328, 7.12.87, p. 15, paragraph 2.5.5.

(14) SEC (89) 2091 final - SYN 131, 6.12.89.

(15) OJ No C 251, 4.10.89, p. 3.

(16) OJ No C 192, 23.07.91, p. 6.

(17) OJ N° C 190 22.07.91, p. 1

3.0 Remedying environmental damage through joint compensation systems

Joint compensation systems are financial structures based on charges or contributions. They are insurance-like, in that the funds collected are designated for a specific purpose, such as cleaning up or restoring the environment. The principle of liability for particular acts is expanded into a principle of shared responsibility for the impact of multiple acts. Joint compensation systems sustained by contributions from the economic sectors most closely linked to the type of damage needing restoration would be concrete applications of the "polluter pays" principle. Inter alia these systems enable the problems outlined in section 2.1.5 above (damage from chronic pollution, authorised pollution and past pollution) to be resolved.

The cost of damage linked to the aggregate impact of a sector's activities becomes apportioned among the individual enterprises, and thereby internalized.

There are several other important advantages to the compensation system approach in view of the specific features of environmental damage. First, the ability to act quickly may be essential in some instances of environmental damage. In contrast to civil liability, which requires a lengthy legal process before obtaining compensation, joint compensation systems can gather funds in advance. Financing could thus be readily available for emergency remedial action or to reimburse early restoration work. Moreover, the burden of damage may be more easily shouldered by collective rather than individual action. Finally, if the cost of cleaning up a particular incident is high, it may not be possible to recover all the costs from a liable party with limited financial resources. A joint compensation system would help provide the additional resources needed for carrying out the restoration.

There are however certain difficulties in the establishment and operation of such systems:

3.1 The problems raised

3.1.1 Requiring restoration as the remedy.

To meet an obligation of restoring environmental damage, what level of environmental restoration is to be sought, what is to be done where restoration to the state before is not feasible and what costs are reasonable?

How can monitoring of the restoration works to ensure quality control be incorporated into the system?

Who is to be responsible for ensuring the quality of the restoration work?

3.1.2 Allocating the cost of restoration.

The "polluter pays" principle requires that, wherever possible, costs of restoration are recovered from the parties responsible for causing the damage. If the particular party cannot be identified or is not liable, it could be possible, in certain cases, to trace the cause of the damage to the activities of a particular economic sector. In such a case, should a joint compensation system allocate the cost of restoration among all members of that sector?

The need to undertake restoration would have to be balanced against the burden on the enterprises sharing the costs, of course. If the financial burden of a joint compensation system became too great for its contributors, costs of restoring particular damage might be shared more broadly, with other sectors or by taxpayers in general. In order to respect the "polluter pays" principle to the greatest degree possible, should not the burden rest upon the sector or sectors most specifically responsible?

3.1.3 Maintaining a preventative effect.

If joint compensation systems are established, should the concept of individual liability still be retained so as to have a preventative effect? Linking the likelihood of damage to the amount of charges to be paid would provide a mechanism by which the preventative effect could be maintained and would maintain the incentive for effective risk management. How could such a system of differentiated charges be designed and by what means could the administration of such an approach be achieved?

The experience gained on the national and international level can provide useful guidance for designing compensation structures to cover the costs of restoration within the Community.

3.2 Solutions adopted at national and international levels

A number of Member States and other countries have already established forms of joint compensation to deal with specific problems of environmental damage. These act as important precedents.

3.2.1 International Schemes

For instance, there are special compensation funds for damage caused by industries posing a particular risk of damage. This type of fund supplements the compensation which can be obtained from the polluters themselves and their insurers. They are used to redress accidental pollution by helping to provide more complete and timely compensation for injured parties.

The oil industry in particular has set up a number of funds to finance clean-up measures and to compensate injured parties. Most notable is the International Fund for Compensation for Oil Pollution Damage, established in 1971 via the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage. This fund complements the 1969 Brussels Convention which imposes strict liability on the shipowner but allows liability to

be limited if there was no fault. Contributors are private members of the oil industry, not governments. The fund makes payments where the shipowner is not liable under the Convention, is insolvent, or when the damages exceed the shipowner's liability limit. The fund compensates for personal injuries and property damage, and for measures actually taken to reinstate the environment. Several parallel financial structures, known as TOVALOP,⁽¹⁸⁾ CRISTAL,⁽¹⁹⁾ and OPOL,⁽²⁰⁾ have been formed privately by the oil industry. It should be noted that, in view of the recent oil-spills off Corunna and the Shetland Islands, a Community action programme is being prepared which aims to ensure strict convergence in the implementation of international rules throughout the Community and to encourage the adoption of appropriate regulations and standards by the IMO. The role of the Community and Member States in drawing up international standards on safety and pollution prevention is spelt out in a draft Commission Communication on a common policy for safety at sea.

3.2.2 National Schemes

Other funds have been created to finance actual restoration of damage. The United States' Superfund is an example of this type of financial instrument. Established in order to finance the clean-up of hazardous waste sites, Superfund is funded by taxes on crude oil and chemical feedstocks, as well as a general environmental tax on American corporations. The U.S. Environmental Protection Agency (EPA) uses Superfund monies to respond to short-term emergencies, such as accidental spills of hazardous substances, and to clean up sites contaminated in the past. Civil liability is used to recover costs when potentially liable parties can be identified for particular sites.

The compensation system set up by Sweden under its 1986 Environmental Damage Act should also be mentioned. It provides compensation for personal injury and damage to property where the damage cannot be traced to an identifiable source, the liable party is insolvent, or the liability is statute-barred. Every enterprise requiring an environmental permit must contribute an amount fixed according to the type of enterprise and its size. In addition, enterprises must maintain insurance to cover any liability resulting directly from their own activities. The system does not cover environmental damage unless it can be considered damage to property "for which a natural person would be entitled to compensation."⁽²¹⁾

The French Fund for noise should be mentioned, which compensates persons living around Paris airports for being exposed to excessive noise levels. The fund was created by decree in 1973; it is financed

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- (18) Tankers Owners Voluntary Agreement Concerning Liability for Oil Pollution reimburses governments for expenses incurred in protecting and cleaning up coastlines (1969; updated 1978).
 - (19) Contract Regarding Interim Supplement to Tanker Liability for Oil Pollution provides compensation above TOVALOP's limits (1971; updated 1978).
 - (20) The Offshore Pollution Liability Agreement guarantees compensation for pollution damage caused by offshore oil exploration or exploitation installations (1974).
 - (21) Annex B to the Government Decision of 25 May 1989, No. 37.

by charges paid by all companies using the airports in question. Similarly, the Netherlands created, by a Law of 1972, a Fund on damage from air pollution. The fund intervenes where the polluter cannot be identified. It may also pay compensation where identification of the polluter might delay payment to the victim, if victims cede "their rights" against the polluter to the Fund.

3.2.3 Proposals at a Community level

In the amended proposal for a Council Directive on civil liability for damage caused by waste, Article 11 provides that "the Commission shall study the feasibility of the establishment of a European fund for compensation for damage and impairment of the environment caused by waste" to cover those cases where the person liable cannot be identified or is incapable of providing full compensation⁽²²⁾.

Similarly, the proposal for a Council Directive on the landfill of waste provides in Article 18 that Member States shall ensure the establishment of one or more "Landfill aftercare funds" whose purpose is to cover the normal costs of aftercare of closed landfills and expenses caused by necessary operations to prevent or cure damage from waste disposal not otherwise recoverable. The fund is to be constituted by contributions from operators of landfills based upon the type of landfill operated and the tonnage of waste deposited⁽²³⁾.

4.0 Possible directions for Community action:

Civil liability as a compensation mechanism is based on the existence of damage resulting in an economic loss.

In the case of damage to the environment, economic loss does not occur unless there is a diminution in economic value or a restoration resulting in costs.

The purpose of this Green Paper is to stimulate discussion on whether and how requirements to remedy environmental damage might be introduced appropriately and effectively within the Community to recover the costs of such restoration.

4.1 A horizontal approach towards civil liability for damage to the environment

Civil liability could have an important role to play in a comprehensive environmental protection programme.

As the Member States develop the policies and programmes for maintaining and restoring their environments to meet Community quality standards, civil liability could be used for recovering the costs of the required restoration.

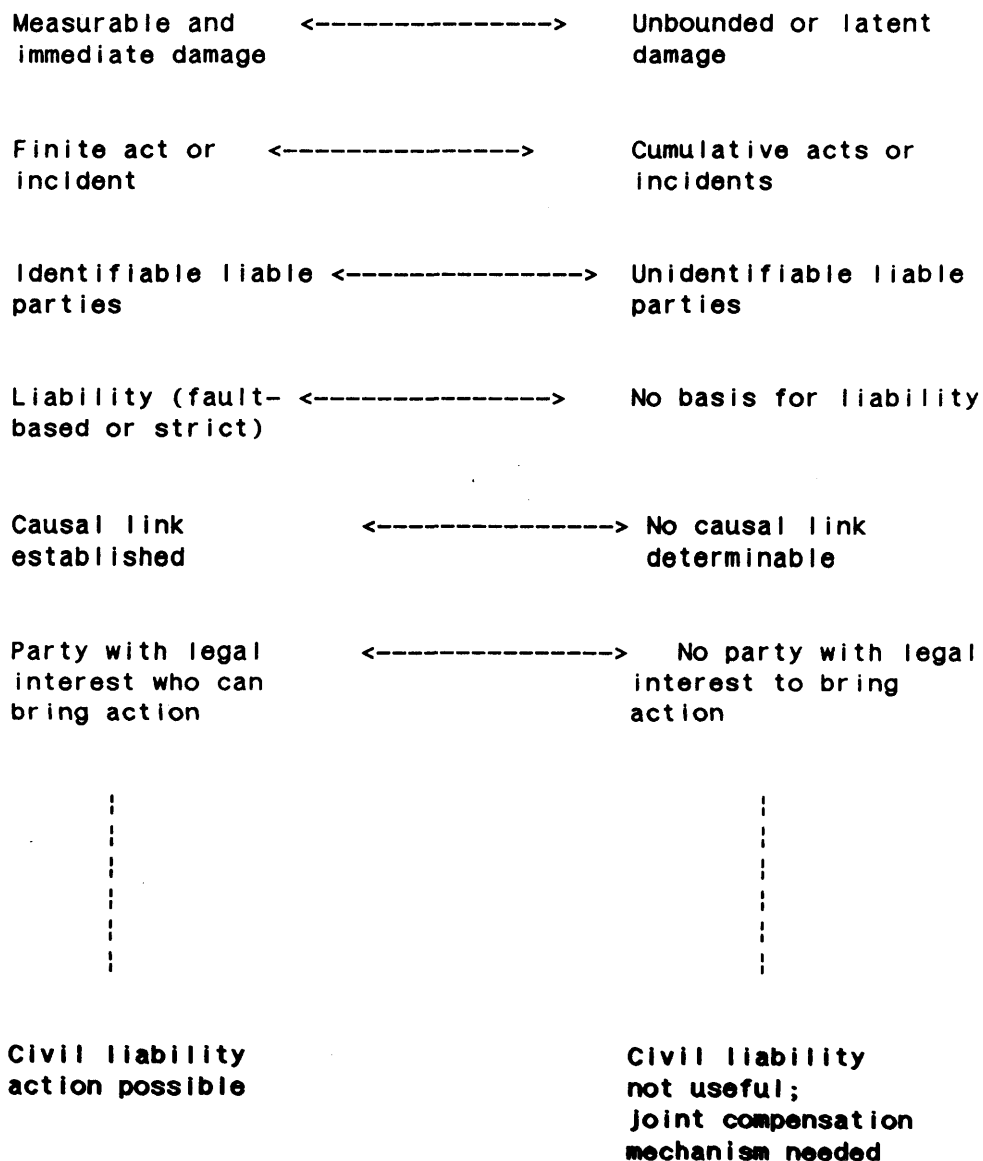
(22) OJ N° C 192, 23.07.91, p. 15

(23) OJ N° C 190, 22.07.91

Civil liability can contribute towards implementing the "polluter pays" principle. Its usefulness is limited, however, to specific incidents of damage involving identifiable liable parties.

As is shown in Figure 1, for reparation of environmental damage to be effective each component has to meet certain conditions. Thus where there is no identifiable liable party, the principle of civil liability is not effective in securing restoration of the damaged environment. It is for these reasons that consideration has to be given to the type of civil liability mechanism (fault based or strict) and other mechanisms (compensation systems) to ensure that environmental restoration will take place.

**Figure 1: Applicability of Civil Liability
in Instances of Environmental Damage**



4.1.1 Fault-based liability

Although this regime would appear to be an appropriate mechanism for promoting compliance with environmental legislation, is it sufficient to apply fault-based liability alone to environmental damage?

This system does not appear to be the best approach in every case since it contains certain disadvantages. The desired objectives cannot be achieved fully unless certain conditions are met.

A system of fault-based liability implies that fault has to be proven. Doing so in the case of damage to the environment is difficult, if not impossible in certain cases. A system of fault-based liability requires the injured party to prove and demonstrate that the person responsible for the damage committed a wrongful act, i.e. that he was guilty of negligence or an otherwise unlawful act that caused damage. A finding of fault depends on whether the party had a duty to behave according to a certain standard of care or rule of law, and breached that duty.

The standards and the procedures set down in environmental legislation can provide guidance for determining whether a party's actions were reasonable or negligent under the circumstances. It is not always possible, however, to decide on this because of gaps in environment law. Certain circumstances pertaining to damage could not be evaluated on the basis of standards or procedures. Hence it would be difficult to judge whether the party responsible for damage had acted wrongfully or not, even if mechanisms were added to a fault-based liability system to simplify aspects such as the burden of proof.

In spite of the advantages of fault-based liability in maximising the important preventative effect of civil liability, the trend visible throughout national legislation and international instruments regarding environmental damage is towards a strict liability regime for certain activities dangerous to the environment.

4.1.2 Strict liability

At this point it is appropriate to look at the role of a strict, or no-fault, liability regime. Could the objective of repairing environmental damage be achieved fully and properly by implementing some type of no-fault liability regime?

Strict liability appears to be particularly suited to the specific features of repairing environmental damage.

Compared with fault-based liability, strict liability eases the burden of attaching liability because fault need not be established. However, the injured party must still prove that the damage was caused by someone's act.

The advantages of such a system can be summarized as follows. A strict liability regime can increase incentives for better risk management and provide legal certainty for those economic enterprises subject to such

a regime. It can also help implement the "polluter pays" principle for certain types of economic activities. It means that this system guarantees that the cost of damage caused by an economic activity is borne by the operator.

A strict liability regime can only achieve its objective if a number of important questions are settled before the decision is taken to opt for that regime. For it to work effectively, the elements of the scheme must be defined precisely. The choices to be made are important because they will determine the scope of the liability regime, and the issues to be settled are set out below.

An extremely extensive strict liability regime could pose too great a burden to be borne by certain sectors which could lead to greater disruption of the economy.⁽²⁴⁾

A - What definition of damage should be adopted?

As has already been pointed out, the legal definition of environmental damage assumes particular significance insofar as it affects decisions regarding the type and extent of restoration measures needed and therefore the costs which can be recovered via civil liability. This problem involves other underlying questions such as the definition of environment, and the degree of impairment which constitutes damage.

B - To which activities should a strict liability regime be applied?

Several approaches can be considered. As stated above with regard to past experiences, too broad a system, i.e. covering a large number of activities, may have adverse consequences for economic operators and create legal uncertainty, thereby becoming impossible to implement.

How does such a regime take account of a sector such as transport which is characterised by, in particular, its mobile nature and the variation in risk according to the mode of transport?

The question of the scope of strict liability is linked to the underlying problem of what is meant by "dangerous". What criteria should be used to decide whether certain activities are dangerous and therefore to be covered by a strict liability regime? No-fault liability regimes relating to dangerous activities must be based on a common understanding of what is deemed "dangerous".

C - What shall constitute a liable party?

This question raises the issue of channelling no-fault liability so that costs are distributed fairly and effectively. Should liability be channelled to the party with the technical know-how, resources and operational control of the activity?

Establishing a no-fault liability regime also raises issues such as the burden of proof, limitation of liability and what a financial guarantee system should consist of.

(24) See Annex II for details of USA experience.

Further problems need to be solved to ensure the proper implementation of a strict liability regime, with its associated benefits for the environment. Lessons must be learned from national and international precedents in strict liability and the disadvantages and implications for the scope and structure of such a regime must be foreseen (how lenders and financial institutions will be affected, for example). A strict liability regime must only have the result intended, namely the restoration of environmental damage.

To settle all the points raised by the issue of establishing a civil liability regime with particular regard to environmental damage, one of the options facing the Community would be to adopt the approach laid down by the Council of Europe Convention on civil liability for damage resulting from activities dangerous to the environment and then consider signing the Convention.

If the Council of Europe Convention is adopted as a solution for a strict liability regime to be applied throughout the Community, special importance should be attached to the provisions of the Convention which allow contracting parties complete flexibility for laying down implementing conditions. This could be the case particularly with the compulsory financial guarantee system provided for by the Convention.

Alternatively, the Council of Europe Convention could be the starting point for a Community initiative regarding environmental damage. Elements of that Convention could provide the answers to the main issues set out above, namely what constitutes environmental damage, defining the liable party, and determining which activities should be covered by a no-fault liability regime.

4.2 A horizontal approach towards joint compensation systems

Civil liability is a useful legal instrument for recovering the costs of restoring environmental damage as well as for its prevention and enforcement functions.

Effective as it is, there are limits to its effectiveness. Civil liability can apply only when certain conditions are met. For example, if the causal link between the damage and the liable party cannot be established, the liability mechanism cannot operate. The question of who is then responsible for restoring the damaged environment and bearing the costs involved also remains unsolved.

If recovery of costs is impossible via a liability action, other mechanisms would eventually be needed to assign responsibility for the costs of restoring damaged environments. Consideration therefore has to be given to how to cope with the limits inherent in a civil liability regime. A possible solution is to have joint compensation mechanisms to cover the costs of environmental restoration. This would enable responsibility for costs to be shared fairly within the economic sector most closely connected to the presumed source of the damage. One solution could therefore consist of combining the strengths of a liability regime with the advantages of compensation systems.

On a practical level, this integrated "environmental" liability regime could take the form of the following alternatives:

- In the event of damage attributable to the action of a single liable party, compensation would be sought via civil liability.
- If the damage could not be attributed to the activities of a liable party (i.e. the liable party could not be identified), joint compensation mechanisms, as decentralized as possible, could be used. The costs of restoration would be divided between a number of economic sectors.

In the light of this could one consider an approach where the strengths of civil liability would come into play and its limitations would be made up for by the advantages of compensation mechanisms?

4.3 Looking Ahead

On the basis of the possible directions set out above the Commission proposes to stimulate Community-wide discussion, among all parties with an interest in the issues canvassed in this Communication, according to the following timetable: Comments are to be received before 1 October 1993.

ANNEX I

Trends at Member State level

The characteristic of this legislation is that liability may be established without fault. By way of illustration:

Belgian Law of 22 February 1974 on toxic waste, which holds the generator of toxic waste strictly liable for damage caused by that waste;

Belgian Royal Decree of 16 October 1981 on the control of organisms harmful to plants and plant products, which holds the owner of the land on which such organisms originate liable for any damage caused by their spread;

French Law of 15 July 1975 on waste, which states that any party transferring certain waste elsewhere than to the operator of an authorized disposal plant shall be strictly liable for any damage caused by that waste;

Greek Framework Law no. 1650 of 1986 on environmental protection which provides that any natural person who or legal person which causes pollution or deterioration to the environment shall be strictly liable for that damage;

United Kingdom Environmental Protection Act 1990 which lays down strict liability rules for damage resulting from the illegal disposal of waste;

Portuguese Basic Law on the Environment no. 11/1987 which provides for strict liability for significant damage to the environment caused by a dangerous activity;

German Water Resources Act 1960 which holds the author of an unauthorized pollution of water strictly liable for any damage caused;

German Law on Environmental Liability 1990 which provides for a comprehensive system of strict liability for the operation of industrial facilities which present a risk to the environment.

ANNEX II

Situation in non-Member States: Japan and the United States

Under Japanese law, liability for environmental damage is based on the Civil Code and certain laws concerning pollution, which determine civil, criminal and administrative liability. The large number of cases of damage caused to persons and property have resulted in Japanese judges interpreting the laws in favour of the injured parties.

The laws concerning air and water pollution have been amended with the result that the polluter is liable for any damage even in cases where it is not his fault. This principle of strict liability applies in Japan only as regards bodily harm. In other cases, the fault of the polluter has to be proven.

In order to improve the position of the injured party, Japanese law has developed two theories: the theory of tolerance limits and the probability theory. According to the first theory, there are certain nuisances which must be tolerated by people. If those nuisances exceed the limit of what is tolerable, the injured party may take legal action. The limits are determined according to the nature of the damage. This may be bodily harm, damage to property or nervous shock. According to the second theory, the injured party only has to show the possibility of the existence of the causal link between the wrongful act and the damage itself.

In cases of pollution where the polluters are not identifiable, there is a compensation fund which gives immediate assistance to all parties who have suffered bodily injury.

Under the Japanese law of 5 October 1973 on compensation for bodily injury resulting from pollution, any injured party suffering damage to health caused by water or air pollution receives compensation, after examination by a board, without having to identify the person responsible or prove any fault. The fund is constituted from levies on pollutant emissions and from a proportion of the tax on motor vehicles. Compensation is automatic, however, only in major risk areas and for specifically listed illnesses.

It should be noted that Japan is currently drafting a law on product liability. Different draft laws have been drawn up by various groups. In general, all the proposals recognize no-fault liability and establish a presumption on defects in products. The proposals cover all sectors of industrial activity. Liability applies to both manufacturers and importers.

In the United States, civil liability for damage to the environment is based on both the Common Law and strict civil liability from statute law.

The Common Law uses concepts such as "nuisance", "trespass", "negligence" and "ultra-hazardous activity" to enable victims to take legal action against polluters.

A federal law entitled CERCLA (Comprehensive Environmental Response Compensation Liability Act) was enacted in 1980. It set up the Superfund, a federal fund financing environmental clean-up measures, thereby enabling the government to take prompt action to remove any threat to human health and to minimize risks which heavily polluted sites might pose in the future.

This law has thus established a strict liability regime under which the government can recover the cost of restoration of the environment from "potentially responsible parties" or PRPs.

The law states that firms may be held responsible for discharges they made in the past, even if the latter were not illegal at the time. The liability defined in CERCLA is both strict - i.e. irrespective of whether fault or negligence has been committed or not - and joint and several.

Under the National Emergency Program, a list must be drawn up and revised annually in order to identify priority sites and installations throughout the United States. In 1989, this national list ("Superfund National Priorities List" or NPL) contained 981 sites to which the provisions on immediate clean-up applied.

Clean-up measures are funded by the Superfund, which pays for removal and restoration operations. Congress increased the Superfund budget by USD 8.5 billion for the 1986-91 period.

Federal action on listed sites is limited to those cases where the responsible parties cannot be identified or fail to take the necessary action. It is thus secondary to action to be taken by potentially responsible private parties. The Environmental Protection Agency is the authority responsible for implementation of this law. First, it classifies sites in need of restoration. Second, it identifies, from the potentially responsible parties (PRPs), those who are deemed to be liable and therefore required to repair the damage caused. The Environment Protection Agency takes "aggressive" legal action against PRPs to recover clean-up costs. It bases its arguments particularly on several liability and on the definition of PRPs.

According to the terms of the law, a large number of persons may be considered "potentially responsible parties". They include the current owner of the site, the owner at the time it was polluted, the industrial operator generating the waste, the transporter of the waste and the waste dealer. In practice, even credit institutions such as banks may be deemed liable if they have taken possession of contaminated land under mortgage.

Parties held liable for discharges of hazardous substances are required by law to effect clean-up operations, carry out full restoration and thus bear the (very high) costs of repairing the damage. The average cost of restoration of a polluted site is put at US\$ 29-35 million.

The courts have devised wide-ranging regulations covering liability. The liability regime arising from CERCLA heavily favours government actions for recovery of damages, thus leaving PRPs exposed to the threat of heavy expenditure.

However, hazardous waste has turned out to be a bigger problem than was originally expected, and clean-up costs have proved to be very high.

This policy and the inadequate level of financial resources at the Superfund's disposal has resulted in a large number of court actions involving persons identified as liable, their insurers, their bankers and the Environmental Protection Agency. The number of persons currently involved in litigation by virtue of CERCLA is put at 14 000.

In one single case the number of insurers involved as a result of the Environmental Protection Agency action was well over 400. The number of court cases and proceedings initiated, accounts for about 30-60% of the financial expenditure of the Environmental Protection Agency, operators and insurers concerned. Consequently proceedings have become extremely long and complicated.

Equally, the way the system works has led insurers operating in the American market to change their thinking with regard to cover for environmental risks. Apart from an increase in premiums, current policies in this market exclude a large number of risks. In a number of cases cover against pollution is not available, as insurers have deemed certain activities non-insurable.

As far as credit institutions are concerned, there has been a tightening up of the criteria for the granting of loans to owners or operators of waste dumps.

The CERCLA system has come in for sharp criticism since one of its objectives, namely full and prompt restoration of polluted sites, has proved impossible to achieve in practice. The CERCLA system is said to be having a "perverse effect". Proposals for major amendments to the system and the way it operates have been made by the various parties concerned (the authorities, industry, insurers, academics, etc.). The proponents of CERCLA argue that the merit of this legislation lies in the fact that it has changed the behaviour of firms and their approach to environmental issues. They maintain that because of the law it has been necessary to undertake studies or environmental audits before embarking on any commercial transaction.

Despite amendments to CERCLA made by the Superfund Amendments and Reauthorization Act 1986 (SARA), which have toned down the extremely harsh character of this system of liability by providing for the concept of the "innocent landowner" who is entitled to preferential treatment if he can prove that he did not and could not have known that his land was contaminated, the criticisms and problems continue.

ANNEX III

Trends at international level

**Table I : International Conventions on
Civil Liability and Compensation
(partial list)**

Nuclear energy

1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy, as amended by the 1964 Additional Protocol
(in force) (B, DE, DK, ES, F, GR, IT, NL, P, UK)

1963 Brussels Convention establishing a supplementary compensation system for damage caused by nuclear incidents
(in force) (B, DE, DK, ES, F, IT, NL, UK)

1963 Vienna Convention on Civil Liability for Nuclear Damage
(in force)

1988 Vienna Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention
(not yet in force)

Oil pollution

1969 Brussels Convention on Civil Liability for Oil Pollution Damage, as amended
(in force) (B, DE, DK, ES, F, GR, IR, IT, NL, P, UK)

1971 Brussels Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, as amended
(in force) (DE, DK, ES, F, GR, IT, NL, P, UK)

1977 London Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources
(not yet in force)

Carriage of dangerous materials and other dangerous activities

1971 Brussels Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material
(in force) (DE, DK, ES, F, IT)

1989 Geneva Convention on Civil Liability for Damage Caused During Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels
(not yet in force)

Convention on Liability and Compensation in Connection with the Carriage of Hazardous and Noxious Substances by Sea

(being drafted)

Council of Europe Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment
(not yet in force)

**Table II : International Conventions Containing
a Provision on Civil Liability
(partial list)**

Marine Protection

1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, as amended (Art. 10)
(in force) (B, DE, DK, ES, F, GR, IR, IT, NL, P, UK)

1976 Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution (Art. 12)
(in force) (ES, F, GR, IT, EEC)

1982 United Nations Convention on the Law of the Sea (Art. 279)
(not yet in force)

1983 Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Art. 14)
(in force) (F, NL, UK)

1985 Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Art. 15)
(not yet in force)

Fifth Barcelona Protocol for the Protection of the Mediterranean Sea Against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Sea-Bed and its Sub-Soil (Art.27)
(being drafted)

Antarctic Protection

1988 Wellington Convention on the Regulation of Antarctic Mineral Resource Activities (Art. 8)
(not yet in force)

Transboundary Pollution

1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Art. 12)

[ECE-UN] Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Art. 7)

[ECE-UN] Convention on the Transboundary Impacts of Industrial Accidents (Art. 18)

ANNEX IV

The System created by the Council of Europe Convention

In the last five years the Council of Europe has been drafting a Convention on civil liability for damage resulting from activities dangerous to the environment, containing a more general approach than the abovementioned international Conventions.

On 26 March 1992 the Council granted the Commission a negotiating mandate⁽¹⁾ for the areas within Community competence with regard to the Convention.

Apart from the European Community and the Member States, the EFTA countries and a growing number of Central and Eastern European countries have participated in the negotiations. The Convention provides for the possibility of non-members of the Council of Europe becoming party to the Convention.

The aim and objective of the Convention is to provide adequate compensation for damage resulting from activities dangerous to the environment. The Convention also puts forward measures for damage prevention and restoration of the environment.

The concept of damage covers damage resulting from impairment of the environment, damage caused to persons and property and the cost of protective measures, i.e. measures taken to prevent or alleviate damage. Damage may be the result of a single action or a chronic process of pollution. It should be noted that the definition of "environment" in the Council of Europe Convention is widely drafted (see point 2.3 of the main report)

In order to achieve the objective of repairing environmental damage adequately, the Convention introduces a strict liability regime. According to the Convention, the person liable is the operator, i.e. the person supervising the dangerous activity at the time the incident occurs or, in the specific case of permanent waste storage sites, at the time the damage becomes known.

In the Convention, the term "dangerous activity" refers to a professional activity involving dangerous substances, genetically modified organisms or micro-organisms. The concept also covers the operation of waste installations or sites, including permanent waste storage sites. (See further section 2.2 of this Annex as regards the definition of the scope of liability in the Convention, section 2.5 concerning the burden of proof and section 2.7 concerning insurance and financial security under the Convention).

(1) Commission mandate concerning the negotiations for an international convention on damage resulting from activities dangerous to the environment (Council of Europe)
SEC(91) 750 final.

The Convention does give environmental associations and foundations the right to take court action to secure the implementation of preventive or restorative measures.

The Convention states that the above-mentioned organizations may bring an action in court requesting "the prohibition of a dangerous activity which is unlawful and poses a grave threat of damage to the environment"; or an order to the operator "to take measures to prevent an incident or damage"; or an order to the operator "to take measures to prevent damage after an incident has taken place"; or an order to the operator "to take measures of reinstatement".

The Convention makes provision for accession by the European Economic Community. The Community has voting rights, within the Standing Committee responsible for monitoring problems of interpretation and implementation raised by the Convention, which it may exercise in its areas of competence.

The Convention was adopted on 8 March 1993 and will be open for signature from 21 June 1993. It will enter into force after the third ratification.

The Committee of Experts of the Council of Europe, which has drawn up the Convention, has decided that the next step will be to look at other forms of reparation for environmental damage, in particular compensation funds.

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