

Liability and Compensation for Environmental Damage

Compilation of Documents

Editor

Alexandre Timoshenko



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FOREWORD

Environmental degradation and military devastation are two of the most immediate threats to humankind. The carnage and destruction associated with war is by no means limited to human beings and the built environment. It spills over as well to the agricultural and the natural environment which is essential to the human well-being and ultimately to human survival itself. The despoiling of freshwater resources and the destruction of the biological wealth is only one instance of the interlocking nature of the environmental and military threats.

Today, armed forces all over the world have a growing technical and logistical ability to devastate large areas. The destruction of some eco-systems is irreversible. For some others, the timeframe of recovery may be a few centuries. Events of the Gulf War point to the more specific dangers of environmental destruction as a method of warfare.

At the national level, governments have adopted legislation imposing liability for environmental damage on individuals and corporations. No such possibility exists at the international level for environmental damage from military activities.

The present volume is an expert study to promote the development of international rules of liability and compensation for environmental damage, particularly for environmental damage resulting from military activities.

I hope that this publication will not only respond to the practical needs of the United Nations system in addressing the issues of liability and compensation for environmental damage arising from military activities, but will also provide a strong basis for the development of international environmental law aimed at sustainable development.

Dr. Klaus Töpfer
UN Under-Secretary General
Executive Director
United Nations Environment Programme

NOTE BY THE EDITOR

The United Nations Environment Programme, in keeping with its long standing mandate in the field of environmental law, undertook to assist with the further development of international law regarding liability and compensation for environmental damage, specifically as related to damage arising from military activities.

In 1972, at the United Nations Conference on the Human Environment, States agreed in Principle 22 of the Stockholm Declaration to "cooperate to develop further the international law regarding liability and compensation for victims of pollution and other environmental damage". Since then the liability and compensation for environmental damage has been high in international agenda and the ethos of the Stockholm Principle 22 was reaffirmed in 1992 by the United Nations Conference on Environment and Development (UNCED) in Principle 13 of the Rio Declaration.

UNEP's second long term Programme for the Development and Periodic Review of Environmental Law for the 1990's, adopted by UNEP Governing Council in May 1993, requested to promote development of legal and administrative measures to ensure the availability of appropriate redress for environmental damage and to further develop rules and procedures for appropriate remedies to victims of damage from environmentally harmful activities including compensation and restoration for environmental damage. The area of liability and compensation for environmental damage was highlighted as a subject where action by UNEP to develop international legal responses may be appropriate during the present decade.

The Iraqi invasion of Kuwait and the subsequent firing of the gas and oil wells gave the issue a specific perspective. In 1991, the United Nations Security Council held Iraq responsible for the adverse consequences of its military acts and established the United Nations Compensation Commission (UNCC) to hear claims and assess damage. Specifically, Iraq was to be held liable "under international law for any direct loss, damage, including environmental damage, and the depletion of natural resources".

In an effort to fulfill the mandate of promoting further development of international law in this field and with a view to assisting the UNCC with its deliberations UNEP embarked on a study on liability and compensation for environmental damage arising from military activities. The study was undertaken in cooperation with a London-based legal NGO, the Foundation for Environmental Law and Development (FIELD). A regionally balanced Working Group of Experts was established to assist with the study and worked during 1995-96.

In its deliberations the Working Group focussed on assessing liability and compensation practices at national and international levels to determine whether general principles or practices existed, the degree to which these general practices were common to different national systems, and the nature of various liability schemes already in operation under international law.

A working cooperation was established between the Group and the UNCC Secretariat. The work of the Group was viewed to assist the UNCC in a number of ways, in particular, by identifying the major legal problems likely to arise in the consideration of claims for environmental damage, identifying precedents from national or international tribunals, highlighting relevant State practice in the form of national law, and providing reference to relevant literature addressing environmental damage, liability and compensation. Also by way of collaborating with the UN Legal Office Mr. Ralph Zacklin, Assistant Secretary-General for Legal Affairs, assisted the deliberations by chairing the meetings of the Working Group of Experts.

At the final meeting in 1996 the experts completed their work with a set of conclusions on principal issues of liability and compensation for environmental damage including as they related to the work of the UNCC, such as applicable law, the scope of environmental damage and depletion of natural resources eligible for compensation, the extent of the right of a State or an international organization to bring a claim, the definitions of environmental damage and depletion of natural resources and valuation of environmental damage and depletion of natural resources. The results of the Working Group meetings were submitted to the UNCC prior to the commencement of its hearing environmental claims.

FIELD's assistance in completing this project, in particular in preparing background documentation and in providing substantive and logistical support to the Group, is highly appreciated. A high appreciation is expressed to the

international experts - members of the Group - who by bringing their wealth of knowledge and practical experience to the issue aided in producing thoughtful and balanced conclusions. A special tribute also must be made to the fruitful cooperation with UNCC, which actively participated in the Group and is the recipient and user of the conclusions.

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The present publication intends to bring to the attention of Governments, international organizations and the public at large a collective international expertship on general issues of liability and compensation for environmental damage as well as in the particular context of adverse consequences of military acts. Besides the proceedings and the documents resulting from the deliberations of the Working Group of Experts the publication includes selected UN documents, international treaties and cases as well as related bibliography.

The publication constitutes a compilation of proceedings of the UNEP Working Group of Experts on Liability and Compensation for Environmental Damage Arising from Military Activities, of the related background materials, relevant United Nations documents, as well as the lists of related international agreements and bibliography.

Section I contains the Background Paper, prepared in collaboration with the FIELD, which served as the basis of the deliberations of the Working Group.

The first meeting of the Group identified several specific topics requiring a closer attention. To assist the deliberations a number of experts volunteered to prepare short papers with more focussed analysis of these specific topics. The short papers by selected experts are assembled in Section II.

Intermediate reporting on results of individual meetings of the Working Group was made in the form of Chairman's summary. The Chairman's summary of the first and second meetings of the Working Group constitute Section III.

Section IV contains the integrated Report of the Working Group of Experts on Liability and Compensation for Environmental Damage Arising from Military Activities.

A thorough expert study of a variety of issues related to the liability and compensation for environmental damage resulted in detailed Conclusions which are placed in Section V.

Section VI contains a number of Annexes designed to assist the reader in a more detailed acquaintance with selected documents and some of them are reproduced in full. The Section also contains various lists which address the reader to related UN documents, international and national legislation, cases and judicial decisions. The Section also includes a selected bibliography.

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First and foremost a deep gratitude is expressed to Dr. Klaus Toepfer, UN Under-Secretary-General and Executive Director of the United Nations Environment Programme, who lent his support to this undertaking thereby reaffirming UNEP's long-standing commitment to the progressive development of international environmental law.

The contribution by Donald Kaniaru, Director of the UNEP Environmental Law and Institutions Programme Activity Centre (ELI/PAC), is especially appreciated. He provided his support and encouragement through the whole process of preparation of this publication.

Sincere thanks go to all ELI/PAC colleagues especially Peigi Wilson, and interns, Jory Ruggeiro, Asheline Appleton and Charles Otieno, and the administrative and support staff for the enthusiasm and commitment with which they have worked, in what is essentially a team effort to make this publication possible.

The UNEP Working Group of Experts held its meetings in London and Geneva. We are grateful to the Foundation for International Environmental Law and Development (FIELD) and UNEP Regional Office for Europe in Geneva for allowing us to use their facilities and for their gracious hospitality.

UNEP WORKING GROUP OF EXPERTS ON LIABILITY AND COMPENSATION FOR ENVIRONMENTAL DAMAGE ARISING FROM MILITARY ACTIVITIES

MEMBERS

Dr Andronico Adede
Registrar, International Criminal Tribunal for Rwanda

H.E. Dr Najeeb Al-Nauimi (Vice Chair)
Minister of Justice, Qatar

H.E. Julio Barboza
Ambassador, Argentina

Dr Laurence Boisson de Chazournes
The World Bank, Legal Department, Washington D.C.

Prof. Michael Bothe
Wolfgang Goethe Universitat, Germany

Dr Rodman Bundy
Frere Cholmeley Bischoff, Paris, France

Dr Francoise Burhenne-Guilmin
IUCN/Environmental Law Centre, Bonn, Germany

Prof. Pierre-Marie Dupuy
University of Paris, France

Dr Kamal Hossain
Advocate, Dhaka, Bangladesh

Prof. Vanda Lamm (Vice Chair)
Hungarian Academy of Sciences, Hungary

Ms Rae Lindsay
Lawyer, London, United Kingdom

Mr Alistair McGlone
Department of the Environment, United Kingdom

H.E. Thomas Mensah
Ambassador, Ghana

Dr Iwona Rummel-Bulska
Secretariat, Basel Convention, Geneva

Mr Philippe Sands (Rapporteur)
University of London (SOAS/FIELD), United Kingdom

Prof. Richard Stewart
New York University Law School, USA

Prof. Francisco O. Vicuna
University of Chile, Chile

Mr Ralph Zacklin (Chair)
Assistant Secretary-General, Office of Legal Affairs
United Nations, New York

UNITED NATIONS COMPENSATION COMMISSION

Dr. Mojtaba Kazazi

UNITED NATIONS ENVIRONMENT PROGRAMME

Prof. Sun Lin
Dr. Alexandre Timoshenko

LIABILITY FOR ENVIRONMENTAL DAMAGE AND THE REPORT OF THE UNEP WORKING GROUP OF EXPERTS

INTRODUCTORY ARTICLE BY THE RAPPORTEUR

Prepared by Philippe Sands¹

Introduction

The Working Group of Experts established by the United Nations Environment Programme (UNEP) to consider liability and compensation for environmental damage arising from military activities met on three occasions during 1995 and 1996. It was agreed early on that the work should focus principally on the practical consequences posed by the 1991 UN Security Council resolution 687, which reaffirmed that Iraq was "liable under international law for any direct loss or damage, including environmental damage and the depletion of natural resources [...]", which occurred as a result of its unlawful invasion and occupation of Kuwait. However, the Working Group recognised that many of the specific issues left open by resolution 687 – and likely to be decided by the UN Compensation Commission (UNCC) – were generic in nature and had potentially broader implications.

The purpose of this Introduction is to set out some of the background international legal materials which were available to the Working Group and which its members may have had in mind in preparing the Groups' Conclusions, as they are set out in the Report on Liability and Compensation for Environmental Damage Arising from Military Activities ("the Report"). In this Introduction I address the Conclusions relating to the applicable law (I), definitions of "environmental damage" and "depletion of natural resources" (II), and valuation of "environmental damage" and "depletion of natural resources" (III). These address most directly some difficult but generic international environmental issues. It is important to stress that what follows represent my personal views as to the background thinking, and should not be attributed to the Working Group or to any of its members.

Limitation of space preclude the possibility of a comprehensive Introduction addressing all aspects of the Report of the Working Group. Two aspects in particular are not addressed: the scope of paragraph 35 of Decision 7 of the UNCC Governing Council and the extent of the right of a State or of an international organisation to bring a claim. The omission should not be taken as suggesting that these areas are less important, but only that they are less generic and more closely linked to the specifics of the injurious consequences of the Iraqi invasion in Kuwaiti conflict.

In fact the Conclusions as to the scope of paragraph 35 were reasonably straightforward to reach, pointing to the uncontroversial view that causality (whether or not "direct damage" has occurred) will need to be decided on the facts of each case, and that some help may be found in the practise of various international courts and tribunals and decision-making bodies. By contrast, the subject of which states or international organisations could bring claims was more problematic for the Working Group, and views were divided. Specifically, the Working Group touched on the issue of claims relating to shared natural resources and claims in relation to areas beyond national jurisdiction, in both respects indicating the way in which such claims may be addressed. The most significant conclusion here – and in my personal view a step forward – is recognition that the possibility should not be excluded of claims being brought (by States and international organisations) in respect of areas beyond national jurisdiction, provided that a clear *legal* interest can be demonstrated. This formulation accommodated the different approaches, and recognised that the likelihood of a claim of this type being brought appeared, at least in the context of the Iraqi invasion in Kuwait conflict, to be hypothetical.

¹ Reader in International Law, University of London (School of Oriental and African Studies); Director of Studies, Foundation for International Environmental Law and Development. The views expressed in this Introduction are entirely those of the author, and any errors as to recollection or substance remain my responsibility alone. I would like to thank Ruth Khalastchi and Ruth Mackenzie for their assistance in preparing this Introduction, and for their unstinting efforts in assisting the Working Group; Ralph Zacklin for his truly excellent chairmanship; each Member of the Working Group for his or her substantive contribution to the overall effort, and in such a collegiate manner; Alex Timoshenko for his substantive and administrative acumen in steering the work along; Elisabeth Dowdeswell for having the foresight to encourage the establishment of the Working Group; and Louise Rands for her administrative and secretarial assistance.

(I) The applicable law

The first issue for the Working Group to address was the law to be applied under Article 31 of the UNCC Provisional Rules for Claims Procedure. Article 31 of the Provisional Rules for Claims Procedure (annexed to Governing Council Decision 10)² determines the law to be applied by the Commissioners in the assessment of claims submitted to the UNCC. There was no dissent from the view that Article 31 should be interpreted in the light of the rules establishing the jurisdiction of the UNCC, namely Part E of Security Council Resolution 687³ and the UN Charter.⁴

Article 31 refers to four sources of law to be applied by the Commissioners: relevant Security Council resolutions, criteria established by the UNCC Governing Council, pertinent decisions of the UNCC Governing Council, and "other relevant rules of international law". The first three sources presented no particular issues for the Working Group. The relevant Security Council resolutions, in particular resolution 687,⁵ could provide only the most general guidance. Somewhat greater assistance could be gleaned from paragraph 35 of the UNCC Governing Council Decision 7, which established a non-exhaustive list of categories for which payments are to be made in respect of "direct environmental damage and the depletion of natural resources". And there were, by the time of our deliberations, no other pertinent decisions of the Governing Council. It was readily apparent that these three sources could provide little by way of practical assistance to the Commissioners, and would be inadequate to enable the Commissioners to deal with the myriad issues that would arise during the processing of Category F environmental and natural resource claims. Gaps and lacunae would require the Commissioners to consider the fourth, which itself gave rise to considerable discussion among the members of the Working Group.

The Working Group considered that in practice the Commissioners will be expected to draw upon the four

sources of applicable law as concurrent elements, provided that there is no conflict between applicable rules of international law and principles particular to the compensation process as set forth in the first three sources.⁶

The Working Group noted that relevant rules are those which, in the first place, apply as a matter of law. Rules that apply as a matter of law were the sources of law listed in Article 38 of the Statute of the International Court of Justice (ICJ). Article 38 (1) refers to (a) international conventions, whether general or particular, establishing rules expressly recognised by the contesting States; (b) international custom, as evidence of a general practice accepted as law; (c) the general principles of law recognised by civilised nations; and (d) judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.

(1) Other relevant rules of international law

The Working Group considered, however, that to the extent that the sources of law listed in Article 38(1) of the Statute of the ICJ were insufficient to enable the Commissioners to assess the Category F environmental claims other rules may be relevant. These other rules may be found in (a) international treaties not applicable to the particular claim, but dealing with similar questions, for example, treaties concerned with international humanitarian and human rights law; (b) customary rules concerning different but related fields of international law, for example, in relation to state responsibility; and (c) acts of relevant international organisations and conferences, such as the United Nations Environment Programme, the International Maritime Organisation and other UN bodies as well as soft law instruments, such as the 1972 Stockholm Declaration on the Human Environment,⁷ the 1978 UNEP Draft Principles of Conduct in the Field of Environment for the Guidance of States in the Conservation and Harmonious Utilisation of Natural Resources Shared by Two or More States,⁸ the 1982 World Charter for Nature,⁹ and the 1992 Rio

² Decision taken by the Governing Council of the United Nations Compensation Commission at the 27th meeting, sixth session, held on 26 June 1992; UN Doc. S/AC.26/1992/10.

³ Resolution 687 of 3 April 1991; UN Doc. S/RES/687 (1991).

⁴ Article 24 and Chapter VII of the UN Charter.

⁵ Eg. Resolution 674 of 29 October 1990, UN Doc. S/RES/674 (1990); Resolution 692 of 20 May 1991, UN Doc. S/RES/692 (1991); Resolution 705 of 15 August 1991, UN Doc. S/RES/705 (1991); Resolution 706 of 15 August 1991, UN Doc. S/RES/706 (1991).

⁶ B. Affaki, "The United Nations Compensation Commission, A New Era in Claims Settlement?", 10 *J. Int'l Arb.*, (1993) 21-57 at 51.

⁷ Report of the UN Conference on the Human Environment, Stockholm, 5-16 June 1972, UN Doc. A/CONF.48/14/Rev.1 reprinted in 11 *ILM* 1416 (1972).

⁸ 17 *ILM* 1091 (1978).

⁹ 37 UN GAOR (Supp No. 51) p. 17.

Declaration on Environment and Development.¹⁰ The Working Group was also of the opinion that other relevant rules may be derived from the domestic laws of a number of countries, including in particular those in the Gulf region.

In Part E of Resolution 687 the UN Security Council *reaffirms* a duty to pay compensation which exists under general international law. It is thus not creating new law but merely establishing the infrastructure to make the existing obligations under the general law of state responsibility effective.¹¹ Under the general law of state responsibility, a state is required to pay compensation for damage caused by a wrongful act. In the present circumstances, the wrongful act is "the unlawful invasion and occupation of Kuwait",¹² in other words a violation of the prohibition of the use of force established by the UN Charter and customary international law. It follows that the jurisdiction of the UNCC only arises in relation to a particular unlawful act and that other bases of compensation which may also exist (e.g. the violation of peacetime rules concerning the protection of the environment) are not relevant. The Working Group noted that the only rule which the UNCC is required to apply is that of the duty to compensate damage caused by the violation of the prohibition of the use of

force.

The Working Group refers to global and regional treaties which may be relevant and accordingly applicable by analogy. International and regional treaties in mind included those on state liability¹³ or civil liability in respect of harm to the environment,¹⁴ (in particular those in the field of oil pollution¹⁵ and nuclear damage)¹⁶ or those more generally applicable to the marine environment,¹⁷ as well as those addressing specific sectors of the environment (e.g. biodiversity,¹⁸ freshwater resources,¹⁹ or atmosphere).²⁰ Bilateral treaties may also serve as a source of inspiration.

(2) Customary law and acts of international organisations

The Working Group considered that as well as established rules of customary international law, emerging customary law rules could be "relevant", for example in the field of valuation of natural resource damage. The Working Group also considered that certain other "international acts" might be relevant. This category included acts of treaty based organisations, such as the International Oil Pollution Convention Fund (IOPC Fund) established under the 1971 Fund Convention. The IOPC Fund which has legal personality under the laws

¹⁰ Report of the UN Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26/Rev.1.

¹¹ Michael Bothe, "Other relevant rules of international law under Article 31 of the Provisional Rules for Claims Procedure", Working Paper prepared for the second meeting of the Working Group of Experts on Liability and Compensation for Environmental Damage Arising from Military Activities.

¹² Resolution 687, paragraph 16.

¹³ E.g. the 1972 Convention on Liability for Damage Caused by Objects Launched into Outer Space, 10 *ILM* 965 (1971) and 11 *ILM* 250 (1972) (Space Liability Convention), the Convention on the Regulation of Antarctic Mineral Resource Activities, (Wellington) 2 June 1988, not in force, 27 *ILM* (1988), 868 (1988 CRAMRA).

¹⁴ E.g. the Council of Europe Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (Lugano), 21 June 1993, not in force, 32 *ILM* (1993) 1228, Article 2(7) (1992 Lugano Convention).

¹⁵ International Convention on Civil Liability for Oil Pollution Damage, (Brussels) 29 November 1969, in force 19 June 1975; 973 *UNTS* 3 (1969 Civil Liability Convention). International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, (Brussels) 18 December 1971, in force 16 October 1978, 11 *ILM* (1972) 284 (1971 Oil Pollution Fund Convention). 1996 Protocol to both the 1969 Civil Liability Convention and the 1971 Oil Pollution Fund Convention, (London) 27 November 1992, in force 30 May 1996, BNA 21:1551, Article 2(3).

¹⁶ E.g. OECD Convention on Third Party Liability in the Field of Nuclear Energy (Paris), 29 July 1960, in force 1 April 1968, as amended by protocols of 1962 and 1964, 956 *UNTS* 251 (1960 Paris Convention); IAEA Convention on Civil Liability for Nuclear Damage (Vienna), 29 May 1963, in force 12 November 1977, 1063 *UNTS* 265 (1963 Vienna Convention); Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention (Vienna), 21 September 1988, in force 27 April 1992, 42 *Nuclear Law Bulletin* 56 (1988) (1988 Joint Protocol).

¹⁷ United Nations Convention on the Law of the Sea, (Montego Bay) 10 December 1982, in force 16 November 1994; 21 *ILM* (1982) 1261 (1982 UNCLOS); International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996, IMO Doc. LEG/CONF.10/DC.4, 2 May 1996 (HNS Convention); 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972; IMO Doc. LC/SM 1/6, 14 November 1996 (1996 Protocol to the London Convention).

¹⁸ E.g. Convention on Biological Diversity, (Rio de Janeiro) 5 June 1992, in force 29 December 1993; 31 *ILM* (1992) 822 (1992 Biodiversity Convention).

¹⁹ E.g. Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki) 17 March 1992, in force 6 October 1996; 31 *ILM* (1992) 1312 (1992 Watercourse Convention); United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses, 21 May 1997, 31 *ILM* 700 (1997) (International Watercourses Convention).

²⁰ E.g. United Nations Framework Convention on Climate Change (New York), 9 May 1992, in force 24 March 1994; 31 *ILM* (1992), 849 (1992 Climate Change Convention).

of each party,²¹ comprises an Assembly and a Secretariat.²² The Fund pays compensation for pollution damage, which means "loss or damage outside the ship carrying oil by contamination". The Working Group considered that cases brought before the IOPC Fund as well as resolutions adopted by the IOPC Fund Assembly could provide guidance on issues such as definition of environmental damage and depletion of natural resources and on issues of valuation.

Soft law

The Working Group also considered that "international acts" would include the views of the international community as evidenced by soft law instruments, in particular the 1972 Stockholm Declaration and the 1992 Rio Declaration, as well as reference to unilateral acts of states and the work of international bodies, including the work of the International Law Commission (ILC) and the International Law Association.²³ The Working Group considered that the work of the ILC in the fields of State Responsibility²⁴ or International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law²⁵ could be particularly relevant.

The Working Group noted that the domestic legislation of, *inter alia*, the US,²⁶ Italy,²⁷ Germany,²⁸ Belgium,²⁹ and in particular, relevant domestic laws of the Gulf States³⁰ and relevant regional legislation³¹ which establish liability for environmental damage and/or damage to natural resources could be of assistance.

(II) The definition of "environmental damage" and "depletion of natural resources"

In order to value the compensable loss it was necessary to define terms. Security Council Resolution 687

distinguished between two heads of damage: "environmental damage" and "depletion of natural resources". Each, in turn, was subject to further differentiation. Thus, the Working Group considered that the term "environmental damage" referred to two different but related categories of claim:

- (a) Damage caused to persons, property or resources as a result of an "environmental" incident, occurrence, activity etc...; and
- (b) Damage caused to the environment itself.

The Working Group concluded that the first head-damage caused to persons and property — was covered by other categories of claim (Report, para. 43) and that therefore it was appropriate to focus on the damage caused to the environment itself, i.e. environmental damage *per se* or 'pure' environmental damage. "Depletion of natural resources" was related to the concept of environmental damage. It was necessary to define "environmental damage" and "depletion of natural resources" before proceeding to set down some general principles on valuation. Neither term had been defined by Resolution 687 or any decisions of the UNCC Governing Council. The essential difference between the two, the Working Group concluded, was that "natural resources" connoted a commercial value while "environmental" connoted a non-commercial (or ecological) value.

(1) Environmental Damage

The Working Group noted that defining the term required a two step approach which involved first defining the term "environment" and then determining the "compensable damage" to the environment. As to the

²¹ Article 2(2) 1971 Fund Convention.

²² The 1992 Protocol discontinued the Executive Committee, Articles 17 to 24.

²³ E.g. 1982 ILA Montreal Rules of International Law Applicable to Transfrontier Pollution, and 1982 ILA Montreal Rules on Water Pollution in an International Drainage Basin, in WCED Experts Group on Environmental Law, R.D. Monro (Chairman) and J.G. Lammers (Rapporteur), Environmental Protection and Sustainable Development - Legal Principles and Recommendations (1987).

²⁴ ILC Draft Articles on State Responsibility, II Yearbook of the International Law Commission (1980), Part 2, p.30.

²⁵ See J. Barboza, Eleventh Report on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law, UN Doc. A/CN.4/468 (1995).

²⁶ Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC ss. 9601-9675; Oil Pollution Act, 33 USC ss. 2701-2761; Clean Water Act, 33 USC ss. 1251-1376.

²⁷ Law No. 349 of 8 July 1986, "Istituzione del Ministro dell'ambiente e norme in materia di danno ambientale" (establishing the Ministry of the Environment and rules on environmental damage), in *Gazzetta Ufficiale* No. 162, 15 July 1986, Suppl. Ord. No.59, p.5 et seq.

²⁸ *Umwelthaftungsgesetz* of 10 December 1990 (Environmental Liability Act 1990).

²⁹ Belgian Civil Code Article 1382 establishing environmental liability.

³⁰ Najeeb Al-Naumi, "Approaches to the Valuation of Environmental Damage under National Jurisdictions in the Gulf Region", working paper prepared for the second meeting of the Working Group of Experts.

³¹ Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution, Kuwait, 24 April 1978, in force 1 July 1979, 1140 UNTS 133 (1978 Kuwait Convention).

former the Working Group concluded that practice supported a broad construction of the term (to include, for example, cultural heritage). The Working Group had regard to international treaties,³² state practice,³³ the practice of international organisation,³⁴ and regional³⁵ and national laws.³⁶ These reflected various approaches to the definition of environmental damage. Some approaches adopted a restrictive definition limited to damage to natural resources alone (i.e. water, soil, fauna and flora, and their interaction);³⁷ other definitions include damage to natural resources and property which forms part of the cultural heritage;³⁸ and still others include damage to landscape and environmental amenity.³⁹

(a) *International treaties*

The Working Group noted that although few international treaties specifically defined environmental damage, other concepts such as "pollution", "adverse effects" or "adverse consequences" could provide some assistance. In relation to state liability, the only international convention which provides a definition of damage to the environment is the 1988 Convention on the Regulation of Antarctic Mineral Resources (1988 CRAMRA), which defines damage to the Antarctic environment or ecosystem very broadly.⁴⁰

In relation to civil liability the Working Group considered various definitions set out in a number of different instruments. * The 1993 Lugano Convention⁴¹ provides an example of the broader approach to the definition of environmental damage. It provides in Article 2 paragraph 10 that "environment" is defined as:

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.

The Lugano Convention defines "damage" as including:

- (c) loss or damage by impairment of the environment in so far as this is not considered to be damage within the meaning of sub-paragraphs a or b above provided that compensation for impairment of the environment, 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;

The recently concluded 1996 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (the HNS Convention), defines "damage" as including:

- (c) loss of damage by containment of the environment caused by the hazardous and noxious substances, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken...⁴²

The HNS Convention does not however include a specific definition of "environment".

³² E.g. Council of Europe Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (Lugano), *supra*, Article 2(7); United Nations Economic Commission for Europe (ECE) Convention on the Transboundary Effects of Industrial Accidents, (Helsinki) 17 March 1992, not in force, 31 ILM 1330 (1992) Article 1(c); ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes, *supra* Article 1(2); Convention on the Regulation of Antarctic Mineral Resource Activities, *supra* XX, Article 8(2)(a), (b) and (d); Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels, (Geneva) 10 October 1989, not in force; UN Doc. ECE/TRANS/79, Article 9(c) and (d); International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, *supra*, Article 1(6).

³³ *Lac Lanoux* Arbitration (France v Spain) 24 ILR 101; *Nuclear Tests Cases* (Australia v France) (Interim Measures) ICJ Rep. (1973) 99, (Jurisdiction) ICJ Rep. (1974) 253; *Case Concerning Certain Phosphate Lands in Nauru* (Nauru v Australia), ICJ Rep. (1992) 240; *Case Concerning the Gabčíkovo-Nagymaros Project* (Hungary v Slovakia) 32 ILM 1293 (1993).

³⁴ See *infra*.

³⁵ 1978 Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution, Kuwait, 24 April 1978, in force 1 July 1979, 1140 UNTS 133.

³⁶ See *infra*.

³⁷ E.g. 1988 CRAMRA, *supra*.

³⁸ E.g. 1992 ECE Convention on the Transboundary Effects of Industrial Accidents, article 1(c); 1992 ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes, article 1(2).

³⁹ 1993 Lugano Convention, *supra*.

⁴⁰ *Supra*, Art. 1(15).

⁴¹ *Supra*.

* *Council of Europe on civil liability for Damage Resulting from Activities Dangerous to the Environment*.

⁴² *Supra*, Article 6(c).

The term "pollution" is defined in, *inter alia*, the 1979 Convention on Long-Range Transboundary Air Pollution (1979 LRTAP Convention),⁴³ and the 1982 United Nations Convention on the Law of the Sea (1982 UNCLOS).⁴⁴ Article 1(a) of the 1979 LRTAP Convention defines air pollution by reference to deleterious effects on living resources and ecosystems, human health, and material property, as well as interference with amenities and other legitimate uses of the environment. The 1982 UNCLOS defines "pollution of the marine environment" as:

the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which result or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.⁴⁵

The 1985 Vienna Convention on the Protection of the Ozone Layer defines "adverse effects" in relation to ozone depletion as, *inter alia*, "changes in the physical environment or biota, including changes in climate, which have significant deleterious effects on human health or on the composition, resilience and productivity of natural and managed ecosystems, or on materials useful to mankind".⁴⁶ The 1992 United Nations Framework Convention on Climate Change introduces a similar definition and extends the definition to include effects on socio-economic systems and human welfare.⁴⁷

The UN Economic Commission for Europe's (ECE) 1992 Convention on the Protection and Use of Transboundary Watercourses and Lakes provides that "...such effects on the environment include effects on human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; they also include effects on the cultural heritage or socio-economic conditions resulting from alterations to those factors".⁴⁸ While Article 1(c) of the ECE 1992 Convention on the Transboundary Effects of Industrial

Accidents refers to the adverse consequences of industrial accidents on "*inter alia*, (i) human beings, flora and fauna; (ii) soil, water, air and landscape; (iii) the interaction between the factors in (i) and (ii); and (vi) material assets and cultural heritage, including historical monuments."

"Pollution damage" is defined in the 1969 Brussels Convention on Civil Liability for Oil Pollution Damage (1969 Civil Liability Convention)

as 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 preventive measures and further loss or damage caused by preventive measures.⁴⁹

The 1971 Oil Fund Convention (1971 Fund Convention) relies upon the same definition.⁵⁰ The view that this definition includes environmental damage is supported by the 1992 Protocols to the 1969 Civil Liability Convention and the 1971 Fund Convention which define pollution damage as:

- (a) loss or damage caused outside the ship by contamination, resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, provided that compensation for *impairment of the environment* other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken;
- (b) the costs of preventative measures and further loss or damage caused by preventative measures.⁵¹ (emphasis added).

The Working Group concluded that while the terms "pollution", "adverse effects" or "adverse consequences" assist with the determination of questions relating to the threshold beyond which environmental damage might trigger liability, such terms do not provide a concrete definition of environmental damage.

⁴³ 1979 Convention on Long-Range Transboundary Air Pollution (Geneva) 13 November 1979, in force 16 March 1983, 18 ILM 1442 (1979).

⁴⁴ *Supra*.

⁴⁵ Article 1(4). See also definition of 'pollution' in the 1996 Protocol to the 1972 London Convention.

⁴⁶ Convention for the Protection of the Ozone Layer, (Vienna) 22 March 1985, in force 22 September 1988, 26 ILM 1529 (1987), Article 1(2).

⁴⁷ 1992 Climate Change Convention, *supra*.

⁴⁸ *Supra*, Article 1(2).

⁴⁹ *Supra*, Article 1(6).

⁵⁰ *Supra*.

⁵¹ Protocol to the International Convention on Civil Liability for Oil Pollution Damage 1969, (London), 27 November 1992, in force 30 May 1996, BNA 21:1551, Art. 2(3).

(b) *State practice*

The Working Group also took into consideration state practice and the decisions of various international and national courts and tribunals. In the *Lac Lanoux* Arbitration, for example, the Tribunal implicitly recognised environmental damage when it referred to changes in the composition, temperature or other characteristics of the waters of the River Carol which injured Spanish interests.⁵² At the national level, in the *Patmos* case the Italian Government brought a case before the Italian courts for ecological damage to the marine flora and fauna, as a result of a collision between the Greek tanker *Patmos* and a Spanish tanker on 21 March 1985 in the Strait of Messina, which caused approximately 1,300 tonnes of the 80,000 tonnes of oil transported by the *Patmos* to spill into the sea, and some of the oil to come ashore on the coast of Sicily. In 1986, the Court of First Instance rejected the Government's claim for compensation for ecological damage on the grounds that the territorial sea was not crown or patrimonial property of the state but a *res communis omnium* which could not be violated by private parties. The Court held that the Government could have claimed compensation for damage to the coast, which is state-owned property, although in this case, no compensation would be forthcoming as the state had not incurred any direct or indirect loss as it had not incurred any clean-up costs nor loss of profit.⁵³ In 1989, the Court of Appeal overruled the decision of the Court of First Instance, interpreting the 1969 Civil Liability Convention to include as environmental damage 'everything which alters, causes deterioration in or destroys the environment in whole or in part'.⁵⁴ The Court of Appeal interpreted the terms of the 1969 CLC in the light of the provisions of the 1969 International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties,⁵⁵ which defines the threat to 'related interests' justifying intervention as including 'the conservation of living marine resources and of wildlife'.⁵⁶ The Court of Appeal went on to hold that:

"the environment must be considered as a unitary asset, separate from those of which the environment

is composed (territory, territorial waters, beaches, fish, etc.) and it includes natural resources, health and landscape. The right to the environment belongs to the State, in its capacity as representative of the collectivities. The damage to the environment prejudices immaterial values, which cannot be assessed in monetary terms according to market prices, and consists of the reduced possibility of using the environment. The damage can be compensated on an equitable basis, which may be established by the Court on the grounds of an opinion of experts... The definition of 'pollution damage' as laid down in Article I(6) is wide enough to include damage to the environment of the kind described above.'⁵⁷

The Working Group noted that oil pollution damage cases⁵⁸ could provide especially useful assistance in respect of the definition of environmental damage and/or damage or depletion of natural resources, as well as issues relating to valuation (see further, *infra*).

(c) *The practice of international organisations*

The Working Group considered in particular the work of the International Law Commission which has been working since the late 1970's on the liability of States for acts not prohibited by international law, and recently prepared draft articles.⁵⁹ When the Working Group prepared its Conclusions the draft liability Articles were incomplete and remained controversial.⁶⁰ They are intended to supplement the rules being developed by the ILC on state responsibility⁶¹ and to establish principles governing state and civil liability in respect of transboundary harm which arises from activities which are not unlawful *per se*.

The Working Group also noted the European Commission proposal for an EC Directive on civil liability for damage caused by waste. This defined injury to the environment as "a significant and persistent interference in the environment caused by a modification of the physical, chemical or biological conditions of water, soil and/or air in so far as these are not considered to be

⁵² *Lac Lanoux* Arbitration (France v. Spain), 24 ILR 101.

⁵³ Joined Cases Nos. 676/86 and No. 337 and others, *General Nation Maritime Transport Company and others v. The Patmos Shipping Company and others*, Court of Messina, 1st Civil Section, 30 July 1996.

⁵⁴ Cases 391, 392, 393, 398, 526, 459, 460 and 570/1986, Court of Appeal of Messina, Civil Section, judgment of 30 March 1989.

⁵⁵ Brussels, 29 November 1969, in force 6 May 1975.

⁵⁶ *Ibid.* Article II(4)(c).

⁵⁷ Summary of judgment of the Court of Appeal, Doc. FUND/EXC.30/2, para. 4.15, 29 November 1991.

⁵⁸ E.g. Incidences such as the *Amoco Cadiz* (1978), *Exxon Valdez* (1989), the *Haven* (1991), the *Braer* (1993).

⁵⁹ *Supra*.

⁶⁰ See further, Julio Barboza, "Draft Articles on International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law - the Work of the ILC at its 1996 session", *RECIEL* 5:4 (1996) p. 347.

⁶¹ ILC Draft Articles on State Responsibility, II Yearbook ILC (1980), Part 2, p.30.

damage within the meaning of subparagraph (c)(ii) [on damage to property]".⁶² The EC Commission Green Paper on Environmental Liability recognises the central importance of the definition of environmental damage adopted in driving the process of determining the type and scope of the necessary remedial action and thus the costs that are recoverable.⁶³

A further source for consideration was the effort by the Ad Hoc Working Group set up under the Basel Convention on the Transboundary Movement of Hazardous Waste and Their Disposal⁶⁴ to develop a draft Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and Their Disposal. As the draft Protocol stood following the meeting of the Ad Hoc Working Group - in May 1996⁶⁵ - damage to the environment was broadly defined to include impairment of the environment and the costs of reasonable preventive and response measures taken to prevent or minimise loss or damage.

(d) *Relevant regional and national laws*

The Working Group also considered that regional treaties, in particular, from the Gulf region, could provide definition guidance. The Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution⁶⁶ which reflects co-operation among the Gulf States to protect the marine environment in the region, defines "marine pollution" to mean:

"the introduction by man directly, or indirectly, of substances or energy into the marine environment resulting or likely to result in such deleterious effects as harm to living resources, hazards to human health, hindrance to marine activities including fishing, impairment of quality for use of sea and reduction of amenities."

In respect of national laws, the Working Group considered that priority should be given to the relevant

laws of the Gulf States. relevant examples taken into consideration included the Iranian Petroleum Act of 6 August 1974, applicable to all petroleum operations on shore, in the territorial sea and on the continental shelf, and which provides:

"The National Iranian Oil Company shall, during operations related to each agreement, be mindful and pay full attention to the conservation of the natural resources (especially natural gas) and also the prevention of pollution of the environment (air, water and land)...⁶⁷"

Other national legislation may also be particularly useful in assisting with matters of definition. In particular, the United States federal statutes, the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and the 1990 Oil Pollution Act may be particularly relevant.⁶⁸ Under CERCLA the "environment" is defined as:

(A) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States...

(B) any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.⁶⁹

Natural resources are defined under CERCLA⁷⁰ and the Oil Pollution Act⁷¹ as "include[ing] land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States....".

Having regard to the various above-mentioned definitions in international, regional and national legislation and practice, the Working Group determined first of all the scope of the term "environment". The Working Group

⁶² COM (89) 282 final. The proposal was submitted by the Commission on 1 September 1989, but has not progressed due to the wider ranging discussion of liability for environmental damage in the EC commenced by the Commission's Green Paper on Remedying Environmental Damage, COM (93) 47.

⁶³ Communication from the Commission to the Council and Parliament and the Economic and Social Committee: Green Paper on Remedying Environmental Damage, COM (93) 47.

⁶⁴ Convention on the Control of the Transboundary Movement of Hazardous Wastes and Their Disposal, (Basel) 22 March 1989, in force 24 May 1992, 28 ILM 657 (1989).

⁶⁵ Fourth Session, Geneva 24-28 June 1996, UN Doc. UNEP/CHW.I/WG.1/4/2 3 July 1996.

⁶⁶ Kuwait, 24 April 1978.

⁶⁷ For the full text of the Iranian Petroleum Act 1974, see Petroleum Legislation, Basic Oil Laws and Concession Contracts - Middle East suppl. No.44 p.3.

⁶⁸ *Supra*.

⁶⁹ *Ibid.* s. 9601 (8).

⁷⁰ *Ibid.* s. 9607 (f)(1).

⁷¹ *Supra.* s. 1001 (20).

was of the opinion that for present purposes the term "environment" should be broadly construed and that the simplest and most comprehensive definition appeared to be that adopted in the 1993 Lugano Convention. "Environmental damage" did not include damage to persons or to property, although such damage could be consequential to the damage caused to the environment *per se*. The Working Group considered that the distinction between environmental damage *per se* and damage as consequence to persons and property was reflected in Article 24 of the International Law Commission's Draft Articles on Liability for Injurious Consequences of Act Not Prohibited By International Law, which addresses "harm to the environment and resulting harm to persons or property".⁷² Accordingly, and taking into account the practice indicated above, it concluded that "environmental damage" broadly refers to the "impairment of the environment", which the Group defined as:

"a measurable adverse impact on the quality of a particular environment or any of its components including its use and non-use values and its ability to support and sustain an acceptable quality of life and a viable ecological balance."⁷³

(2) Depletion of natural resource

The Working Group noted that while there may be some overlap between the concept of "depletion of natural resources" and that of "environmental damage", the two constituted separate heads of damage under Security Council Resolution 687 and Governing Council Decision 7 (the latter refers to "depletion of or damage to natural resources). As used in resolution 687 the concept of "depletion of natural resources" was novel. Unlike the definition of "environmental damage" no great assistance could be gleaned from international practice.

The Working Group considered the legal definition of "depletion" which is defined as "an emptying, exhaustion or wasting of assets", and the verb to deplete which means "to reduce or lessen, as by use, exhaustion or waste".⁷⁴

The Working Group concluded that these definitions suggested that "the depletion of natural resources" was a more restricted notion than "environmental damage", and that it related to the using up of a natural resource having economic value but which may not cause environmental damage in and of itself (although the possibility of collateral damage is not excluded).⁷⁵ The Working Group recognised that the most obvious example of "depletion of natural resources" in respect of the unlawful invasion by Iraq of Kuwait was the loss of oil and gas from sabotaged wells but that other resources such as, *inter alia*, marine resources could conceivably constitute a depletion of natural resources.

(III) Valuation of "environmental damage" and "depletion of natural resources"

The Working Group decided to deal with the valuation of environmental damage and the valuation of depletion of and damage to natural resources separately.⁷⁶ By way of clarification, it was noted that in the United States the phrase "natural resource damage" refers essentially to what in international law is referred to as environmental damage. Taking into account its Conclusions in relation to applicable law, and noting the relative lack of practice in international law in relation to valuation of environmental damage, the Working Group made reference in its discussion on this issue to law and practice in national jurisdictions.⁷⁷

As indicated above, the Working Group considered that the primary distinction to be drawn between

⁷² ILC Draft Articles on Liability for Injurious Consequences of Acts Not Prohibited by International Law, Barboza, Sixth Report, UN Doc. A/CAN.4/428, p.39 (1990).

⁷³ Report para. 45.

⁷⁴ Black's Law Dictionary, 5th Ed. (West Publishing Co. 1983) p.227.

⁷⁵ Rodman R. Bundy, The Definition and Valuation of Depletion of Natural Resources, paper prepared for the second meeting of the UNEP Working Group of Experts on Liability and Compensation for Environmental Damage Arising from Military Activities.

⁷⁶ In the Conclusions, paragraphs 60 to 81 deal with environmental damage, and paragraphs 82 to 96 with the depletion of natural resources.

⁷⁷ As noted below, the Working Group made extensive reference to practice in the US under CERCLA and OPA. CERCLA (the Comprehensive Environmental Response, Compensation and Liability Act, 1980) imposes liability for natural resources damage caused by hazardous substances. It provides that responsible parties may be held liable for "damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from such a release". (sec. 107(a)(C), 42 U.S.C., sec. 9607(a)(C)). OPA (the Oil Pollution Act, 1990) imposes liability for damage caused by discharges of oil into navigable water. Under the Acts, natural resources damages may be recovered by state and federal trustees, and by Indian tribe trustees. Natural resource damages may be recovered for those natural resource injuries that are not fully remedied by response actions as well as public economic values lost from the date of the discharge or release until the resources have fully recovered. Monies recovered for natural resource damages are to be used "to restore, replace or acquire the equivalent" of the injured resource. CERCLA and OPA do not address in detail the assessment of natural resource damages. For CERCLA, Natural Resource Damages Assessment regulations were promulgated by the Department of the Interior (DOI), and for OPA by the National Oceanic and Atmospheric Administration (NOAA). Aspects of the DOI regulations, issued in 1986 were subject to challenge by a number of states, environmental groups and industry bodies in *Ohio v. US Department of the Interior*, 880 F.2d 432 (D.C. Cir. 1989). Aspects of the partially revised regulations, issued in 1994, were subject to challenge in *Kennecott Utah Copper Corporation v. US Department of the Interior*, 88 F.3d 1191 (D.C. Cir. 1996). For a discussion of the revised DOI regulations, see Wilde, "Natural Resource Damage Assessment under the Revised United States DOI Regulations" [1996] 7 OGLTR 285.

"environmental damage" and "depletion of natural resources" related to the commercial or non-commercial nature of the resources in question. As noted in the Conclusions,⁷⁸ Decision 7 of the UNCC Governing Council does not indicate how the Commission is to determine the amount of damages to be awarded for the various types of damage, and valuation methods are likely to be dealt with by reference to "other relevant rules of international law".

The Working Group noted that the starting point for the discussion of valuation was the *dictum* of the Permanent Court of International Justice in the *Chorzow Factory (Indemnity)* case,⁷⁹ that "reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed".

The Working Group identified the key elements of claims for damage under this head as:

- (a) evidence of injury, damage or depletion;
- (b) evidence of the particular conduct that caused the injury in question;
- (c) evidence of the "directness" of the damage;
- (d) the elements of damages sought; and
- (e) the methodology for valuing these elements of damage.⁸⁰

In relation to environmental damage, the Working Group concluded that injury should be defined in terms of impaired sustainability of communities, populations and ecosystems rather than losses of individuals or physical, chemical or biological changes alone. In this regard, the Working Group had regard to the increasing emphasis in international conventions on ecosystem approaches.⁸¹

In relation to evidence of causation, the Working Group noted that it might be difficult to obtain evidence as to what the condition of the environment would have been had the conduct alleged to have caused damage not occurred. This would require some counterfactual analysis, whereas information on baseline resources against which to measure any damage may not be available due to lack of previous monitoring.⁸²

(1) Valuation of environmental damage

The Working Group approached its task firstly by considering the specific (but non-exhaustive) heads of damage set out in paragraph 35 of Decision 7,⁸³ and then by considering other types of environmental damage which may be compensable.

- (a) *Abatement and prevention of environmental damage (including expenses directly relating to fighting oil fires and stemming the flow of oil in coastal and international waters.*

The Working Group had before it provisions of a number of international conventions which incorporate the cost of preventive measures as a head of damage, and noted that this head of damage is well-recognised in international law and practice. For example, the 1969 International Convention on Civil Liability for Oil Pollution Damage (1969 CLC)⁸⁴ includes in its definition of "pollution damage"⁸⁵

"The costs of preventive measures and further loss and damage caused by preventive measures".

"Preventive measures" are defined as

"any reasonable measures taken by any person after an incident has occurred to prevent or minimise pollution damage".⁸⁶

This approach is retained in the 1992 Protocol to amend the 1969 CLC (1992 CLC Protocol).⁸⁷

⁷⁸ Report, Paragraph 54

⁷⁹ Report, [1927] P.C.I.J. Series A, No. 17, 47.

⁸⁰ Paragraph 59.

⁸¹ See also, for example, Convention on Biological Diversity; Convention on the Conservation of Antarctic Marine Living Resources, Article 1(3).

⁸² See Stewart, Connaughton and Steel, "Evaluating the Present Natural Resource Damages Regime: the Lawyer's Perspective", Ch. 6 in Stewart (ed.) *Natural Resource Damages: A Legal, Economic and Political Analysis* (National Legal Centre for the Public Interest, 1995), at 157.

⁸³ See Richard B. Stewart, "Outline of Linkages Between Valuation Methodologies and the Categories of Environmental Damage in Paragraph 35 of Decision 7", prepared for the second meeting of the Working Group, July 1995.

⁸⁴ 9 I.L.M. 45, Brussels 29 November 1969; in force 19 June 1975.

⁸⁵ Article 1.6

⁸⁶ Article 1.7

⁸⁷ London, 27 November 1992; in force 30 May 1996. Article 2(3), amending Article 1.6 1969 CLC.

Costs of preventive measures and loss or damage caused by preventive measures are also included within the definition of damage in the 1993 Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment⁸⁸ and the 1996 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances at Sea.⁸⁹ The Geneva Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail, and Inland Navigation Vessels also includes in its definition of "damage" costs of preventive measures, defined as, "any reasonable measures taken by any person after an incident has occurred to prevent or minimise damage".⁹⁰

Preventive measures are also currently included within the definition of damage in the Draft Articles of a Protocol on Liability and Compensation for Damage Resulting from the Transboundary Movements of Hazardous Wastes and their Disposal being developed by an Ad Hoc Working Group of Legal and Technical Experts under the Basel Convention.⁹¹

The Working Group noted that, unlike the other heads identified in paragraph 35 of Decision 7, this head of damage does not expressly state that measures taken should be "reasonable".⁹² Nevertheless, the Group felt that it would be appropriate to infer some limitation on compensation to measures (and costs) that are reasonable, although in the light of the precautionary principle, some latitude would be warranted in relation to emergency response measures. As noted above, the definition of preventive measures included in some of the international conventions does include a reasonableness criterion.

(b) *Reasonable measures already taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment.*

With regard to restoration, the Working Group noted two basic issues: the basis and scope of restoration, and the "reasonableness" of measures taken. While international law and practice recognises liability for restoration or reinstatement of the environment and the principle that measures for restoration or reinstatement must be reasonable,⁹³ criteria for determining the scope and reasonableness of such measures are undeveloped, and in some respects controversial.⁹⁴ As to the basis and scope of restoration, there are a number of options.⁹⁵ One option is to replicate, as far as possible, the precise physical and biological condition that the injured resource would be in but for the injury. Another is to aim to replace the basic ecological functions lost by the injury.⁹⁶ A further approach is to reinstate the uses and other services – such as recreational opportunities and environmental amenities – that the environment and its ecological functions provide to the public.⁹⁷ The Working Group concluded that the basic aim should be to reinstate ecologically significant functions of the injured resources, rather than to replicate the pre-existing conditions, which may in any event be impossible or impracticable.⁹⁸

In relation to assessing what constitutes a reasonable level of restoration, a fundamental problem will be how to establish the baseline measure of the character and quality of the environment prior to the spill or release, against which the restoration measures are to be judged.⁹⁹ In many cases a well-documented baseline of the pre-existing quality of environmental resources damaged as a result of Iraq's invasion of Kuwait is unlikely to exist, and may be very difficult, if not impossible, to determine retrospectively. In relation to fixing the baseline against which measures should be judged, a further problem which has been identified is whether the pre-injury resource should be defined strictly in terms of its physical and biological characteristics, in which case restoration should, so far as possible, aim at replication, or whether the baseline should be defined

⁸⁸ 32 I.L.M. (1993) 1228. Lugano, 21 June 1993; not in force. Article 2(7)(d).

⁸⁹ IMO LEG/CONF.10/DC.4. London, 3 May 1996; not in force. Article 1(6)(d).

⁹⁰ ECE/TRANS/79. 10 October 1989; not in force. Article 1(10)(d); Article 1(11).

⁹¹ UNEP/CHW.I/WG.I.4.2, 3 July 1996, Annex I, Draft Article 2(2)(b)(vi). Note: the Ad Hoc Working Group met again in May 1997.

⁹² Report, Paragraph 62.

⁹³ See the international conventions and instruments discussed below in this section.

⁹⁴ Report, Paragraph 65.

⁹⁵ See Stewart, n. 83 above. See also Sands and Stewart, "Valuation of Environmental Damage - US and International Law Approaches", 5(4) RECIEL (1996) 290.

⁹⁶ *ibid.*

⁹⁷ *ibid.*, 292.

⁹⁸ Report, Paragraph 66.

⁹⁹ See n. 82 above.

in terms of the services, both use and non-use, previously provided by the damaged or destroyed resources. The second approach might be cheaper (and more feasible) to implement, but may be less acceptable in the context of rare or unique resources or resources not within the jurisdiction or ownership of any one state.

The Working Group considered the provisions of a number of international conventions and instruments which refer to clean-up, restoration or reinstatement measures. For example, under Article 8 of CRAMRA, the operator is under an obligation to take necessary and timely response action if its activities result in, or threaten, damage to the Antarctic environment or its dependent or associated ecosystems. Such action includes prevention, containment, clean-up and removal measures.¹⁰⁰ The operator will be strictly liable for damage to the Antarctic environment or dependent or associated ecosystems (including payment in the event that there has been no restoration to the *status quo ante*); loss of or impairment to established use; loss of or damage to people and property; and reimbursement of reasonable costs relating to necessary response action to restore the *status quo ante* (including prevention, containment, clean-up and removal).¹⁰¹

Chapter IV of the ILC Draft Articles on the liability of states for acts not prohibited by international law addresses the issue of liability if transboundary harm arises. Under Draft Article 24, a distinction is drawn between different harms. With regard to environmental harm, the state of origin would be required to "bear the costs of any reasonable operation to restore, as far as possible, the conditions that existed prior to the occurrence of the harm" or, if that proves impossible, to reach agreement on monetary or other compensation for the deterioration suffered.¹⁰²

The Working Group noted that a number of the civil liability conventions contain definitions of "damage" which include the costs of reasonable restoration and clean up measures. For example, the 1992 CLC Protocol amends the definition of pollution damage in the 1969 CLC such that

"compensation for impairment of the environment other than loss of profit from such impairment shall be

limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken".¹⁰³

A similar provision is contained in the 1996 HNS Convention.¹⁰⁴

Reasonable measures of reinstatement are also referred to in the Geneva Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels. Compensable damage under the Convention includes loss or damage by contamination to the environment caused by dangerous goods, provided that compensation for impairment of the environment other than for loss of profit caused from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken.¹⁰⁵

Under the terms of the Lugano Convention, damage includes environmental damage, which is defined as:

"loss or damage by impairment of the environment in so far as this is not considered to be damage within the meaning of [Article 2(7)(a) or (b) ...] provided that compensation for impairment of the environment, other than for loss of profit from such impairment, shall be limited to the costs of reasonable measures of reinstatement actually undertaken or to be undertaken..."¹⁰⁶

Measures of reinstatement are defined under the Lugano Convention as:

"any reasonable measures aiming to reinstate or restore damaged or destroyed components of the environment, or to introduce, where reasonable, the equivalent of these components into the environment. Internal law may indicate who will be entitled to take such measures."¹⁰⁷

The Draft Articles under discussion in relation to a liability protocol under the Basel Convention currently provide that:

"With respect to compensation for the impairment of the environment in Article 2(2)(a)(iv)

¹⁰⁰ Art. 8(1).

¹⁰¹ Art. 8(2).

¹⁰² Art. 24(a).

¹⁰³ Article 2(3), amending Article 1.6 1969 CLC.

¹⁰⁴ Article 1(6)(c).

¹⁰⁵ Article 10(1)(c).

¹⁰⁶ Art. 2(7)(c) (emphasis added).

¹⁰⁷ Art. 2(8) and (10).

- (a) if the environment can be reinstated, compensation shall be limited to:
- (i) the costs of measures of reinstatement actually undertaken or to be undertaken; or
- (ii) the costs of returning the environment to a comparable state where reasonable".¹⁰⁸

Measure of reinstatement are currently defined in the Draft Protocol as "any reasonable measures aiming to [assess] rehabilitate or restore damaged or destroyed elements of the environment". The Basel Draft Articles contain a proposed (but not yet agreed) definition of "reasonable" in the context of measures of reinstatement and preventive measures. Under the proposal "reasonable" is to include "notions of risk to the environment, risk to human life and safety, technological feasibility and proportionality in relation to costs".¹⁰⁹ This suggests something beyond cost-effectiveness.

The question of restoration measures has also been discussed in a 1993 EC Green Paper on Liability for Environmental Damage. This recognised that:

"An identical reconstruction may not be possible, of course. An extinct species cannot be replaced. Pollutants emitted into the air or water are difficult to retrieve. From an environmental point of view, however, there should be a goal to clean-up and restore the environment to the state which, if not identical to that which existed before the damage occurred, at least maintains its necessary permanent functions. [...] Even if restoration or cleanup is physically possible, it may not be economically feasible. It is unreasonable to expect the restoration to a virgin state if humans have interacted with that environment for generations. Moreover, restoring environment to the state it was in before the damage occurred could involve expenditure disproportionate to the desired results. In such a case it might be argued that restoration should only be carried out to the point where it is still "cost-effective". Such determinations involve difficult balancing as well as of economic and environmental values."¹¹⁰

As noted above, despite the broad range of instruments which include references to reasonable measures of restoration or similar terms, there remains little actual

practice of assessing the reasonableness of measures taken. The Working Group therefore made reference to relevant national laws and practice. The question of what types of measures constitute reasonable measures of restoration has been faced in a US case in 1980, *Commonwealth of Puerto Rico v. SS Zoe Colocotroni*,¹¹¹ which involved an oil spill in 1973 on the Puerto Rican coast. The national legislation in question provided that the federal government and states were authorised to recover "costs or expenses incurred...in the restoration of natural resources damaged or destroyed as a result of a discharge of oil or a hazardous substance". At first instance, the District Court awarded damages based, *inter alia*, on the cost of replacing, through biological supply laboratories, the millions of tiny aquatic organisms destroyed by the spill. The Court of Appeals vacated the District Court's decision in this respect and held that the appropriate primary standard for determining damages in such a case was the cost reasonably to be incurred by the sovereign or its designated agency to restore or rehabilitate the environment in the affected area to its pre-existing condition, or as close thereto as is feasible without grossly disproportionate expenditures. Factors to be taken into account would include technical feasibility, harmful side effects, compatibility with or duplication of such regeneration as is naturally to be expected, and the extent to which efforts beyond a certain point would become either redundant or disproportionately expensive. The Court of Appeals also recognised that there may be circumstances where direct restoration of the affected area would be either physically impossible or so disproportionately expensive that it would not be reasonable to undertake such a remedy. With respect to the District Court's decision, the Court of Appeals found that the replacement costs were excessive, particularly since Puerto Rico had not represented that it intended to replace the lost organisms (whose damaged habitat would, in any event, have been unable to support them). In effect, the alleged replacement value had been used as a yardstick for estimating the quantum of harm done. Instead, the Court of Appeals found that the plaintiff should have the opportunity to show what other more reasonable steps, if any, might be taken which would have a beneficial effect on the damaged ecosystem, and that the projected costs of such measures should form the basis of any award.

Issues of what constitute appropriate restoration measures also arise at the national level in the US under CERCLA.¹¹²

¹⁰⁸ Draft Article 4ter(2)(a).

¹⁰⁹ Draft Article 2(3).

¹¹⁰ Communication from the EC Commission to the EC Council and European Parliament on Environmental Liability, para. 5.2, (1993).

¹¹¹ United States Court of Appeals, First Circuit, 628 F.2d 652 (1980).

¹¹² In relation to CERCLA clean up cases, critics of Superfund have complained that the clean up standards imposed are excessively stringent. There have been disputes as to whether costly permanent remedies that involve complete removal of contamination from sites are justified or whether management solutions that tolerate a degree of continuing contamination, subject to certain safeguards should be utilised instead. - In claims for environmental damage similar issues will arise and it can be expected that there might be protracted disputes over the suitability, effectiveness and cost of the measures taken.

Damages recovered in actions brought under CERCLA by certain federal or state authorities as trustees must be used "to restore, replace or acquire the equivalent of" the injured resource.

The Working Group found that the requirement that measures undertaken be "reasonable" implied that the most cost-effective means of achieving restoration should be utilised.¹¹³ Also in the U.S., there is a suggestion that reasonableness requires that the costs of restoration incurred are not "grossly disproportionate"¹¹⁴ to the value of the resources. In *Ohio v. DOI*, the US Court of Appeals found, *inter alia*, that Congress had established a preference for restoration cost as a measure of recovery in natural resource damage cases, but this was not to say that Department of the Interior (DOI) may not establish a class of cases where other considerations - such as infeasibility of restoration or grossly disproportionate costs - warrant a different standard.¹¹⁵

The Working Group also found that limitations on restoration costs ought to be applied on an incremental basis. The question therefore whether the costs of additional measures are reasonable in relation to incremental benefits would arise.¹¹⁶

(c) *Reasonable monitoring and assessment of the environmental damage for the purposes of evaluating and abating harm and restoring the environment*

and

(d) *Reasonable monitoring of public health and performing medical screening for the purposes of investigation and combating increased health risks as a result of the environmental damage.*

In relation to assessment, the Working Group once again considered relevant provisions of US law. CERCLA and Oil Pollution Act (OPA) provide for recovery by trustees of the reasonable costs of monitoring and assessing environmental damage and devising appropriate removal and restoration measures.¹¹⁷ CERCLA itself does not define "reasonable costs". In defining the reasonable costs of assessment, the DOI regulations require that "the anticipated increment of extra benefits in terms of the precision or accuracy of estimates obtained by using a more costly . . . methodology are greater than the anticipated increment of extra costs of that methodology, and the anticipated cost of the assessment is expected to be less than the anticipated damage amount".¹¹⁸ The requirement that the anticipated cost of the assessment be less than the anticipated damage amount was one of the elements of the DOI regulations challenged in *Ohio v. DOI*, but the Court of Appeals refused to overturn it.¹¹⁹

In Paragraph 72 of its Conclusions, the Working Group considered whether claims for monitoring and assessment of environmental damage might also be recoverable by international organisations. For example, a number of regional and international organisations participated in the preparation of a 1991 Report to the Secretary General by a UN Mission Assessing the Scope and Nature of Damage Inflicted upon Kuwait's Infrastructure During the Iraqi Occupation of Kuwait.¹²⁰ Reports were also prepared under the auspices of UNEP to assess the environmental consequences of the conflict and to propose a programme for the mitigation of the adverse effects, rehabilitation and protection of the environment affected by the conflict.¹²¹

¹¹³ The DOI's revised regulations include cost-effectiveness as a factor to be taken into account by trustees in selecting a restoration option, but cost-effectiveness is not an absolute determinative factor. This approach was upheld by the Court of Appeals in *Kennecott*, n.89 above, at 1217-1218. See also *Sands and Stewart*, n.95 above, at n.17.

¹¹⁴ A German law on liability for environmental damage has adopted a similar approach. The law stipulates that "when damage sustained by an object constitutes at the same time injury to nature or the countryside, restoration to its natural state can be rejected if known to be altogether excessive, but the simple fact that the costs of restoration exceed the economic value of the object does not justify the rejection". Rehinder, "Rapport General" in SFDE, *Le Dommage écologique en droit interne, communautaire et comparé* (Economica, 1992) at 114, cited in Wu Chao, *Pollution from the Carriage of Oil by Sea: Liability and Compensation* (Kluwer, 1996) at 352, n.75.

¹¹⁵ See *Ohio v. DOI*, n.77 above, at 443 and 459. In fact, the DOI did not include the grossly disproportionate test in its revised regulations. This approach survived challenge in *Kennecott Utah Copper Corporation v. DOI*.

¹¹⁶ *Stewart*, n. 83 above, at 3.

¹¹⁷ *Sands and Stewart*, n.95 above, at 293. CERCLA, sec. 107(C), 42 U.S.C. sec. 9607(C); OPA sec. 106(d)(1)(C), 33 U.S.C. sec. 2706(C).

¹¹⁸ 43 C.F.R. s 11.14 (ee). Cited in *Stewart et al.* n.82 above.

¹¹⁹ *Ohio v. DOI*, n.77 above, at 468.

¹²⁰ UN Doc. S/22535. Organisations involved included UNEP, UNESCO, WHO.

¹²¹ UNEP, *Report on the UN Inter-Agency Plan of Action for the ROPME Region, Phase I: Initial Surveys and Preliminary Assessment*, 12 October 1991; UNEP, *Abridged and Updated Report on the UN Inter-Agency Plan of Action for the ROPME Region*, 11 June 1992; UNEP, *Updated Scientific Report on the Environmental Effects of the Conflict between Iraq and Kuwait*, UNEP/GC.17/inf.9, 8 March 1993. Organisations involved in the preparation of these reports included IMO, WHO, WMO, UNESCO, IAEA, UNCHS/Habitat, UNEP and UNIDO. The International Union for the Conservation of Nature also participated in the preparation of the 1991 Report.

(e) Other environmental damage

As noted above, the Working Group did not consider that the heads of damage enumerated in paragraph 35 of Decision 7 were exhaustive. The members of the Working Group therefore went on to consider other potential heads of environmental damage¹²² and relevant valuation issues. The Working Group considered that recoverable loss here could be categorised into two types:

- recoveries for permanent damage to the environment where clean-up or restoration would not be physically possible, reasonable or otherwise feasible, or where clean-up or restoration was not successful; and
- recoveries for interim damage pending full clean-up or restoration (an example might be loss of environmental amenity).

Damage under these categories would represent an element of recovery separate from and additional to costs of clean-up and restoration.¹²³

The Working Group noted that there was uncertainty, and little practice, relating to these categories of damage at the international level. They had been recognised in certain national jurisdictions, but remain controversial, particularly as to valuation. The Working Group did not recommend a particular valuation methodology for environmental damage, but rather set out various approaches and considerations which the Commissioners might wish to draw upon.

The Working Group distinguished between use values

and non-use values associated with environmental resources. Use values include consumptive values (such as fishing) and non-consumptive values (such as birdwatching). Non-use values include values that persons may hold for an environmental resource even if they never use or visit it, and may include preservation, bequest, and, by some accounts, option values.¹²⁴

Some relevant practice is found at the international level in claims brought to the International Oil Pollution Fund. The Working Group noted that practice under the IOPC Fund was to reject claims for environmental damage based upon abstract quantification methods. In the *Antonio Gramsci* incident, the USSR submitted claims comprising largely claims for ecological damage, to the Court in Riga (USSR). The amount of damage was calculated, in accordance with a USSR statute, at the rate of 2 Roubles per cubic metre of polluted water. However, the Executive Committee of the IOPC Fund felt that such a claim was not covered by the definition of "pollution damage" in the 1969 and 1971 Conventions, and that claims should be based upon quantifiable losses.¹²⁵ This incident led to the adoption of IOPC Fund Resolution No. 3 in 1980, which stated that "the assessment of compensation to be paid by the IOPC Fund is not to be made on the basis of an abstract quantification of damage calculated in accordance with theoretical models". In 1985, on the basis of Resolution No.3, the IOPC Fund addressed a £2.3 million claim by the Italian Government for damage to the marine environment arising out of a spillage from the *Patmos*, a Greek registered tanker. In the absence of any documentation from the Italian Government indicating the nature of the damage which had been caused or the basis on which the

¹²² See discussion on definitions of environmental damage, above.

¹²³ See Paragraph 74, Working Group Conclusions.

¹²⁴ Paragraph 75. Cicchetti and Wilde have categorised use and non-use values as follows:

(1) Use values

(a) Current use: The value to an individual of current use of a resource, including consumptive and non-consumptive uses.

(b) Future use: The value to an individual of future intended use of a resource, including both consumptive and non-consumptive uses.

(2) Non-use values

(a) Option: The value to an individual (who may not be a current or future user) of knowing that a resource is available for potential use in the future (excluding future use value)

(b) Existence:

(i) Vicarious: The value to an individual of knowing that other individuals in the current generation are able to use a resource now or in the future.

(ii) Bequest: The value to an individual of knowing that future generations will be able to use a natural resource.

(iii) Inherent: The value to an individual of knowing that a resource exists, exclusive of any other use or non-use value.

Cicchetti and Wilde, "Uniqueness, Irreversibility and the Theory of Non-use Values", 9(1992) *Am. J. of Agricultural Econ.* 1121, cited in Wilde, n.77 above, 286.

¹²⁵ Annual Report of the Oil Pollution Convention Fund [year]

amount claimed had been calculated, the IOPC Fund rejected the claim.¹²⁶ The Italian Government took the case to the Italian courts. In 1989, the Court of Appeal¹²⁷ held that

"the environment must be considered as a unitary asset, separate from those of which the environment is composed (territory, territorial waters, beaches, fish etc) and it includes natural resources, health and landscape. The right to the environment belongs to the State, in its capacity as representative of the collectivities. The damage to the environment prejudices immaterial values, which cannot be assessed in monetary terms according to market prices, and consists of the reduced possibility of using the environment. The damage can be compensated on an equitable basis, which may be established by the Court on the grounds of an opinion of experts... The definition of "pollution damage" as laid down in Article I(6) is wide enough to include damage to the environment of the kind described above."¹²⁸

The Court of Appeal appointed three experts to ascertain the existence, if any, of damage to the marine resources resulting from the oil spillage.¹²⁹ The experts found that, with the exception of damage to fishing activities which they valued at approximately £465,000, there was a lack of data to evaluate the economic impact on other activities and that a precise assessment of damage to such activities was impossible. The experts also determined that the Court was the appropriate body to carry out the evaluation.¹³⁰ In 1993, the Court of Appeal held that the government was entitled to £830,000 as compensation for damage to the environment, recognising that this type of damage affects values which do not have a market price. Compensation

was assessed on the basis of equity.¹³¹ In the second *Antonio Gramsci* case in 1987, a claim relating to environmental damage was submitted by the Estonian State Committee for Environmental Protection and Forestry, based on the same "metodika" formula used in the first *Antonio Gramsci* case described above.¹³²

On 11 April 1991 the Haven, a Cypriot registered tanker caught fire and broke apart seven miles from Genoa in Italy and released over 10,000 tonnes of oil, causing damage to the Italian and French coasts and necessitating extensive clean-up operations.¹³³ The Italian Government submitted a claim for damage to the marine environment, in the provisional amount of 100,000 million Italian lire (£47 million), a figure which the Region of Liguria requested should be doubled.¹³⁴ 1200 Italian claimants, the French Government, twenty two French municipalities and two other public bodies also submitted claims. In the subsequent court proceedings at the Court of First Instance in Genoa, the question arose as to whether claims for damage to the marine environment could be pursued against the shipowners outside the Conventions under the relevant Italian law if such damage was not admissible under the 1969 CLC and the 1971 Fund Convention.¹³⁵ In 1996, the Court of First Instance in Genoa determined that the claim for environmental damage was admissible, and awarded £16.8 million in compensation, assessing the damage as a portion of the clean-up costs on the basis that this represented damage which had not been repaired by clean-up operations.¹³⁶ The IOPC Fund has appealed against this decision.

It should be noted that amendments in the 1992 Protocols to the 1969 and 1971 Conventions restrict the definition of "pollution damage" to reflect the

¹²⁶ FUND/EXC.16/8, 220, October 1986 para. 3.3, 1985 Patmos decision.

¹²⁷ Cases 391, 392, 393, 398, 526, 459, 460 and 570/1986, Court of Appeal of Messina, Civil Section, judgement of 30 March 1989, unofficial translation (on file with the author), p.57.

¹²⁸ Summary of judgement of the Court of Appeal, Doc. FUND/EXC.30/2, para. 4.15, 29 November 1991.

¹²⁹ See *Annual Report 1991 of the International Oil Pollution Convention Fund*, p. 30.

¹³⁰ *Ibid.*

¹³¹ Brans, "Liability and Compensation for Natural Resource Damage under the International Oil Pollution Conventions", 5(4) *RECIEL* 297. See below [text re Italian law]: Note that as the IOPC Fund was not called upon to pay compensation, it was not entitled to appeal the decision.

¹³² *Annual Report 1990 of the Oil Pollution Convention Fund*, at 20.

¹³³ See *Annual Report 1991 of the Oil Pollution Convention Fund*, at 59-62.

¹³⁴ *Ibid.*, p. 63.

¹³⁵ *Ibid.*, p. 68. The relevant Italian legislation relating to the protection of the marine environment is the Act of 31 December 1982 (No. 979), containing provisions for the protection of the sea, and the Act of 8 July 1986 (No. 349) establishing the Ministry of Environment. The issue also raised the question of the relationship under Italian law between the legislation implementing the 1969 and 1971 Conventions (Act No. 506 of 27 May 1978) and this later legislation.

¹³⁶ n.131 above, at 300. Brans notes a further incident, the Seki incident in which a claim for environmental damage has been submitted by the United Arab Emirates, based on an abstract method. Brans notes that the claim is based on the "Jeddah method", for eco-value assessment. The calculation is made on the basis of: the amount of oil lost; degradability and dispersability of the oil; and a dollar value for damaged marine resources based on a degree of sensitivity, *id.* at 300. The IOPC opposes the claim since it is calculated on the basis of a theoretical model.

decision of the IOPC Fund Executive Committee in Resolution No. 3.¹³⁷ The Working Group also noted that the Draft Basel Protocol contains language addressing the valuation compensation where environmental damage cannot be restored.¹³⁸

Given the relative lack of international practice, the Working Group spent some time considering national law and practice on this issue.

A number of alternative methods for valuing environmental resources have been considered, and were discussed by the Working Group. One method is to utilise the price that the environmental resource commands in the market. However, there may be no market price or the market price of the resource may not reflect its true value (for example, in the case of endangered species). As an alternative, some economists have attempted to calculate the use value of certain public natural resources relying on travel cost methods or hedonic pricing. In relation to travel cost methods, expenditures made by individuals to visit and enjoy resources form the basis of the calculation. Hedonic pricing methods look to the added market value commanded by private property with designated environmental amenities and seeks to transpose such values to public resources with comparable amenities.

For non-use values, the Working Group noted that the only established method which has been devised is contingent valuation methodology (CVM) has been developed which seeks to measure value through surveys, by asking individuals how much they would pay, for example in terms of increased taxation, to preserve a given natural resource from injury. Application of CVM methodology has been particularly controversial. Criticisms of CVM suggest that it can be an unreliable method which does not reflect actual economic behaviour and gives inflated values. It has also been argued that the value of environmentally significant resources to society collectively cannot be reduced to an aggregation of individual willingness to pay.¹³⁹

Again, the most developed practice on valuation of lost use and non-use values is in the US under CERCLA and the OPA. In relation to CERCLA, there has been some dispute as to which valuation methodologies should be

used. CERCLA provides that natural resource damages "shall not be limited by the sums which can be used to restore or replace such resources". It also directs that the damage assessment regulations prepared by the Department of Interior shall "identify the best available procedures to determine [natural resources damages], including both direct and indirect injury, destruction, or loss and shall take into consideration factors including, but not limited to, replacement value, use value, and the ability of the ecosystem to recover".

DOI regulations issued in 1986 set out a hierarchy of methodologies to be used, preferring the utilisation of market value, if available, followed by travel cost methods, hedonic pricing and CVM methodologies. In *Ohio v. DOI*, this over-reliance on market values was subject to some criticism in that it could result in significant undervaluation. The Court stated that while it is not irrational to look at market price as one factor in determining the use value of a resource, it is unreasonable to view market price as the exclusive factor, or even the predominant one.¹⁴⁰ The Court of Appeals remanded the regulations to DOI for review, noting that "[o]ption and existence values may represent "passive" use, but they nonetheless reflect a utility derived by humans from a resource, and thus, *prima facie*, ought to be included in a damage assessment".¹⁴¹

The inclusion of CVM methodology in the DOI regulations was also challenged in *Ohio v. DOI*. However, the Court of Appeals sustained DOI in its conclusion that CVM was a "best available procedure", and that its inclusion in the regulations was proper.¹⁴²

The Working Group also had before it a Note containing information on approaches to valuing environmental damage in jurisdictions other than the USA, and it indicated some alternative approaches which the Compensation Commission might consider.¹⁴³ For example, in some jurisdictions, valuation is left to the judge or tribunal. Italian domestic legislation provides the clearest example of a written law giving the judge the task of placing a value on the damage caused to the environment. The starting point is Italian Law No. 349 of 8 July 1986 regarding the establishment of the Ministry of Environment and rules on environmental damage.¹⁴⁴ According to Article 18, paragraph 1 of that Law,

¹³⁷ 1992 CLC Protocol, Article 2(3) amending Article 1.6 1969 CLC.

¹³⁸ Draft Article 4 ter (2)(b); Draft Article 2.

¹³⁹ See Stewart *et al.*, n.82 above.

¹⁴⁰ *Ohio v. DOI*, 462.

¹⁴¹ *Ohio v. DOI*, 464.

¹⁴² *Ohio v. DOI*, at 478.

¹⁴³ Khalastchi, "The Valuation of Environmental Damage: Comparative Note", prepared for the second meeting of the Working Group, July 1995.

¹⁴⁴ Legge 8 July 1986, n.389, *Italian Official Journal*, no. 159, 15 July 1986, cited in Khalastchi, n.143 above.

"anyone who, acting by fraud or fault, violates laws or regulations and causes harm to the environment has to pay compensation to the State". Whilst restoration in kind is the preferred option, where this is not viable the alternative is an award of damages. According to Article 18, paragraph 6, if a precise quantification is impossible, the amount of compensation to be paid is calculated on the basis of equitable criteria:

"The judge, in cases where a precise quantification of the damage is not possible, fixes the amount in an equitable way, taking into account the seriousness of the individual negligence, the costs of restoration, and the profit obtained by the transgressor in consequence of his damaging behaviour to the environmental goods."

As noted above, the decision of the Italian Court of Appeal in the Patmos case was made on the basis of equity.

Other examples of national legislation include the Conservation Act of 31 March 1987 of New Zealand which asks the Tribunal to consider all pertinent factors, including the incurred expenses of remedying the damage caused.¹⁴⁵ In certain national jurisdictions, the amount of compensation is fixed by an administrative decision. For example, in Spain, under the decree of 28 June 1986 on environmental impact assessment, where damage by projects carried out in violation of the Decree or following an incorrectly executed environmental impact assessment, such damage is valued by the relevant public authority. Similarly in the Australian States of New South Wales and Victoria, evaluation of ecological damage is made by the public body responsible for the protection of the environment. However, no indication is given to these bodies as to how to quantify the damage.¹⁴⁶

Certain national jurisdictions have adopted a system whereby the value of a particular species or natural habitat is assessed according to an established scale. For example under Spanish legislation the value attached to various species start from 2500 pesetas up to a million and a half pesetas for certain species in danger of

extinction, such as the monk seal, the bear and the Iberian lynx. In the autonomous region of Asturias there also exists such a scale for freshwater fish (from 100 000 to 500 000 pesetas) and another scale for marine organisms. This system is adopted in other national States including Hungary, Mongolia and Latin American States. Under Hungarian legislation (Decree of 15 March 1982 on the Law on the Conservation of Nature) the infringer may be ordered to pay ten times the value of the species destroyed where the animals and plants which had been destroyed were specially protected species. The same Hungarian legislation ascribes a value of 100 000 forints per hectare for any degradation without authorisation of a protected zone. In any case any compensation which is forthcoming must be used for the protection of the environment. In Hungary, any indemnity paid out goes into a centralised Environment Fund.¹⁴⁷

(2) Depletion of or damage to natural resources

As noted previously, the Working Group considered this head of damage to refer to resources with primarily economic or commercial value. The most obvious examples of resources in this category were oil and gas, but fisheries or water resources (insofar as their economic, rather than ecological, value had been affected) could also fall under this head.

The Working Group noted that the valuation of natural resources in international law is a complex issue. Consideration of relevant valuation techniques has arisen principally in cases involving the expropriation of foreign investments in the natural resource sector, particularly in relation to oil. Much of the discussion of compensation in these cases has centred on the legality or illegality of the expropriation itself, and the effect this may have upon the assessment of compensation.¹⁴⁸ However, in relation to potential claims before the Compensation Commission, the depletion of or damage to natural resources has occurred as a result of an unlawful act, i.e. the invasion and occupation of Kuwait. Nevertheless, the Working Group felt that it would be helpful to consider international precedents dealing with valuation in cases of expropriation, particularly cases involving oil or gas interests.¹⁴⁹

¹⁴⁵ C. de Klemm, *Les apports du droit compare, in Le dommage ecologique en droit interne, communautaire et compare*, Societe Française pour le Droit de l'Environnement, Institut du Droit de la Paix et de Developpement, pp. 143-164, t. 156. Cited in Khalastchi, n. 143 above.

¹⁴⁶ *Ibid.*, at 159.

¹⁴⁷ *Ibid.*, p. 157-158.

¹⁴⁸ For example, *Libyan American Oil Company (LIAMCO) v. Government of the Libyan Arab Republic (LIAMCO arbitration)*, (1981) 62 ILR 140; *American Independent Oil Co. (Aminoil) v. Kuwait (Aminoil arbitration)*, (1982) 21 ILM 976.

¹⁴⁹ See Bundy, "The Definition and Valuation of Natural Resources", prepared for the second meeting of the Working Group, July 1995. See also generally: Lauterpacht, "Issues of Compensation and Nationality in the Taking of Energy Investments", 8(4) JENRL (1990) 241; Amerasinghe, "Issues of Compensation for the Taking of Alien Property in the Light of Recent Cases and Practice", 41 ICLQ (1992) 22; Aldrich, *The Jurisprudence of the Iran-United States Claims Tribunal*, Ch. 5 (Oxford University Press, 1996); Becker, "Valuing the Depletion of Natural Resources under International Law", 6(2) RECIEL (1997) 181.

An important consideration of the Working Group in its deliberations on this issue was that oil lost as a result of the invasion and occupation of Kuwait (through well blow-outs or deliberate release) would otherwise have been produced over a period of time. Any valuation method used for assessing compensation would need to reflect this consideration.

The Working Group recognised that a number of methodologies were available for the valuation of commercial assets. These include accounting methods such as net book value and replacement cost, and methods to calculate market value, such as current market price, comparable sales value, and net present value calculated according to discounted cash flow methodology.¹⁵⁰ The Working Group considered each of these methods in paragraphs 85 to 97 of its Conclusions.

(a) Net book value

As outlined in Paragraph 85 of the Working Group's Conclusions, net book value is generally based upon the historic cost of physical assets depreciated in accordance with generally accepted accounting principles. It is primarily used to value businesses, rather than natural resources *per se*, which do not always have a listed book value. In a number of cases involving expropriation of foreign investments (including some relating to natural resources), governments have argued that net book value should be the appropriate basis of compensation. For example in the *Aminoil* arbitration,¹⁵¹ a case involving nationalisation of an oil concession, Kuwait argued that it owed the claimant no more than the net book value of the assets transferred to the state.¹⁵² The claimant, by contrast, argued that it was entitled to all the revenues which it would have received up to the end of the concession period. The Tribunal, however, in its assessment of compensation, was guided by the concept of a "reasonable rate of return". In the *LIAMCO* arbitration, Libya stated that compensation should be based on net book value.¹⁵³

Iran has claimed that net book value should be the basis of valuation in a number of cases before the Iran-US Claims Tribunal. For example, in *Amoco International Finance Corporation v. Iran*¹⁵⁴ (*Amoco* case), which involved a plant for the production and marketing of sulphur and gas, Iran argued that the fair value of the expropriated assets was best represented by net book value.¹⁵⁵ The Tribunal noted that net book value of an asset has the advantage of being easily and objectively assessed. However, although the Tribunal did not conclude that net book value was of no interest in assessing compensation,¹⁵⁶ it found that it was inadequate in relation to the valuation of a going concern, which involved intangible as well as tangible assets.¹⁵⁷ Aldrich notes that the Iran-US Claims Tribunal uniformly rejected net book value as the proper value of a going concern.¹⁵⁸

(b) Replacement cost

Replacement cost measures the cost of acquiring identical assets to those that have been lost or depleted.¹⁵⁹ The Working Group noted, however, that in the case of an asset such as a major oil field there may be no comparable asset available on the market. This method would also pose difficulties where the asset to be replaced would have been produced over a long period of time, so that the cost of acquiring replacement assets over time would have to be calculated.

(c) Market value

The Working Group considered a number of valuation methods which sought to establish the market value of an asset. One of the approaches adopted by the Iran-US Claims Tribunal for valuing oil and gas reserves was based on a calculation of market value of the reserves.¹⁶⁰ The Working Group noted that it may also be appropriate to consider national practice in this area, where relevant international practice is limited or non-existent, such as in relation to losses of natural resources other than oil or gas.¹⁶¹ The Working Group considered

¹⁵⁰ Paragraph 84.

¹⁵¹ *Aminoil*, n.148 above.

¹⁵² *Ibid.*, para. 137.

¹⁵³ n.148 above. The arbitrator based the award on "equitable compensation", *ibid.*, p.209-210.

¹⁵⁴ *Amoco International Finance Corporation v. Iran*, 15 Iran-US CTR 189.

¹⁵⁵ For the claimant's submission, see further below.

¹⁵⁶ *Ibid.*, para 256.

¹⁵⁷ *Ibid.*, para. 255.

¹⁵⁸ Aldrich, n.149 above, 250.

¹⁵⁹ In the *Aminoil* arbitration, the tribunal rejected the valuation of fixed assets based on net book value, and determined that, for the purposes of the case a depreciated replacement value seemed appropriate, *Aminoil*, n.148 above, at para.178(3).

¹⁶⁰ Bundy, n.149 above, at 6.

¹⁶¹ Paragraph 87.

three methods: current market price, comparable sales and net present value.

The Working Group noted that, provided there is an available market for the depleted resources, current market price could provide an appropriate mechanism. However, again, the fact that the depleted or damaged resources would have been produced over time creates a difficulty for a valuation method based solely on current prices. As the Working Group noted in paragraph 88, such a valuation would disregard factors such as the relationship between current and future market prices, the quantity of the resource utilised over time, costs of production, and risks.

The Working Group noted that the comparable sales method would also pose difficulties in this context, as it requires comparable markets in terms of size, location, political setting and production schedules.

The Working Group considered that valuation based on net present value of the depleted or damaged resources may be appropriate, given that the natural resources in question would have been produced or utilised over a period of time. The principal method for calculating net present value is discounted cash flow (DCF) methodology. The DCF method involves "determining how much an asset will earn during its productive life, deducting therefrom the cost of its doing so, and then using an appropriate discount to produce a capital sum that will represent the present value of the future flow of earnings".¹⁶²

DCF methodology has been considered on a number of occasions by the Iran-US Claims Tribunal,¹⁶³ although, as Aldrich notes,¹⁶⁴ the Tribunal's willingness to utilise DCF analysis has varied. In the *Amoco* case, for example, the claimant submitted a DCF analysis as its proposed

basis of valuation (as noted above, Iran, argued for the use of net book value). The Tribunal in *Amoco* criticised DCF analysis as speculative,¹⁶⁵ but it did not entirely reject it. Although it refused to apply either DCF or net book value directly, the Tribunal was of the opinion that, if correctly applied, the DCF method could provide useful information relating to profitability (rather than lost profits as such) of a going concern.¹⁶⁶

The *Phillips* case¹⁶⁷ concerned the expropriation of an interest in an oil joint venture. Again, in this case, the Tribunal rejected Iran's submission that compensation should be assessed on the basis of net book value. The Tribunal noted that in the absence of any active and free market for comparable assets at the date of taking, a tribunal must, of necessity resort to various analytical methods to assist it in deciding the price a reasonable buyer could be expected to have been willing to pay for the asset in a free market transaction. This must involve an appraisal of the revenue-producing potential of the asset over time.¹⁶⁸ Such an appraisal should take into account the level of production that might reasonably be expected, the costs of operation, including taxes and other liabilities, and the revenue such production could reasonably be expected to yield (which would include a determination of price estimates for sales of future production). It would also involve an evaluation of the effect on the price of any other risks likely to be perceived by a reasonable buyer at the date in question.¹⁶⁹ DCF was considered the primary mechanism for determining this revenue-producing potential. The Tribunal also noted the need for some adjustments to the valuation reached through use of DCF, so as to take into account all relevant circumstances, including "equitable considerations".¹⁷⁰ While the Tribunal recognised that DCF could be a relevant contribution to the evidence of the value of the claimant's contract rights, it did not recognise DCF as an exclusive method of analysis.¹⁷¹

¹⁶² Lauterpacht, n.149 above, at 246.

¹⁶³ See, for example, *Starrett Housing Corporation v. Iran* 4 Iran-US CTR 176; *Amoco* case, n.154 above; *Phillips Petroleum Co. v. Iran* (*Phillips* case), 21 Iran-US CTR, 79.

¹⁶⁴ Aldrich, n.149 above, at 250.

¹⁶⁵ The Tribunal stated:

"As a projection into the future, any cash flow projection has an element of speculation associated with it... For this very reason it is disputable whether a tribunal can use it at all for the valuation of compensation. One of the best settled rules of the law of international responsibility of States is that no reparation for speculative or uncertain damage can be awarded." (*Amoco* case, n. 154 above, at para. 238).

¹⁶⁶ *Amoco*, n.154 above, at para. 232.

¹⁶⁷ n.154 above. It should be noted that, although published, this award was not recognised by the Parties, after challenge by Iran.

¹⁶⁸ Para. 111.

¹⁶⁹ *ibid.*

¹⁷⁰ *ibid.*, para. 112. The Tribunal cited the reference to "equitable considerations" in the *Aminoil* award, n.148 above, paras. 78 and 144. However, this reference to equity by the Tribunal has been subject to criticism, see Lauterpacht, n. 149 above, at 248. Lauterpacht notes that the concept of equity is out of place given the specific formula in the 1955 Iran-US Treaty of Amity, which specifically provides that compensation should represent "the full equivalent of the property taken".

¹⁷¹ *ibid.*, para. 113. The Tribunal also made reference to what it described as an "underlying asset valuation", para. 115.

In *Starrett Housing Corporation v. Iran*,¹⁷² the Tribunal had recourse to DCF to value an expropriated interest in the development of a housing complex in Iran. Although the Tribunal accepted DCF as the method of valuation, it significantly reduced the compensation figure which had been calculated using DCF analysis, without any clear explanation of the reasons for this reduction.

The utility of the DCF method was also recognised, although not applied, in *Bilhoune v. Ghana*.¹⁷³ In this case, an *ad hoc* arbitration tribunal¹⁷⁴ noted that in cases of expropriation of a going concern, the most accurate measure of the value of the property was its fair market value, which in its nature takes into account future profits. The tribunal noted that the DCF method of valuation was often used to calculate the worth of an enterprise at the time of taking. However, the claimant had provided no evidence of future profits, and the tribunal therefore based its award on an alternative methodology. The DCF method was also used to value a going concern in a dispute before an ICSID Tribunal regarding the alleged expropriation of an interest in the construction and management of a hotel in Indonesia.¹⁷⁵

In addition to considering whether DCF might be an appropriate methodology for valuing compensation for depletion of or damage to oil and gas reserves, the Working Group also addressed the particular steps in carrying out DCF analysis. As noted above, this comprises two principal steps:

- calculating the amount and timing of the revenue that the asset or resource is expected to generate over its life, less the costs required to produce the asset ("future net cash flow" of the asset); and
- discounting the projected cash flow of the asset at

an appropriate rate to arrive at the "net present value" of the cash flow.¹⁷⁶

The Working Group noted that both steps entail the need to take into account a wide variety of factors.

First, a technical evaluation of the quantity of the resource depleted as a result of the unlawful action would be required.¹⁷⁷

Second, it would be necessary to determine the production schedule, i.e. when and in what quantities the oil would have been produced under normal circumstances. The Working Group noted that these calculations may require expert assessment.

Third, the applicable price to be utilised would need to be established.¹⁷⁸ In this regard, the Working Group noted that the price of oil had risen as a result of Iraq's invasion of Kuwait, and the question therefore arose as to whether actual prices should form the basis of assessment or alternatively whether prices "reasonably foreseeable" at the time of the loss should be utilised. The Working Group recognised that international precedents suggest that the valuation should not take into account circumstances which arose after the date of the loss.¹⁷⁹ In expropriation cases, it is reasonably well settled that in calculating compensation for expropriated property, the value of the asset before the specific threat of expropriation is taken as the benchmark for assessing compensation.¹⁸⁰ This approach would suggest that oil lost as a result of the invasion of Kuwait by Iraq should be valued on the basis of price forecasts carried out before the invasion.¹⁸¹

Fourth, costs of production should be deducted from cash flows.

¹⁷² n.163 above.

¹⁷³ *Bilhoune and Marine Drive Complex Ltd. v. Ghana Investment Centre and the Government of Ghana*, 95 ILR (1993) 183, at 228. The arbitration concerned a dispute arising out of the alleged expropriation of investments made by the claimant involving the development of a hotel resort complex in Ghana.

¹⁷⁴ The composition of the arbitration tribunal was: Judge Schwebel, President; Wallace and Leigh, Arbitrators.

¹⁷⁵ *AMCO-Asia et al. and Indonesia*, 24 ILM 1022 (1985). With regard to the valuation of the going concern, the tribunal noted that "the most appropriate [method] in the present case is to establish the net present value of the business, based on a reasonable projection of the foreseeable net cash flow during the period to be considered, said net cash flow being then discounted in order to take into account the assessment of damages at the date of the prejudice, while in the normal course of events, the cash flow would have been spread on the whole period of operation of the business; para. 271 (emphasis in original).

¹⁷⁶ Paragraph 91.

¹⁷⁷ Bundy notes that it is striking that the U.N. Report refers to losses of between 2 million and 6 million barrels per day, although Kuwait's pre-invasion production was about 1.5 million barrels per day. Bundy, n. [] above, at 7, n.6. Becker notes that at the beginning of 1990, Kuwait's proven reserves stood at 94,525 barrels "or about 130 years production at a rate of 2 million barrels per day", n. [] above, at 187.

¹⁷⁸ See Bundy, n.149 above, at 8.

¹⁷⁹ See Aldrich, n.149 above, at 243, citing *American International Group Inc. v. Iran*, 4 Iran-US CTR 96, 106; *INA Corp. v. Iran*, 8 Iran-US CTR 373, 380; *Phillips*, paras. 128-9.

¹⁸⁰ See Bundy, n.149 above, at 8, citing *Phillips* case, at p.133.

¹⁸¹ *ibid.*

Finally, "an appropriate discount rate must be applied to the cash flows in order to take into account various factors including the risk that the actual revenue produced would have been less than the projected cash flow and the time value of money, adjusted for inflation and the real rate of interest".¹⁸² In its decision in the *Amoco* case, the Tribunal stated:

"The second stage of the DCF method is the calculation of the proper discount rate. It starts with the determination of a reference or "benchmark" discount rate, based on market data allowing comparisons within a certain industry or type of investment."¹⁸³

The discount rate applied to the cash flow (as well as other elements of the DCF analysis) may be subject to challenge.¹⁸⁴ For example, although the Tribunal relied primarily on the claimant's DCF analysis in *Phillips*, it made a number of adjustments to the valuation relating to:¹⁸⁵ (i) the quantity of oil that could reasonable have been expected to be produced pursuant to the claimant's contractual rights;¹⁸⁶ (ii) anticipated oil prices;¹⁸⁷ and risks foreseen. In relation to risks the *Phillips* Tribunal noted that:

"As used by the Claimant, with its production and price estimates and a very low discount rate (four and one-half per cent), the Tribunal cannot agree that the method has resulted in a proper estimate of market value. There are, for example, risks, such as the risk of reduced future production as a result of national policy changes flowing from the Iranian Revolution, that should be taken into account, even if such risks cannot be quantified with any certainty in the anticipated production or as part of the discount rate."¹⁸⁸

As noted previously, the Tribunal also examined whether

there existed any equitable considerations which should be taken into account.¹⁸⁹ The consideration of risks was also discussed in the *Amoco* case, in relation to claimant's DCF analysis and the calculation of the discount rate. The Tribunal noted that:

"As a second step in the calculation of the proper discount rate, an adjustment must be made specifically to account for the relative risk characteristics of Khemco's future net cash flow. Three series of risks were considered: tax and currency risk, business risk, and *force majeure* risk."¹⁹⁰

The Tribunal in *Amoco* was of the view that in certain instances the risks seemed to have been underestimated, for example in relation to currency risk and *force majeure* risk.¹⁹¹

(IV) Conclusions

The Compensation Commission will have the challenging task of applying Resolution 687 to the facts of particular claims relating to the environmental and natural resources. Although the Working Group saw its principal task as being to assist the Commission by preparing appropriate suggestions as to how particular points might be dealt with, it was also conscious of the broader issues at play. It is clear from the Group's Report, and from deliberations which preceded it, that the legal rules in this domain are emergent, and that the Compensation Commission will have a degree of flexibility in carrying out its functions. Nevertheless, there does exist a range of precedents from which the Commission will be able to draw, and which inspired the Working Group in its pragmatic approach. The direction taken by the Commission will be of great interest, and not only to Members of this Working Group!

¹⁸² Paragraph 96.

¹⁸³ *Amoco* case, n.154 above, para. 241.

¹⁸⁴ *Bundy*, n. 149 above, at 9.

¹⁸⁵ *Aldrich*, n. 149 above, at 262-263.

¹⁸⁶ *Phillips*, para.155.

¹⁸⁷ *Ibid.*

¹⁸⁸ *Phillips* case, n.163 above, at para. 113.

¹⁸⁹ On the facts of the case, the Tribunal found no such considerations which would affect the compensation to which the claimant was otherwise entitled; para.157.

¹⁹⁰ *Amoco* case, n.154 above, at para. 242.

¹⁹¹ *Ibid.*, paras. 245-246.

Section I

**BACKGROUND PAPER FOR THE
UNEP WORKING GROUP OF EXPERTS
ON LIABILITY AND COMPENSATION FOR
ENVIRONMENTAL DAMAGE ARISING FROM
MILITARY ACTIVITIES**

BACKGROUND PAPER FOR THE UNEP WORKING GROUP OF EXPERTS ON LIABILITY AND COMPENSATION FOR ENVIRONMENTAL DAMAGE ARISING FROM MILITARY ACTIVITIES

*Prepared by Philippe Sands,¹⁹²
Ruth Mackenzie¹⁹³ & Ruth Khalastchi¹⁹⁴*

***Foundation for International Environmental
Law and Development, Department of Law,
School of Oriental and African Studies,
London University***

Introduction

This Background Paper is prepared for the benefit of the members of the UNEP Working Group on Environmental Damage, Liability and Compensation ("Working Group").

The Working Group has been established in the context of United Nations Security Council Resolution 687/1991, which reaffirmed that Iraq is "liable under international law for any direct loss, damage including environmental damage and the depletion of natural resources ... as a result of Iraq's unlawful invasion and occupation of Kuwait" and created the United Nations Compensation Commission. In March 1992 the Compensation Commission decided that claims relating to environmental damage and depletion of natural resources could be made only by States and international organisations (but not by private persons), and that they should be filed by 1 February 1997.

It will be recalled that the Working Group has been established within the context of the following Needs identified by UNEP:-

- to develop further rules of international law concerning the assessment of environmental damage caused by military activities;
- to develop guidelines to prevent damage and to deal with environmental damage caused by military activities within or beyond national jurisdiction;
- to develop the legal framework on liability and

compensation for environmental damage of an international nature caused by military activities and consequences;

- to promote adequate compensation for environmental damages and provide means of prevention and reinstatement within or beyond national legislation.

The specific Results to be achieved by the Working Group are:-

- the definition of "environmental damage" and "depletion of natural resources", bearing in mind that two related legal issues need to be distinguished: what in general constitutes environmental damage, and what level of environmental damage might give rise to liability?;
- the criteria for determining the reasonableness of measures taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment;
- the criteria for valuing "environmental damage" and "damage to natural resources";
- the appropriate level of financial reparation; and
- the legal interest of a State or international organisation in bringing a claim to the Compensation Commission.

¹⁹² MA (Cantab), LL.M (Cantab); Barrister; Legal Director, FIELD, London University; Visiting Professor, New York University School of Law.

¹⁹³ BSc (Econ), LL.M; Solicitor of the Supreme Court of England and Wales; Staff Lawyer, FIELD, London University.

¹⁹⁴ LL.B, LL.M; Solicitor of the Supreme Court of England and Wales; Consultant, FIELD, London University.

The Background Paper is intended to assist members of the Working Group in preparation for its first meeting in early 1995. Its general purpose is to raise issues and provide background information, rather than provide answers. It will be for the Working Group, on the basis of this and other materials, to prepare recommendations for UNEP. Specifically, the Background Paper has three objectives:

- (a) to provide background information on the history, structure and tasks of the United Nations Compensation Commission (established by United Nations Security Council resolution 687) in addressing matters relating to Iraq's liability for environmental damage and the depletion of natural resources which resulted from Iraq's invasion of Kuwait;
- (b) to provide background information on the rules of international law which are relevant for consideration of the Compensation Commission's task of receiving and processing claims for liability for environmental damage and depletion of natural resources from international organisations; and
- (c) to identify, on a preliminary basis, some pertinent legal issues which the Working Group might address in considering whether the United Nations Environment Programme should present one or more claims to the Compensation Commission in respect of environmental damage and depletion of natural resources.

This Background Paper is divided into three Parts. Part 1 describes the background, structure and tasks of the United Nations Compensation Commission, focusing in particular on the Compensation Commission's competence to address environmental liabilities.

Part 2 describes the general international legal context in which the environmental issues to be addressed by the Compensation Commission are situated (including in particular the rules relating to the prevention of environmental damage and the depletion of natural resources and the environmental limitations placed on the methods and means of warfare) and identifies three critical issues: what is meant by environmental damage and depletion of natural resources? what level of environmental damage or depletion of natural resources would give rise to a claim before the Compensation Commission? and how should the quantum of compensation for environmental damage or depletion of natural resources be assessed?

Part 3 briefly addresses some of the issues which will need to be addressed in determining which states or international organisations might be entitled to bring environmental claims to the Compensation Commission,

and in particular whether the United Nations Environment Programme could and should bring such a claim.

By way of summary of the issues which will need to be addressed by the Working Group, the following is a list of critical issues:

On general aspects

- to what extent might Iraq's liability depend upon whether the environmental damage in question is caused in Kuwait, in the territory of other states, or in areas beyond national jurisdiction?
- do the rules of international environmental law, customary or in treaties, apply during war and armed conflict?
- to what extent do the terms of Security Council Resolution 687 remove any need for the Commission to establish Iraq's liability for environmental damage under the general rule contained in Principle 21 of the Stockholm Declaration or under the specific rules related to armed conflict?

On the definition of environmental damage

- what is meant by "environmental damage" in Resolution 687 and Decision 7? What criteria might the Commission use to identify environmental damage?
- what is meant by "depletion of or damage to natural resources" in Decision 7, and how does it differ from environmental damage?
- to the extent that Decision 7 sets out a non-exhaustive list what other heads of "environmental damage" might apply?
- do Resolution 687 and Decision 7 include "environmental damage" and/or "depletion of or damage to natural resources" which has occurred in areas beyond national jurisdiction (the global commons)?
- in considering these and related issues what are the "other relevant rules of international law" which the Commissioners might apply? In particular, what treaty rules might be relevant, are there any relevant rules of customary international law, and might there be general principles of law which could be derived from municipal legal systems? and
- in what circumstances would it be necessary for the Commissioners to apply those relevant rules of international law?

On thresholds

- how should the Commission deal with the question of what constitutes "direct" environmental damage as a result of Iraq's unlawful invasion and occupation of Kuwait? How should the Commission deal with a situation where intervening factors may have caused or exacerbated environmental damage?
- how should the Commission deal more generally with the difficult question of proof of causation of environmental damage?
- notwithstanding that Security Council Resolution 687 and Decision 7 do not explicitly impose a threshold below which liability does not arise, should the Commission utilise a threshold approach? Is there in effect an implied threshold?
- if the Commission does set a threshold, at what level should this be set and what methods and indicators might the Commission use to determine whether the threshold has been met in each case?

On quantum

- can compensation be awarded for "pure" environmental damage?
- if so, how can damage to the environment be valued in economic terms?
- assuming that restoration or remedial work is compensable (as suggested by paragraph 35(b) of Decision 7), how should one determine what constitute "reasonable measures" of restoration?
- what should the measure of compensation be if the damage in question is irreversible insofar as restoration measures are not feasible for economic or ecological reasons?
- might certain awards of compensation by the Commission include a "punitive" element reflecting the unlawful nature of the activities giving rise to damage?
- what levels of compensation have in fact been awarded by international tribunals in claims for environmental damage? How has compensation been assessed under private sector compensation schemes and under national liability regimes? On

what basis have negotiated settlements been reached? To what extent might the Commission usefully draw on these approaches?

On the capacity of UNEP to bring a claim

- under what conditions may a state bring an environmental claim in accordance with Decision 7?
- as a general matter, which entities are "international organisations" within the meaning of Decision 7, paragraph 35?
- what conditions must a particular "international organisation" fulfil in order to bring an environmental claim under Decision 7?
- which "international organisations" might fulfil those conditions?
- is UNEP entitled to bring an environmental claim under Decision 7, and if so in respect of which heads of damage? In the event that UNEP is so entitled, should it bring such a claim?

PART I

BACKGROUND TO THE ACTIVITIES OF THE UNITED NATIONS COMPENSATION COMMISSION

1.1 The Iraqi invasion of Kuwait and the effects on the environment and on natural resources*1.1.1 Background*

The Iraqi invasion of Kuwait began on 2 August 1990. On 8 August 1990 Iraq formally annexed Kuwait and soon after, on 28 August it declared Kuwait to be one of its provinces. Iraq's claim over the territory of Kuwait dates back to Kuwait's independence in 1961 and is based on a territorial claim that Kuwait formed part of the Iraqi province of Basra under the Ottoman rule.¹⁹⁵ The invasion followed a period of increased tension between the two countries as a result of Iraqi dissatisfaction over Kuwait's breaches of oil production quotas set by the Organisation of Petroleum Exporting Countries, and unsuccessful negotiations in which Iraq claimed that Kuwait was drilling for and selling oil belonging to it (in particular it was alleged that oil was taken from the Rumaila oil field straddling the border between Iraq and Kuwait). In addition, Iraq had been unable to persuade

¹⁹⁵ For a fuller review of the historical position see Kirgis, F.L., *International Organizations in their Legal Setting* (2nd ed., 1993) pp 647-648; Warbrick, C., *The Invasion of Kuwait by Iraq*, 40 I.C.L.Q. (1991) p. 482.

Kuwait to forgive all or a substantial part of the debt Iraq had incurred to it during the Iran-Iraq war.¹⁹⁶

The invasion amounted to an act of aggression in violation of Art. 2(4) of the United Nations Charter. The Security Council acted immediately in adopting Resolution 660, which condemned the invasion and demanded the immediate and unconditional withdrawal of Iraqi forces from Kuwaiti territory.¹⁹⁷ On 6 August 1990 the Security Council subsequently imposed economic sanctions,¹⁹⁸ and on 25 August 1990 it passed Resolution 665 authorizing Member States to take all necessary measures to enforce the United Nations trade embargo.¹⁹⁹ When Kuwait remained captive three months later, the United States pushed for broader United Nations authorization of use of force. In response, on 29 November 1990, the Security Council passed Resolution 678 authorizing "the use of all necessary means to effect the removal of Iraqi forces from Kuwait as of 15 January 1991".²⁰⁰ On 27 February 1991, the Allied Forces successfully secured Iraq's withdrawal from Kuwait.

1.1.2 The Environmental Effects of the Conflict

Numerous efforts have been undertaken to assess the effects of the conflict on the environment and on natural resources in the territory of Kuwait, in the territory of third countries, and in areas beyond national jurisdiction (such as the high seas or superjacent airspace). For the purposes of the Working Group two reports are particularly useful.

(i) 1991 UN Report

The first is the Report to the Secretary-General by a UN Mission Assessing the Scope and Nature of Damage Inflicted on Kuwait's Infrastructure During the Iraqi

Occupation of Kuwait ("1991 UN Report"; Annex 1).²⁰¹ The Report addresses the main sectors having a major bearing on Kuwait's economic activity, in particular the oil industry, and those sectors having effects upon the health and environmental welfare of the population.²⁰² The 1991 Report comments on and attempts to provide a broad assessment of the impact of events during the Iraqi occupation on the air and marine environment and terrestrial ecosystems. However, the Report was not intended to provide an exhaustive or quantified evaluation of the damage.²⁰³ Chapter IV details the mission's findings on the impact and consequences on the environment, addressing five categories of issues: oil wells; oil and the marine environment; land degradation; mines and other unexploded ordnance; and environment-related infrastructure.²⁰⁴ The mission also examined damage and disruption to the major industries including an assessment of the effects of the invasion and occupation on agriculture, livestock and fisheries.²⁰⁵

(ii) 1991 UNEP Report and 1992 and 1993 Updates

The second set of documents annexed to this Background paper are those resulting from efforts coordinated by UNEP and prepared by UNEP's Oceans and Coastal Areas Programme Activity Centre: the 1991 Report on the UN Inter-Agency Plan of Action for the ROPME Region ("1991 UNEP Report"; Annex 2),²⁰⁶ together with the 1992 Abridged and Updated Report ("1992 UNEP Update"; Annex 3)²⁰⁷ and the 1993 Updated Scientific Report on the Environmental Effects of the Conflict between Iraq and Kuwait ("1993 UNEP Update"; Annex 4).²⁰⁸ The objectives of the 1991 UNEP Report and 1992 and 1993 Updates were to assess the environmental consequences of the conflict and to propose a programme for the mitigation of the adverse effects, rehabilitation and protection of the environment

¹⁹⁶ *Ibid.*, p. 642.

¹⁹⁷ S.C. Res. 660 (2 Aug. 1990) reprinted in 29 *ILM* 1325.

¹⁹⁸ S.C. Res. 661 (6 Aug. 1990) reprinted in 29 *ILM* 1325.

¹⁹⁹ S.C. Res. 665 (25 Aug. 1990) reprinted in 29 *ILM* 1329.

²⁰⁰ S.C. Res. 678 (29 Nov. 1990) reprinted in 29 *ILM* 1565.

²⁰¹ See letter dated 26 April 1991 from the Secretary-General addressed to the President of the Security Council, together with attached report; UN Doc. S/22535 (Annex 1); the Mission was led by Mr. Abdulrahim A. Farah (a former Under-Secretary-General of the United Nations), and visited Kuwait from 16 March to 4 April 1991.

²⁰² *Ibid.*, p. 15, para. 23.

²⁰³ *Ibid.*, p. 16, para. 25.

²⁰⁴ *Ibid.*, Chapter IV, pp. 44-58.

²⁰⁵ *Ibid.*, Chapter V, pp. 65-68.

²⁰⁶ UNEP, Report on the UN Inter-Agency Plan of Action for the ROPME Region, Phase I: Initial Surveys and Preliminary Assessment, 12 October 1991 (Annex 2).

²⁰⁷ UNEP, Abridged and Updated Report on the UN Inter-Agency Plan of Action for the ROPME Region, 11 June 1992 (Annex 3).

²⁰⁸ UNEP, Updated Scientific Report on the Environmental Effects of the Conflict between Iraq and Kuwait, UNEP/GC.17/Inf.9, 8 March 1993 (Annex 4).

affected by the conflict.

By reference to three environmental media (marine and coastal, atmospheric, terrestrial) as well as the generation of hazardous wastes, the 1991 UNEP Report attempts to quantify hazardous components in the environment,²⁰⁹ the fate of pollutants in the environment,²¹⁰ and impact and risk assessment.²¹¹ It also identifies gaps and needs for further assessment and sets forth a range of proposals for mitigation of adverse effects, rehabilitation and protection of the environment.²¹²

The 1992 UNEP Update provides a further assessment of the state of the environment. It addresses the impact upon the marine and coastal environment,²¹³ atmospheric pollution including long-term effects on human health,²¹⁴ and terrestrial ecosystem including hazardous wastes.²¹⁵

The 1993 UNEP Report considers in further detail the impacts of oil pollution,²¹⁶ atmospheric pollution, including long-term effects on human health,²¹⁷ and terrestrial ecosystem including hazardous wastes.²¹⁸

(iii) *Overview of the various Reports and Updates*

In overview the two Reports and the Updates catalogue a range of effects on the environment and on natural resources. As the geographic location of the environmental effect will contribute to the determination of which person, if any, may be entitled to bring a claim, it is appropriate to consider these effects by reference to distinct geographical areas: in the territory of Kuwait; in the territory of third countries; and in areas beyond national jurisdiction. The principal effects include the following:-

(A) On Kuwaiti territory

(i) from the burning of oil wells

Soot and oil mist covered the soil surface and vegetation in large areas, with the soot-affected area extending into Saudi Arabia. Most of the native

vegetation in the soot-affected areas was adversely affected. While there are indications that the vegetation is being re-established effectively, there might be a change in the distribution of species.

(ii) from the release of crude oil on land and into the marine environment

(a) As a result of the oil gushing from the damaged and exploded wells large pools of oil were formed, some of which extended over vast areas of the desert. Layers of oil droplets and soot covered hundreds of square kilometres (estimates are as high as 30 percent of the area of Kuwait) eliminating the existing vegetation and reducing the possibility of regrowth. Estimates of the quantity of oil accumulated in these pools range between 25 and 50 million barrels.

(b) There was no indication of any massive fouling of beaches. Only in a few scattered sites along the Kuwait coast were oil traces and deposits found. The only relatively large amount of heavy black oil was found contained in the commercial harbour of the Kuwait Fisheries Company at Mina Shuaiba.

(c) There was indication of damage to the Kuwaiti coral reefs at the three coral islands of Kubbar, Qaru and Umm Al Maradim. Furthermore, in the coastal waters of Kuwait, there is a very broad inter-tidal zone, with extensive mud flats coated with blue-green algae which provide the basic input for the food chains of many fish, crustaceans and numerous species of wading birds. The coating of oil not only smothers the surface algae but also kills the fauna of worms and crustaceans upon which both fish and birds feed.

(iii) other effects on the Kuwaiti terrestrial ecosystem

(a) In its surveys, the UN Report indicated that large parts of rural Kuwait showed land degradation dating to before the occupation. However,

²⁰⁹ Annex 2, pp. 4-12.

²¹⁰ *Ibid.*, pp. 12-14.

²¹¹ *Ibid.*, pp. 14-19.

²¹² *Ibid.*, pp. 19-29.

²¹³ Annex 3, pp. 2-3.

²¹⁴ *Ibid.*, pp. 3-4.

²¹⁵ *Ibid.*, pp. 4-5.

²¹⁶ Annex 4, pp. 8-11.

²¹⁷ *Ibid.*, pp. 11-13.

²¹⁸ *Ibid.*, pp. 13-16.

environmental factors resulting from the conflict enhanced impacts on these areas.

- (b) The sandy oil belt around Kuwait Bay and along the coast had been disturbed by military activities. The affected soils had been exposed to wind erosion and the pulverization of the surface soil by off-road military vehicles destabilized the soil, increasing its vulnerability to wind erosion.
- (c) Disruption of irrigation in the north of Kuwait City caused severe damage to young plants.
- (d) A long lasting threat to the environment of Kuwait is as a result of the laying of minefields by Iraq and other ordnance which had not been exploded at the time of the conflict.

(B) Effects on areas outside Kuwait

(i) Conditions in the Persian Gulf

- (a) Natural drainage of land is towards the coast and vast amounts of surface oil flowed into the Persian Gulf. Further, according to Kuwait Oil Company ("KOC") officials, 6 million barrels of crude oil was deliberately released into the sea and three Iraqi oil tankers unloaded crude oil into the Persian Gulf, accounting for another 4.2 million barrels. The UN Report determined that the oil slick was about 50 kilometres long and 8 kilometres wide on 25 January 1991. Assuming that the slick had an average thickness of 0.5 centimetres, the resulting volume could be as large as 2 billion litres (13 million barrels).
- (b) As the main body of the oil slick moved south along the Saudi Arabian coast, winds repeatedly drove it onto shore and then back into the sea, leaving much of the northern shoreline of Saudi Arabia heavily contaminated.
- (c) The estimates of the extent of damage to the marine habitats varied. Early data indicated that at least 30,000 marine birds perished as a result of exposure to oil. Some reports showed that approximately 20% of the mangroves on the eastern coast of Saudi Arabia have been oiled and about 50% of the coral reefs have been affected. There was also indication that hundreds of square kilometres of sea-grass beds (feeding grounds for dugongs, turtles, shrimp) as well as tidal mud flats had been inundated by oil. The Iranian coast north of Bandar Khomeyni was also affected, although to a lesser extent, while the Iraqi coast was only slightly affected.

(ii) Conditions on the terrestrial ecosystems of Saudi Arabia and Iraq

- (a) In Saudi Arabia the limited oil spills on the land had an influence on the halophytes growing in the salty areas; the sandy soil belt along the coast had been disturbed by military activities; vehicle movement pulverized surface soils exposing them to erosion from wind and water; due to the soot fallout many species of vegetation had died and seed productivity was reduced.

- (b) In Iraq, the drainage water pumps and fertilizer plants were put out of action, toxic chemicals were spilled into soil and streams all of which affected agriculture, adversely damaging crops and livestock.

(C) Effects on the global commons

- (i) The burning of oil wells and consequent release of atmospheric pollutants
 - (a) Between 600 and 700 oil wells in Kuwait had been set alight with about 6 million barrels of oil being burnt daily. Each oilfield produced its own emission cloud, mainly particulates (including soot) and combustion gases.
 - (b) Particulates from the fires had been deposited on both land and sea over wide areas. In the Persian Gulf they formed a surface skin and on land they covered the ground surface and plants.
 - (c) The smoke plumes widths ranged from 15 to 150 km for distances of 0 to 1000 km from the fires. The base of the smoke plume was generally at a height of between 0.5 and 2 km and its summit was never detected above 6 km. The plumes substantially reduced the ground-level sunlight, visibility, and temperature beneath the plume. However because of its relatively low altitude and short residence time, due to capture by water vapour, the smoke did not have any attributable effect on the weather or climate outside the Persian Gulf region. The plume was not photochemically active until it had travelled over 200 km. Inside the plume 1000 km downwind of Kuwait the ozone concentration exceeded the US National Ambient Air Quality Standard of 120ppb. However regional ozone concentrations were not substantially elevated and there was no impact on the region's population.
 - (d) During the period the fires burned, the total emissions of carbon dioxide was estimated at about 1.5 per cent of the world-wide annual emissions from fossil fuel and biomass burning. The carbon dioxide and nitrous oxide emission diminished as the burning wells were brought under control. The overall effect on global warming however was considered too small to be measured.

(ii) The release of oil onto the high seas

In November 1991, in a costed proposal prepared under contract to UNDP, the Saudi Meteorology and Environmental Protection Administration estimated that as much as \$2.8 billion would be necessary to restore the environment of the ROPME region to what it was before the conflict.²¹⁹

(iv) Activities of international organisations

The 1991 UN Report and the 1991 UNEP Report (1992 and 1993 Updates) reflect the participation of a number of regional and global international organisations, some of whom may be interested in pursuing claims before the Compensation Commission. The Regional Organisation for the Protection of the Marine Environment (ROPME) is the principal regional organisation affected by the conflict.²²⁰ International organisations participating in the mission leading to the preparation of the 1991 UN Report were the UN, UNEP, UNESCO, WHO. International organisations active in the preparation of the 1991 UNEP Report were the IMO, WHO, WMO, UNESCO, IAEA, UNCHS/Habitat, UNEP and UNIDO.²²¹ The International Union for the Conservation of Nature (IUCN), which is described as an "International Non-UN Organisation" also participated in the preparation of the 1991 UNEP Report,²²² as did various governmental teams.²²³ The 1991 UNEP Report also notes the activities of three international non-governmental organisations.²²⁴

1.2 The Role of the United Nations and the Establishment of the United Nations Compensation Commission

1.2.1 General issues

(i) United Nations Security Council Resolutions

The decision of the international community to establish the United Nations Compensation Commission ("the

Commission") to receive claims for damage resulting from Iraq's unlawful invasion of Kuwait is indicated in paragraphs 18 and 19 of Security Council Resolution 687 of 3 April 1991 (Annex 7 (a)). The basis for its establishment may be found in paragraph 16 of Resolution 687, which reaffirms that

Iraq, without prejudice to the debts and obligations of Iraq arising prior to 2 August 1990, is liable under international law for any direct loss, damage including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals and corporations, as a result of [its] unlawful invasion and occupation of Kuwait.

Resolution 687 is significant for at least three reasons. It was apparently the first time that the Security Council had explicitly addressed environmental issues. It reshaped the boundaries defining the consequences of the illegal use of force. And it instantly contributed to the further development of "international law regarding liability and compensation for the victims of pollution and other environmental damage" in the sense envisaged by Principle 22 of the Stockholm Declaration.²²⁵

The origins of the establishment of the Compensation Commission may be traced to earlier Resolutions adopted in the context of the conflict. Security Council Resolution 674 of 29 October 1990 (Annex 7 (b)) requested that governments which had suffered damage should gather all relevant information regarding incurred losses for the purpose of compensation. Without referring to environmental damage or loss of natural resources it "Reminds Iraq that under international law it is liable for any loss, damage or injury arising in regard to Kuwait and third states and their nationals and corporations, as a result of the invasion and illegal occupation of Kuwait by Iraq" (para. 8).

Resolution 687 provided for the creation of a Fund to pay compensation for claims under paragraph 16 and the establishment of a Commission to administer this

²¹⁹ See United Nations Development Programme Gulf Task Force: Proposals for the socio-economic and environmental recovery of countries affected by the Gulf crisis of 1990-91: Overview, DP/1992/4, 15 November 1991, para. 54 (Annex 5).

²²⁰ ROPME was established by Article XVI of the Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution, Kuwait, 24 April 1978, in force 1 July 1979, 1140 UNTS 133 (1978 Kuwait Convention) (Annex 6).

²²¹ For a description of their activities see 1991 UNEP Report, *supra* n. 15, pp. 33-6.

²²² *Ibid.*, p. 36.

²²³ *Ibid.*, pp. 37-40. These teams came from countries within the affected region (Kuwait, Saudi Arabia, Bahrain, United Arab Emirates, Qatar, Iran, Oman) and outside the affected region (United States of America, United Kingdom, France, Canada, Japan, Norway, Germany, Hungary and Australia).

²²⁴ *Ibid.*, p. 40. They are Earthtrust, Friends of the Earth, and Green Peace (sic).

²²⁵ Stockholm Declaration of the United Nations Conference on the Human Environment, 11 ILM 1416 (1972). See now Principle 13 of the Rio Declaration on Environment and Development ("States shall ... cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction"); UN Doc. A/CONF.151/5.

Fund, and requested the Secretary-General to prepare a report as to how this system of compensation should operate.²²⁶ Pursuant to paragraph 19 of Resolution 687 the UN Secretary-General issued a Report ("the 1991 Secretary-General's Report") setting forth the Institutional Framework and the means for Implementation of paragraphs 16, 17 and 18 of Resolution 687 (Annex 8).²²⁷ Shortly thereafter the Security Council adopted Resolution 692 on 20 May 1991 which established the Compensation Fund and the Compensation Commission (Annex 7 (c)).

The Compensation Fund is to be financed out of a specified percentage of Iraqi oil export revenues. Security Council Resolution 705 of 15 August 1991 determined the compensation to be paid was not to exceed "30 per cent of the annual value of the exports of petroleum and petroleum products from Iraq" (Annex 7 (d)). Because Iraq has not yet sold oil under the terms set forth by the Security Council (see Resolution 706 of 15 August 1991 and Resolution 712 of 19 September 1991, Annex 7 (e) and (f)) the Compensation Fund is not yet funded.

By resolution 778 of 2 October 1992 the Security Council decided "that all States in which there are funds of the Government of Iraq ... that represent the proceeds of Iraq petroleum... shall cause the transfer of those funds to the escrow account provided for in resolution 706 and 712 ...", and confirms that 30 percent of these monies shall be transferred to the Compensation Fund.²²⁸

(ii) The Commission's constitution, composition, structure and functions

Since Iraq's international legal responsibility for damage resulting from the invasion and occupation has been affirmed by United Nations resolutions, the scheme set up under the system is essentially an administrative process to marshal claims, identify those eligible for compensation and verify the amounts due. The United Nations Compensation scheme is both structurally and procedurally distinct from any previous international claim settlement scheme.²²⁹

Central to the Secretary-General's proposal to establish the Commission was the view that it would not be "a court or an arbitral tribunal before which the parties appear; it is a political organ that performs an essentially fact-finding function of examining claims, verifying their validity, evaluating losses, assessing payments and resolving dispute claims".²³⁰

The Commission is presently under the Presidency of Fernando Valenzuela (Spain), and is located in the Villa La Pelouse in the United Nations premises in Geneva. It is a subsidiary organ of the Security Council and is entrusted with the task of making effective Iraq's liability within the institutional framework of the United Nations. It has three constituent components:

- (i) the Governing Council, which is the Commission's policy making body and consists of the representatives of the fifteen members of the Security Council. The Council has a two fold task:
 - (a) to establish guidelines for the administration of the Fund, including overseeing its financing and Iraq's contribution to it; and
 - (b) setting forth the compensation procedure to be applied to the claims processing.

By the end of November 1994 the Governing Council had adopted 22 Decisions in fulfilment of these tasks which address the full range of the Commission's work. As a general matter these Decisions are adopted by a majority of at least nine of its members, with no veto rights vesting in any of the members.²³¹

- (iii) Commissioners who are neither administrators nor arbitrators but experts in finance, accounting, law, insurance, environmental damage assessment or other relevant fields. The Commissioners are appointed by the Governing Council on the recommendation of the United Nations Secretary-General. There are currently 12 Commissioners.²³² Their general task is to consider and verify claims by means of standards

²²⁶ Paras. 18 and 19.

²²⁷ Report of the Secretary-General pursuant to paragraph 19 of the Security Council Resolution 687 (1991); UN Doc. S/22559, 2 May 1991 (Annex 8).

²²⁸ S.C. Res. 778 (2 Oct. 1992) (Annex 7 (g)).

²²⁹ B. Affaki, "The United Nations Compensation Commission, A New Era in Claims Settlement?", 10 *J. of Int'n. Arb.* 21-57 (1993).

²³⁰ Secretary General's report, para 21 (Annex 8).

²³¹ Except in relation to the level of Iraq's contribution to the Compensation Fund which has to be decided unanimously.

²³² Rafael Rivas (Argentina); Kamal Hossein (Bangladesh); Matti Pellonpää (Finland); Mohammed Bennouna (Morocco); Denise Bindschedler (Switzerland); Fang Ping (China); Yves Fortier (Canada); Phillip Amoah (Ghana); Sergei Lebedev (Russia). There are also three Commissioners only concerned with claims by Egyptian workers (whose names have not been made public).

and procedures laid down by Council Decisions, and make recommendations as to the amount to be awarded. It is then for the Council to adopt these recommendations. The Council has the power to increase or reduce the recommended amount.

- (iii) a Secretariat headed by an Executive Secretary (currently Ambassador Carlos Almazora) appointed by the United Nations Secretary-General. The Executive Secretary is supported by a staff which assists the Council in the performance of its political and operational functions, and which undertakes the technical administration of the Commission. The Secretariat's functions include administering the Compensation Fund and providing the essential technical and legal support mechanism for the categorising and processing of claims. Additionally, it is responsible for the organisation of Council sessions and provides advice to potential claimants.

(iii) The Claims Procedure and Relevant Decisions of the Governing Council

The 1991 Secretary-General's Report outlines the claims procedure.²³³ It proposes that in carrying out its tasks of verification and evaluation, panels of three Commissioners should be given the necessary powers to request additional evidence and to hold hearings. Paragraph 26 of the 1991 Secretary-General's Report also states that Iraq is to be "informed" of all claims and is to have the right to "present its comments" to the Commissioners within a period to be designated. Disputes arising out of the claims procedure are to be submitted to a board of Commissioners who will function under guidelines established by the Governing Council and the arbitration rules of the United Nations Commission on International Trade Law (UNCITRAL).

(iv) Categories of Claims

One of the first tasks which fell to the Governing Council was the adoption of Decisions to identify categories of permissible claims and claimants and to regulate the submission and processing of claims. There are six categories of claims. A first group of three categories are considered "urgent" or "small claims" and which are dealt with as a matter of priority by the Commission:

- A-Claims for departure from Iraq or Kuwait during

the relevant period;

- B-Claims for serious personal injury or the death of a family member;
- C-Claims for individuals relating to amounts up to US\$ 100,000 for death, personal injury or actual loss.

A second group of three categories are subject to different procedures and priorities. In its 7th Decision (adopted on 16 March 1992) (Annex 9),²³⁴ the Governing Council noted the Criteria for Additional Categories of Claim, namely:

- D-Claims for individual losses exceeding US\$ 100,000;
- E-Claims for losses incurred by corporations, other private legal entities and public sector enterprises; and
- F-Claims for damage or losses incurred by governments and international organisations, losses and costs incurred by a government in evacuating its nationals; and direct environmental damage and the depletion of natural resources which result from Iraq's invasion and occupation of Kuwait.

It is in relation to the F-Claims relating to environmental damage and the depletion of natural resources that the Working Group will be most closely concerned.

(v) Claims procedures and time-limits

In its 10th Decision (adopted on 26 June 1992) (Annex 10)²³⁵ the Governing Council finalized the framework governing the compensation scheme by adopting Provisional Rules for Claims Procedure ("Provisional Rules"). The Provisional Rules comprise forty-three Articles divided into four sections ((i) general provisions; (ii) submission and filing of claims; (iii) Commissioners; and (iv) procedures governing the work of the panels). Article 5 of the Provisional Rules specifies that only claims submitted by governments and international organisations shall be registered by the Secretariat. All others are channelled through the national authorities appointed by their governments.

Article 38 of Decision 10 specifies the time-limits for the scrutiny of claims by the Panel, which is to have one hundred and eighty days to complete its review of the

²³³ *Supra*. n. 36, para. 26.

²³⁴ Governing Council Decision 7 taken during its third session, at the 18th meeting, held on 27 November 1991, as revised at its 24th meeting held on 16 March 1992; UN Doc. S/AC.26/1991/7/Rev.1 (Annex 9).

²³⁵ Governing Council Decision 10 taken during its Sixth Session, at the 27th meeting, held on 26 June 1992, UN Doc. S/AC.26/1992/10 (Annex 10).

claims assigned to it and to issue its report. For unusually large or complex claims, however, the time-limit for the Panel's consideration is twelve months. This time-limit runs from the time when the claims are submitted to the Panel. A Panel may require an extension of time:

In Decision 12 (adopted on 26 September 1992) (Annex 11) the Governing Council established extended filing deadlines for "claims under the criteria for processing claims of Governments and international organisations for losses resulting from environmental damage: these claims should be submitted to the Commission no later than 1 February 1997".²³⁶ These are the F-category claims.

(vi) Sources of Law

With regard to the applicable law, Article 31 of the Provisional Rules for Claims Procedures sets forth four sources of law to be applied by Panels in processing claims:

In considering the claims, Commissioners will apply Security Council resolution 687 (1991) and other relevant Security Council resolutions, the criteria established by the Governing Council, for particular categories of claims, and any pertinent decisions of the Governing Council. In addition, where necessary, Commissioners shall apply other relevant rules of international law.

In practice, it has been suggested that the Commissioners will be expected to draw upon these four sources as concurrent elements, provided that there is no conflict between applicable rules of international law and principles particular to the compensation process as set forth in the first three sources.²³⁷

1.2.2 *Claims relating to the environment and depletion of natural resources*

Paragraph 16 of Resolution 687 provides that Iraq is liable for "environmental damage and the depletion of natural resources" without providing a detailed definition of the extent of that liability. On the basis of a Working Paper put forward by the United States in November 1991 (Annex 12),²³⁸ the Governing Council adopted in paragraph 35 of Decision 7 a more detailed definition of the environmental claims which might be made by governments and international organisations before 1 February 1997.

Paragraph 35 of Decision 7 provides that payments are available with respect to direct environmental damage and the depletion of natural resources ... including losses or expenses resulting from:

- (a) Abatement and prevention of environmental damage, including expenses directly relating to fighting oil fires and stemming the flow of oil in coastal and international waters;
- (b) Reasonable measures already taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment;
- (c) Reasonable monitoring and assessment of the environmental damage for the purpose of evaluating and abating the harm and restoring the environment;
- (d) Reasonable monitoring of public health and performing medical screening for the purposes of investigation and combating increased health risks as a result of the environmental damage; and
- (e) Depletion of or damage to natural resources.

Although the list is non-exhaustive, it provides the basis for initial consideration of the types of environmental claims which might be made to the Commission. One task for the Working Group might be to consider other categories or types of environmental claims which could be made.

PART 2

THE INTERNATIONAL LEGAL CONTEXT

The environmental claims which will be made by governments and international organisations before 1 February 1997 pursuant to resolution 687 must be seen in the context of broader rules of international law relating to the protection of the environment.

Existing and developing international rules on state and civil liability for environmental damage address certain substantive and procedural elements which determine the nature and extent of liability. Resolution 687 and Decision 7 of the Governing Council provide answers to some of the questions which arise in relation to liability for environmental damage, such as, for example, the forum for bringing the claim, the entity against which

²³⁶ Governing Council Decision 12, taken during its seventh session, at its 29th meeting, on 24 September 1992, UN Doc. S/AC.26/1992/12) (Annex 11).

²³⁷ B. Affaki, *supra* n. 38, p.51.

²³⁸ Working Paper submitted by the United States on criteria for claims for environmental damage and the depletion of natural resources; UN Doc. S/AC.26/1991/WP.20, 20 November 1991 (Annex 12).

claims can be brought, and, though perhaps less clearly, who may bring such claims. However, certain other issues remain to be resolved. Among the international legal issues which arise, and which will be adverted to in this part are:-

- ◆ what constitutes environmental damage?²³⁹
- ◆ what is the threshold of environmental damage which gives rise to liability?²⁴⁰
- ◆ for what types or elements of environmental damage will compensation be payable?²⁴¹
- ◆ how is the appropriate level of financial compensation for environmental damage to be assessed?²⁴²

These are issues which have only relatively recently begun to be addressed by international law, and although some guidance is provided by Security Council Resolution 687 and by Decision 7 many issues remain to be dealt with by the Commission, which will in all probability find it necessary to "apply other relevant rules of international law" in relation to environmental claims.

In this respect the practice of the Commission in, for example, defining environmental damage and in assessing measures of reparation will further the development of international law in this area and provide assistance to other international bodies, including courts and tribunals which will no doubt be required to deal with international legal aspects of liability for environmental harm in the future.

2.1 The international legal context within which the issues arise

The Commission's practice is likely to draw upon, and subsequently influence, rules of international law relating to liability for environmental damage in other fora. In this context it is appropriate to briefly consider other sources of international law which might inspire the practice of the Commission. These include, in particular, the primary and secondary rules which have emerged around the general obligation under international law to prevent environmental damage and the depletion of natural resources, and those obligations of international environmental law which relate to the methods and

means of warfare.

2.1.1 *The general obligation under international law to prevent environmental damage and the depletion of natural resources*

The liability imposed against Iraq in respect of environmental damage arising out of its invasion and occupation of Kuwait can be seen in the context of the general obligation of states under international law to refrain from activities which damage the environment. In its most widely accepted formulation, this obligation relates to a duty to prevent transboundary environmental damage and damage to the environment beyond national jurisdiction. To the extent that the duty represents customary international law, it can be said to apply to Iraq in relation to its activities in Kuwait, where certain activities causing environmental damage took place under Iraq's control and caused damage to the environment of Kuwait, of other states and to areas beyond national jurisdiction.

This general obligation is reflected in a number of declarations and also now in numerous international environmental agreements. Principle 21 of the Stockholm Declaration 1972 provides that:

"States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction and control do not cause damage to the environment of other states or to areas beyond the limits of national jurisdiction" (emphasis added).²⁴³

This principle has been reaffirmed in Principle 2 of the Rio Declaration 1992. Although Principle 21 is now widely recognised to reflect a rule of customary international law, consistent state practice is not easy to discern "relatively few claims have been brought by states relying upon the rule." One is therefore left to rely largely upon state practice as evidenced by participation in and support for treaties and other international acts.

For example, shortly after the Stockholm Conference in 1972 Principle 21, with Principle 22,²⁴⁴ was expressly stated by UN General Assembly Resolution 2996 to lay

²³⁹ See Part 2.2

²⁴⁰ See Part 2.3

²⁴¹ See Part 2.4

²⁴² See Part 2.4

²⁴³ Declaration of the United Nations Conference on the Human Environment, UN Doc. A/CONF/48/14.

²⁴⁴ Which provides, "States shall cooperate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction"; see also Principle 13 of the Rio Declaration.

down the "basic rules" governing the international responsibility of states in regard to the environment. It was also the basis of Article 30 of the Charter of Economic Rights and Duties of States²⁴⁵. The no harm principle is endorsed by Principle 3 of the 1978 UNEP Draft Principles, which requires states to ensure that "activities within their jurisdiction or control do not cause damage to the natural systems located within other states or in areas beyond the limits of national jurisdiction",²⁴⁶ and by the 1982 World Charter for Nature, which declares the need to 'safeguard and conserve nature in areas beyond national jurisdiction'.²⁴⁷

Perhaps even more compelling is the reference to Principle 21 in treaties. It has been referred to,²⁴⁸ or wholly incorporated,²⁴⁹ in the Preamble of several treaties, and was fully reproduced in the operational part of a treaty, for the first time, as Article 3 of the 1992 Convention on Biological Diversity without words limiting its scope to matters within the Convention.²⁵⁰ Principle 2 of the Rio Declaration is incorporated into the Preamble of the 1992 United Nations Framework Convention on Climate Change Convention.²⁵¹

Many other treaties contain language reflecting a similar obligation. The 1981 Lima Convention requires activities to be conducted so that 'they do not cause damage by pollution to others or to their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not, as far as possible, spread beyond the areas where [they] exercise sovereignty and jurisdiction'.²⁵² The 1982 United Nations Convention on the Law of the Sea (UNCLOS)²⁵³ transforms the 'responsibility' into a 'duty', although it is unclear what was intended by the change. Under Article 193 of UNCLOS

states have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment. UNCLOS shifts the emphasis from a negative obligation to prevent harm to a positive commitment to preserve and protect the environment. To that end however, Article 194(2) does provide that states shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other states and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with [the] Convention.

The 1985 ASEAN Convention recognises the second element of Principle 21 as a "generally accepted" principle of international law.²⁵⁴

2.1.2 *The rules of international environmental law concerning methods and means of warfare with reference to their impact on the environment*

In addition to the general rules of international environmental law which may be applicable to events in the Gulf, international law has specifically recognized and addressed the link between military activities and environmental protection. For example, treaties to protect humans and their property from the effects of military activities also aim to protect the environment, albeit indirectly. Moreover recently, treaties have addressed environmental protection as an end in itself, so that some special rules beyond the general obligations identified above are imposed.

²⁴⁵ General Assembly Resolution 3281.

²⁴⁶ Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, 17 *ILM* (1978) 1091.

²⁴⁷ 37 UN GAOR (Supp No. 51) 17, Para. 21(e).

²⁴⁸ 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki), 9 April 1992, not in force, BNA 35.0401 (1992 Baltic Sea Convention).

²⁴⁹ Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, (London, Mexico City, Moscow, Washington DC), 29 December 1972, in force 30 August 1975, 1046 *UNTS* 120 (1972 London Convention); Convention on Long-Range Transboundary Air Pollution, (Geneva) 13 November 1979, in force 16 March 1983, 18 *ILM* (1979) 1442 (1979 LRTAP Convention); Convention for the Protection of the Ozone Layer, (Vienna) 22 March 1985, in force 22 September 1988, 26 *ILM* (1987) 1529 (1985 Vienna Convention).

²⁵⁰ Convention on Biological Diversity (Rio de Janeiro), 5 June 1992, in force 29 December 1993, 31 *ILM* (1992) 822 (1992 Biodiversity Convention).

²⁵¹ United Nations Framework Convention on Climate Change, (New York) 9 May 1992, in force 24 March 1994, 31 *ILM* (1992) 849 (1992 Climate Change Convention).

²⁵² Convention for the Protection of the Marine Environment and Coastal Area of the South East Pacific, (Lima) 12 November 1981, in force 19 May 1986, *IELMT*, 981:85, Art. 3(5) (1981 Lima Convention); Protocol for the Protection of the South East Pacific Against Pollution from Land-Based Sources (Quito), 22 July 1983, in force 23 September 1986, *IELMT* 983:54, Art. XI.

²⁵³ United Nations Convention on the Law of the Sea, (Montego Bay), 10 December 1982, in force 16 November 1994, 21 *ILM* (1982) 1261 (1982 UNCLOS).

²⁵⁴ Association of South East Asian Nations Agreement on the Conservation of Nature and Natural Resources (Kuala Lumpur), 9 July 1985, not in force, 15 *EPL* (1985) 64 (1985 ASEAN Agreement).

Three separate, but related, questions are worthy of attention. First, do the rules of international environmental law operate during times of war and armed conflict? Second, what indirect protection for the environment is afforded by the rules of international law governing war and armed conflict? And third, to what extent does the international law of war and armed conflict address environmental protection as an end in itself?

(i) *International environmental law during war and armed conflict*

The first issue which arises concerns the applicability of the various rules of international environmental law to military activities, including preparatory activities. For example, Iraq and Kuwait were parties to the 1978 Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution and its Protocol.²⁵⁵ This Convention establishes a general commitment on parties, *inter alia*, to "take all appropriate measures ... to prevent, abate and combat pollution of the marine environment in the Sea Area" (Art. III(a)) and to "take all appropriate measures to prevent, abate and combat pollution caused by discharges from land reaching the Sea Area" (Art. VI). The 1978 Convention is silent as to its applicability during war or armed conflict, although it does include a provision on the sovereign immunity of warship or other State-owned or operated ships.

The general rules of public international law provide little guidance as to the legal validity and consequences of environmental treaties following the outbreak of military hostilities.²⁵⁶ The validity and effect of a particular treaty during war and/or armed conflict will often turn on the terms of the treaty itself. The general instruments of international environmental law and policy also fail to provide any guidance on this question. The 1972 Stockholm Declaration focuses exclusively on nuclear

weapons. Principle 26 provides that

Man and his environment must be spared the effects of nuclear weapons and all other means of mass destruction. States must strive to reach prompt agreement, in the relevant international organs, on the elimination and complete destruction of such weapons.

The 1982 World Charter for Nature adopts a more general approach, stating the "general principle" that "[n]ature shall be secured against degradation caused by warfare or other hostile activities", and declaring that "military activities damaging to nature shall be avoided".²⁵⁷ The wording of the 1992 Rio Declaration gets closer to the point but is still ambiguous, providing in Principle 24 that Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in time of armed conflict and cooperate in its further development, as necessary.

Although not legally binding, the wording of Principle 24 could either be interpreted as requiring states to respect those rules of international law which provide protection for the environment in times of armed conflict, or as requiring states to respect international law by protecting the environment in times of armed conflict.

Most environmental treaties are silent on the issue of their applicability following the outbreak of military hostilities. Some, including those on civil liability for damage, include provisions excluding their applicability when damage occurs as a result of war and armed conflict.²⁵⁸ Others include provisions allowing for total or partial suspension at the instigation of one of the Parties,²⁵⁹ whilst yet others require the consequences of hostilities to influence decision-making in the application of the treaty by its institutions.²⁶⁰ Some treaties do not apply to military activities even during peacetime

²⁵⁵ *Supra* n. 29.

²⁵⁶ Art. 73 of the 1969 Vienna Convention on the Law of Treaties, in force on 27 January 1980, 8 *ILM* (1969) 679: 'the present Convention shall not prejudice any question that may arise in regard to a treaty from ... the outbreak of hostilities between States.'

²⁵⁷ Paras. 5 and 20.

²⁵⁸ OECD Convention on Third Party Liability in the Field of Nuclear Energy (Paris), 29 July 1960, in force 1 April 1968, 956 UNTS 251, Art. 9 (1960 Paris Convention); Convention on Civil Liability for Nuclear Damage (Vienna), 29 May 1963, in force 12 November 1977, 1063 UNTS 265, Art. IV(3)(a) (1963 Vienna Convention); International Convention on Civil Liability for Oil Pollution Damage (Brussels), 29 November 1969, in force 19 June 1975, 973 UNTS 3, Art. III(2)(a) (1966 CLC); International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Brussels), 18 December 1971, in force 16 October 1978, 11 *ILM* (1972) 284, Art. 4(2)(a) (1971 Oil Pollution Fund Convention) (no liability attached to the Fund for damage from oil from warships used on non-commercial service); Convention on the Regulation of Antarctic Mineral Resource Activities (Wellington), 2 June 1988, not in force, 27 *ILM* (1988) 868, Art. 8(4)(b) (1988 CRAMRA) (if no reasonable precautionary measures could have been taken).

²⁵⁹ International Convention for the Prevention of Pollution of the Sea by Oil (London), 12 May 1954, in force 26 July 1958 327 UNTS 3, Art. XIX(1) (1954 Oil Pollution Convention) allowing parties to suspend operation of whole or part of Convention in case of war or other hostilities if they consider themselves affected as a belligerent or as a neutral, upon notification to the Convention's Bureau.

²⁶⁰ International Convention for the High Seas Fisheries of the North Pacific Ocean (Tokyo), 9 May 1952, in force 1953, 205 UNTS 65 (1952 North Pacific Fisheries Convention) which provides that Commission decisions should make allowance for, *inter alia*, wars which may introduce temporary declines in fish stocks (Art. IV(2)).

operations,²⁶¹ whilst others are specifically applicable to certain activities which may be associated with hostilities.²⁶² Finally, the terms and overall purpose of some treaties make it abundantly clear that they are designed to ensure environmental protection at all times.²⁶³

(ii) *International law of war and armed conflict: general rules of environmental protection*

The international law of war and armed conflict limits the methods and means of warfare available to states. These rules of treaty and customary law were developed to protect humans and their property, and may only be indirectly protective of the environment which is not intended to be the direct beneficiary. The 'Martens Clause' provides that until the adoption of specific regulations, inhabitants and belligerent are 'under the protection and the rule of the principles of the law of nations, as they result from the usages established among civilized peoples, from the laws of humanity, and the dictates of public conscience'.²⁶⁴ In modern international law there is no reason why these should not encompass environmental protection.

It is a well accepted general rule of international law that methods and means of warfare are not unlimited. Methods and means are limited to activities necessary

to achieve military objectives; which prevent unnecessary suffering and superfluous injury; which are proportionate; and which respect the rules of international law on neutrality. As early as 1899 states accepted that the 'right of belligerent to adopt means of injuring the enemy is not unlimited'.²⁶⁵ The 1977 Additional Protocol I provides that 'In any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited'.²⁶⁶ As a general rule the destruction of property is prohibited unless it is rendered absolutely necessary by military operations,²⁶⁷ as is the use of mines causing long-lasting threats.²⁶⁸

These general obligations limiting the methods and means of warfare have been supplemented by specific treaty obligations prohibiting certain forms of weaponry and warfare which are particularly harmful to the environment. Although these rules are invariably designed to protect people, rather than the environment, their application could also provide protection to the environment. Under the 1977 Additional Protocol I, Parties must assess new weapons and means or methods of warfare to determine whether, in their employment, they would be prohibited by the Protocol or by any other applicable rule of international law.²⁶⁹ Other treaties prohibit the use of conventional weapons causing excessive injuries or indiscriminate effects,²⁷⁰ including incendiary weapons,²⁷¹ chemical and biological

²⁶¹ 1972 London Convention *Supra*. n. 58, Art. VII(4) (non-applicability of Convention to vessels and aircraft entitled to sovereign immunity under international law).

²⁶² Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft, (Barcelona), 16 February 1976, in force 12 February 1978, 15 *ILM* (1976) 290, (1976 Barcelona Dumping Protocol), which generally prohibits dumping of materials produced for biological and chemical warfare (Annex I, Section A, para. 9); and Protocol for the Prevention of Pollution of the South Pacific Region by Dumping, (Noumea), 25 November 1986, in force 22 August 1990 *IELMT* 986:87A (1986 Noumea Dumping Protocol) which prohibits special dumping permits from being granted in respect of materials produced for biological and chemical warfare (Art. 10(1) and (2) and Annex I, Section A, para. 6).

²⁶³ Antarctic Treaty (Washington), 1 December 1959, in force 23 June 1961, 402 *UNTS* 71, Art. I(1) (1959 Antarctic Treaty); 1988 CRAMRA, (art. 2), *Supra*. n. 67.

²⁶⁴ Convention Concerning the Laws and Customs of War on Land (Hague IV), (The Hague), 18 October 1907, in force 26 January 1910, 3 *Martens* (3rd) 461, Preamble (1907 Hague Convention IV). The 'Martens Clause' may be helpful in extending customary international law obligations to extend to environmental protection objectives, particularly in the context of current efforts to establish the environment as a civilian objective.

²⁶⁵ Hague Regulations to the International Convention with Respect to the Laws and Customs of War by Land (Hague II), 26 *Martens* (2nd) 949; and 1907 Hague Convention IV, *supra*.

²⁶⁶ Protocol I (Additional to the Geneva Convention of 12 August 1949) Relating to the Protection of Victims of Armed Conflict, (Geneva) 8 June 1977, in force 7 December 1978, 16 *ILM* (1977) 1391, Art. 35(1) (1977 Additional Protocol I).

²⁶⁷ Hague Regulations, Art. 23(g) and 55; Convention IV for the Protection of War Victims, Concerning the Protection of Civilian Persons in Time of War, (Geneva), 12 August 1949, in force 21 October 1950, 75 *UNTS* 287, Art. 53 (1949 Geneva Convention IV).

²⁶⁸ Convention Relative to the Laying of Automatic Submarine Contact Mines, (The Hague), 18 October 1907, in force 26 January 1910, 3 *Martens* (3rd) 580 (1907 Hague Convention VIII); see also UNGA Res. 37/215 (1982).

²⁶⁹ Art. 36.

²⁷⁰ Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which may be Deemed to be Excessively Injurious or to have Indiscriminate Effects, 10 April 1980, 19 *ILM* (1980) 1523 (1980 Inhumane Weapons Convention); the Preamble identifies one of the aims as environmental protection.

²⁷¹ See Protocol III (Incendiary Weapons), to the 1980 Inhumane Weapons Convention *supra*, which prohibits making forest or other plant cover the object of attack unless used to cover, conceal or camouflage military objectives: Art. 2(4).

weapons,²⁷² and nuclear weapons. Cultural property is also subject to a regime of special protection.²⁷³

More specific to environmental protection is the prohibition of attacks on works and installations containing dangerous forces, even when they are military objects, if such attacks might cause the release of dangerous forces and consequent severe losses among the civilian population.²⁷⁴ Dams, dykes and nuclear power plants are specifically identified, although the effectiveness of this provision is limited by the exceptions provided if these types of works and installations are used in regular, significant and direct support of military operations, and if such attack is the only feasible way to terminate such support.²⁷⁵ Attacks against such works or installations launched in the knowledge that they will cause excessive loss of life, injury to civilians or damage to civilian objects are regarded as war crimes.²⁷⁶ The International Atomic Energy Agency (IAEA) has called for a prohibition of attacks on nuclear facilities, since they "could result in radioactive releases with grave consequences",²⁷⁷ and the International Law Association (ILA) has declared that international law prohibits the destruction of water installations which "may involve ... substantial damage to the basic ecological balance".²⁷⁸ The increased importance attached by the international community to the protection of the environment in times of armed conflict is also reflected in the work of the International Law Commission (ILC). The first reading of the draft Code of Crimes Against the Peace

and Security of Mankind defines an "exceptionally serious war crime" as, *inter alia*, "employing methods or means of warfare which are intended or may be expected to cause widespread, long-term and severe damage to the natural environment".²⁷⁹

(iii) *International law of war and armed conflict: special rules of environmental protection*

The first treaty to establish rules specifically protecting the environment from the consequences of military activities was the 1977 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (1977 ENMOD Convention).²⁸⁰ It prohibits Parties from engaging in "military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury" to any other Party.²⁸¹ The Convention defines "environmental modification techniques" as "any technique for changing - through the deliberate manipulation of natural processes - the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space".²⁸²

No definitions are provided of the terms "widespread", "long-lasting" and "severe", although the Conference of the Committee on Disarmament under whose auspices the Convention was negotiated did attach Understandings to the text of the Convention which were submitted

²⁷² Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare, (Geneva), 17 June 1925, in force 8 February 1928, 94 UNTS 65; Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxic Weapons and on their Destruction, (London, Washington, Moscow) 10 April 1972, in force 28 March 1975, 1015 UNTS 163 (1972 Biological and Toxic Weapons Convention). See also Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction, (Paris), 13 January 1993, 32 ILM (1993) 800.

²⁷³ Convention for the Protection of Cultural Property in the Event of Armed Conflict, (The Hague), 14 May 1954, in force 7 August 1956, 249 UNTS 215 (1954 Hague Convention).

²⁷⁴ 1977 Additional Protocol I, *supra*, n. 75, Art. 56(1); Protocol II (Additional to the 1949 Geneva Conventions) Relating to the Protection of Victims of Non-International Armed Conflicts, (Geneva), 8 June 1977, in force 7 December 1978, 16 ILM (1977) 1391, Art. 15 (1977 Additional Protocol II).

²⁷⁵ 1977 Additional Protocol I, Art. 56(2).

²⁷⁶ 1977 Additional Protocol I, Art. 85(3) and (5).

²⁷⁷ UNGA res 45/58J (1990). See also resolutions of the General Conference of the IAEA, GC(XXVII)/RES/407 (1983), GC(XXVIII)/RES/425 (1984), GC(XXIX)/RES/444 (1985), GC(XXXI)/RES/475 (1987), GC(XXXIV)/RES/533 (1990).

²⁷⁸ 1976 ILA Madrid Resolution on the Protection of Water Resources and Water Installations in Times of armed Conflict, resolution of 4 September 1976, 57 ILA 234.

²⁷⁹ Report of the ILC, 43rd Session, 46 GAOR Supp. I No. 10 (A/46/10), Ch. IV D.1., (30 ILM 1584 (1991)), at Art. 22 (2) (d). See also Art. 26 of the Draft Code: an individual who 'wilfully causes or orders the causing of widespread long-term and severe damage to the natural environment' is liable to be convicted of a crime against the peace and security of mankind.

²⁸⁰ Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, (New York), 10 December 1976, in force 5 October 1978, 1108 UNTS 151 (1977 ENMOD Convention).

²⁸¹ Art. I(1). The Convention is not intended to hinder environmental modification techniques for peaceful purposes and is stated to be 'without prejudice to the generally recognized principles and applicable rules of international law concerning such use': Art. III(1).

²⁸² Art. II.

to the General Assembly.²⁸³ The terms of Article II are sufficiently opaque to leave open the question of whether the act must be deliberately intended to manipulate natural processes, or whether it is sufficient to show that natural processes have been manipulated as the result of an act which was intended to manipulate non-natural processes, as may have been the case with the destruction by Iraq of Kuwaiti oil fields. The former, and far narrower, approach would undoubtedly limit the scope of the Convention's application and its effectiveness.

Several months after the ENMOD Convention was concluded, the 1977 Additional Protocol I to the 1949 Geneva Conventions Relating to the Victims of Armed Conflict was adopted.²⁸⁴ The 1977 Additional Protocol I contains two explicit obligations designed to protect the environment which, given the large number of Parties and views expressed by states, may now reflect a rule of customary international law.²⁸⁵ Under Article 35 it is "prohibited to employ methods and means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment".²⁸⁶ Article 55, entitled "Protection of the natural environment", provides that

Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population.²⁸⁷

The Protocol also prohibits attacks against the natural environment by way of reprisals.²⁸⁸

(iv) UNCED and other developments

The Iraqi invasion of Kuwait has led to further consideration of the environmental effects of war and armed conflict, including an examination of the adequacy

of the existing and rather limited treaty rules. Agenda 21 reflects limited progress. It called on the international community to consider measures in accordance with international law "to address, in times of armed conflict, large-scale destruction of the environment that cannot be justified under international law", and identified the General Assembly and its Sixth Committee as the appropriate fora to deal with the issue, taking into account the competence and role of the International Committee of the Red Cross.²⁸⁹

In December 1992 the General Assembly adopted a resolution stressing that the destruction of the environment not justified by military necessity and carried out wantonly was "clearly contrary to international law", and noted that existing provisions of international law prohibited the destruction of oil well heads and the release and waste of crude oil into the sea.²⁹⁰ The General Assembly urge states to take all measures to ensure compliance with the existing international law applicable to the protection of the environment in times of armed conflict, and requested the Secretary General to report to the General Assembly in 1993 on activities undertaken by the International Committee of the Red Cross and other relevant bodies.

2.1.3 Possible tasks for the UNEP Working Group

In relation to the general international legal context in which the issue of liability arises, among the points which the Working Group might address are;

- to what extent might Iraq's liability depend upon whether the environmental damage in question is caused in Kuwait, in the territory of other states, or in areas beyond national jurisdiction?
- do the rules of international environmental law, customary or in treaties, apply during war and armed conflict?

²⁸³ The Understanding on Art. I provides that the terms should be interpreted in the following way:

'(a) 'widespread': encompassing an area on the scale of several hundred square kilometres;

(b) 'long-lasting': lasting for a period of months, or approximately a season;

(c) 'severe': involving serious or significant disruption or harm to human life, natural and economic resources or other assets.'; see Understanding Relating to Article I of ENMOD, 31 GAOR Suppl. No. 27 (A/31/27), Annex I, Annex.

²⁸⁴ 1977 Additional Protocol I, supra. n. 75.

²⁸⁵ Although the UK and US are not Parties to the Protocol, they have expressed support for the protection of the environment on similar terms.

²⁸⁶ Art. 35(3).

²⁸⁷ Art. 55(1).

²⁸⁸ Art. 55(2).

²⁸⁹ Agenda 21, Chapter 39, para. 39.6(a).

²⁹⁰ UNGA res. 47/591 (1992).

- to what extent do the terms of Security Council Resolution 687 remove any need for the Commission to establish Iraq's liability for environmental damage under the general rule contained in Principle 21 of the Stockholm Declaration or under the specific rules related to armed conflict?

2.2 The definition of "environmental damage" and "depletion of natural resources"

Security Council Resolution 687 and Decision 7 of the Commission's Governing Council provide for compensation for environmental damage and the depletion of natural resources. These terms are not defined in Decision 7, which it is important to recall was not intended to provide an exhaustive list. Although some guidance is given as to the types of losses or expenses which will be compensable, these do not relate to compensation for environmental damage *per se*. It will remain for the Commission to define what falls within the term "environmental damage" and "depletion of natural resources" for the purposes of Decision 7.

Defining environmental damage remains a complex issue in national and international law. Two related issues need to be distinguished: what constitutes environmental damage? And what level of environmental damage might give rise to liability?²⁹¹ The Commission will also need to consider the relevance and implications of the distinction made between "environmental damage" and the "depletion of natural resources" in the Resolution and Decision 7, and this is a matter on which the Working Group might usefully provide some assistance.

In defining environmental damage, treaties and state practice reflect various approaches. A narrow definition of environmental damage is limited to damage to natural resources alone (ie. air, water, soil, fauna and flora, and their interaction); a more extensive approach includes damage to natural resources and property which forms part of the cultural heritage; the most extensive definition includes landscape and environmental amenity. On each approach, environmental damage does not include damage to persons or damage to property, although such damage can be consequential to environmental damage (this distinction is reflected in Article 24 of the ILC's Draft Articles on International

Liability, which addresses "harm to the environment and resulting harm to persons or property").²⁹² Loss of environmental amenity, which may be included under the provisions of the 1993 Council of Europe Convention on Liability for Environmental Damage (1993 Lugano Convention) which refers to the "characteristic aspects of the landscape", could be treated as environmental damage or damage to property, depending on the definition of the latter.²⁹³ Few of the treaties explicitly define the term "environmental damage" as such. However, some assistance can be gleaned from the various defined terms in international environmental agreements, from state practice, from the practice and work of international organisations, including those concerned with the codification and development of international law, from the various approaches taken under national laws and from certain academic studies.

2.2.1 *International treaties and practice thereunder*

In respect of state liability, the only treaty which provides an explicit definition of damage to the environment is the 1988 Convention on the Regulation of Antarctic Mineral Resources (1988 CRAMRA), which defines damage to the Antarctic environment or ecosystem very broadly, to include:

any impact on the living or non-living components of that environment or those ecosystems, including harm to atmospheric, marine or terrestrial life, beyond that which is negligible or which has been assessed and judged to be acceptable pursuant to [the] Convention.²⁹⁴

The concept of "pollution", which is defined in the 1979 Convention on Long-Range Transboundary Air Pollution (1979 LRTAP Convention),²⁹⁵ the 1982 United Nations Convention on the Law of the Sea (1982 UNCLOS)²⁹⁶ and elsewhere, provides some assistance. However, as the 1993 Lugano Convention makes clear, the concept of "pollution" is not interchangeable with "environmental damage". The distinction between environmental damage (and compensable environmental damage) and pollution is illustrated by Article 8 (d) of that Convention which provides that an operator of a dangerous activity will not be liable for damage (impairment of the environment) caused by pollution at "tolerable" levels

²⁹¹ See Part 2.3 below.

²⁹² ILC Draft Articles on Liability for Injurious Consequences of Acts Not Prohibited By International Law, Barboza, *Sixth Report*, UN Doc. A/CAN.4/428, p.39, (1990).

²⁹³ Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, (Lugano), 21 June 1993, not in force, 32 *ILM* (1993) 1228.

²⁹⁴ *Supra*. n. 66, Art. 1(15).

²⁹⁵ 1979 LRTAP Convention, *supra*. n. 58.

²⁹⁶ *Supra*. n. 62.

under local relevant circumstances.²⁹⁷

"Air pollution" in the 1979 LRTAP Convention is defined by reference to deleterious effects (which are themselves undefined) on living resources and ecosystems, human health, and material property, as well as interference with amenities and other legitimate uses of the environment.²⁹⁸ Other treaties require "adverse effects", rather than pollution, to define consequences of activities which are to be avoided. Like pollution, "adverse effects" provides some assistance in establishing a basis for, but cannot be used interchangeably with, a general definition of environmental damage. The 1985 Vienna Convention on the Protection of the Ozone Layer defines "adverse effects" in relation to ozone depletion as, *inter alia*, "changes in the physical environment or biota, including changes in climate, which have significant deleterious effects on human health or on the composition, resilience and productivity of natural and managed ecosystems, or on materials useful to mankind".²⁹⁹ The 1992 United Nations Framework Convention on Climate Change introduces a similar definition and extends the definition to include effects on socio-economic systems and human welfare.³⁰⁰ Thus "pollution" and "adverse effects" help in determining the threshold beyond which environmental damage might trigger liability, but they do not actually define it.

Definitions in civil liability conventions provide an alternative source of assistance, and also go to the measure of damages available.³⁰¹ Thus, "pollution damage" is defined in the 1969 Brussels Convention on Civil Liability for Oil Pollution Damage as

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

preventive measures and further loss or damage caused by preventive measures.³⁰²

The 1971 Oil Fund Convention relies upon the same definition.³⁰³ The view that this includes environmental damage is supported by the amended text of the 1992 Liability Protocol which defines pollution damage as

- (a) loss or damage caused outside the ship by contamination, resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken;
- (b) the costs of preventative measures and further loss or damage caused by preventative measures.³⁰⁴

2.2.2 State practice under general international law

Other state practice is limited. Environmental damage in the pure sense was not considered by the Arbitral Tribunal in the *Trail Smelter* case,³⁰⁵ although the *Lac Lanoux Arbitration* implicitly recognized environmental damage when it referred to changes in the composition, temperature or other characteristics of the waters of the River Carol which injured Spanish interests.³⁰⁶ Treating environmental damage as a separate head is recognized in the claims by Australia and New Zealand in the *Nuclear Tests* cases,³⁰⁷ by Nauru in the *Case Concerning Certain Phosphate Lands in Nauru*,³⁰⁸ and by Hungary in its unilateral declaration against Slovakia in the *Gabcikovo-Nagymaros Case*.³⁰⁹

2.2.3 The practice of international organisations including the International Law Commission

²⁹⁷ *Supra*. n. 102; see Part 2.3.

²⁹⁸ Art. 1(a); see also 1982 UNCLOS, Art. 1(4).

²⁹⁹ 1985 Vienna Convention, *supra*. n. 58, Art. 1(2).

³⁰⁰ 1992 Climate Change Convention, *supra*. n. 59.

³⁰¹ See Part 2.4 below.

³⁰² *Supra*. n. 67, Art. 1(6). 'Preventive measures' are limited to 'reasonable measures' to prevent or minimize pollution damage: Art. 1(7).

³⁰³ *Supra*. n. 67.

³⁰⁴ Protocol of 1992 to Amend the International Convention on Civil Liability for Oil Pollution Damage 1969, (London), 27 November 1992, not in force, BNA 21:1551, Art. 2(3).

³⁰⁵ *Trail Smelter Arbitration* (US v. Canada), 16 April 1938-11 March 1941, 9 ILR 315.

³⁰⁶ *Lac Lanoux Arbitration* (France v. Spain), 24 ILR 101.

³⁰⁷ *Nuclear Tests Cases* (Australia v. France) (Interim Measures) ICJ Rep. (1973) 99, (Jurisdiction) ICJ Rep. (1974) 253.

³⁰⁸ *Case Concerning Certain Phosphate Lands in Nauru* (Nauru v. Australia), ICJ Rep. (1992) 240.

³⁰⁹ *Case Concerning the Gabcikovo-Nagymaros Project* (Hungary v. the Slovak Republic), 32 ILM (1993) 1293.

The ILC has been working since the late 1970's on the liability of states for acts not prohibited by international law, and recently prepared draft articles.³¹⁰ The draft liability Articles are incomplete and remain controversial. They are intended to supplement the rules being developed by the ILC on state responsibility³¹¹ and to establish principles governing state and civil liability in respect of transboundary harm which arises from activities which are not unlawful *per se*.

The draft Articles would establish basic principles applicable to the activities carried out in the territory of a State, or in other places under its jurisdiction, or under its control, the physical consequences of which cause, or create a risk of causing, transboundary harm throughout the process.³¹² 'Transboundary harm' is tentatively defined as physical harm in the 'territory or in [places] [areas] under the jurisdiction or control of another State, is [appreciably] [significantly] detrimental to persons, [objects] [property] [, the use or enjoyment of areas] or the environment'.³¹³

The European Commission proposal for an EC Directive on civil liability for damage caused by waste defined injury to the environment as "a significant and persistent interference in the environment caused by a modification of the physical, chemical or biological conditions of water, soil and/or air in so far as these are not considered to be damage within the meaning of subparagraph (c)(ii) [on damage to property]".³¹⁴ More recently, the EC Commission Green Paper on Liability for Environmental Damage recognises the central importance of the definition of environmental damage adopted in driving the process of determining the type and scope of the necessary remedial action and thus the costs that are recoverable.³¹⁵

In its efforts in addressing an appropriate definition of environmental damage, the UNEP Working Group might also usefully seek guidance from the domestic legal systems of many states, particularly from national environmental liability regimes.

2.2.4 Possible tasks for the UNEP Working Group

The Working Group could usefully address the following issues:

- what is meant by "environmental damage" in Resolution 687 and Decision 7? What criteria might the Commission use to identify environmental damage?
- what is meant by "depletion of or damage to natural resources" in Decision 7, and how does it differ from environmental damage?
- to the extent that Decision 7 sets out a non-exhaustive list what other heads of "environmental damage" might apply?
- do Resolution 687 and Decision 7 include "environmental damage" and/or "depletion of or damage to natural resources" which has occurred in areas beyond national jurisdiction (the global commons)?
- in considering these and related issues what are the "other relevant rules of international law" which the Commissioners might apply? In particular, what treaty rules might be relevant, are there any relevant rules of customary international law, and might there be general principles of law which could be derived from municipal legal systems? and
- in what circumstances would it be necessary for the Commissioners to apply those relevant rules of international law?

2.3 The threshold at which environmental damage entails liability

A second issue raised in relation to "environmental damage" and "depletion of or damage to natural resources" concerns the threshold at which such depletion or damage might entail a liability for Iraq.

³¹⁰ *Supra*. n. 101.

³¹¹ ILC Draft Articles on State Responsibility, II Yearbook ILC (1980), Part 2, p.30.

³¹² Art. 1. The activities envisaged include those which involve the handling, storage, production, carriage, unloading or other similar operation of one or more dangerous substances; or use technologies that produce hazardous radiation; or introduce into the environment genetically altered organisms and dangerous micro-organisms: *id.*, Art. 2(a); see also Arts. 2(b), (c) and (d) for definitions of 'dangerous substances', 'dangerous genetically altered organisms' and 'dangerous micro-organisms'.

³¹³ Art. 2(g); it also includes the cost of preventive measures. '[Appreciable] [Significant] harm' is defined as 'harm which is greater than the mere nuisance or insignificant harm which is normally tolerated': Art. 2(h).

³¹⁴ COM (89) 282 final. The proposal was submitted by the Commission on 1 September 1989, but has not progressed due to the wider ranging discussion of liability for environmental damage in the EC commenced by the Commission's Green Paper on Remedying Environmental Damage, n. 124 *infra*.

³¹⁵ Communication from the Commission to the Council and Parliament and the Economic and Social Committee: Green Paper on Remedying Environmental Damage, COM (93) 47.

Security Council Resolution 687 and Decision 7 of the Governing Council provide simply that Iraq will be liable for environmental damage arising as a result of its unlawful invasion and occupation of Kuwait. They do not expressly qualify the term "environmental damage" by indicating a threshold of damage below which Iraq will not be liable. The only explicit requirement in the Security Council Resolution, reflected in Decision 7, is that the environmental damage be "direct" as a result of Iraq's unlawful invasion and occupation of Iraq. This "proximity" test may provide yet another question for the Commission: how will it treat the determination of what constitutes "direct" environmental damage arising out of the invasion? Will it adopt a wide approach so that all damage is covered (on the grounds that, save for the invasion there would have been no damage), or a narrower approach which imposes liability solely for deliberate acts of or attributable to Iraq which directly cause damage. To the extent that Iraq will have scope to challenge attributions of liability, it may be principally through pointing to intervening causal factors, and thus by challenging the directness of damage. In this regard, the Working Group might also usefully address more generally the issues and difficulties raised in establishing causation in relation to environmental damage.

Turning to the threshold issue, in general, whilst all pollution or human activity having adverse effects might give rise to some environmental damage, it is unlikely that all environmental damage results in state liability. Such a rule would impose liability for all human activity having any impact whatsoever on the environment. Although there are no agreed international standards which establish a threshold for environmental damage which triggers liability, and allow claims to be brought, certain sources of international law suggest that environmental damage must be "significant" or "substantial" (or possibly "appreciable", which might suggest a

marginally less onerous threshold) for liability to be triggered.³¹⁶

2.3.1 *International treaties and practice thereunder*

A number of international treaties impose thresholds below which environmental damage (or adverse effects or pollution) is not deemed to have occurred for the purposes of the treaty. For example, as cited above, Article 1(1) of the Climate Change Convention and Article 1(2) of the Vienna Convention on the Protection of the Ozone Layer respectively define "adverse effects" in terms of changes in the environment having "significant" deleterious effects. The 1977 ENMOD Convention and the 1977 Additional Protocol I to the 1949 Geneva Convention set a higher threshold, outlawing within their respective spheres military activities having widespread, long-lasting (or long term) and severe effects.³¹⁷

By contrast, the 1988 CRAMRA sets a low threshold defining damage to the Antarctic environment to include any impact beyond that which is "negligible" or which has been assessed and judged to be acceptable pursuant to the Convention.³¹⁸

In addition, a number of the civil liability instruments establish thresholds for environmental damage or adverse effects which are 'significant',³¹⁹ or 'serious',³²⁰ or above 'tolerable levels'.³²¹ The Lugano Convention specifically provides for a threshold approach by recognising a distinction between "tolerable pollution" and environmental damage. Exceptions in the Convention³²² provide, *inter alia*, that an operator will not be liable for damage which he proves "was caused by pollution at tolerable levels under local relevant circumstances".³²³ This indicates clearly the distinction to be drawn between pollution and liability for environmental

³¹⁶ See generally on this issue, Sachariew "The Definition of Thresholds of Tolerance for Transboundary Environmental Injury under International Law: Development and Present Status", XXXVIII NILR 193 (1990); cf. the replacement of "appreciable" by "significant" in the ILC's Draft Article 7 on the Law of the Non-Navigable Uses of International Watercourses by the Drafting Committee for the reason explained in the text and "not as a means of raising threshold" of harm: see A/CN.4/SR.2352, 6 July 1994 at p. 27 (Prof. Bowett, Chairman of the Drafting Committee).

³¹⁷ ENMOD Art. I: "Each State Party to this Convention undertakes not to engage in military or any other hostile use of environmental modification techniques having widespread, long lasting or severe effects as the means of destruction, damage or injury to any other State Party" and 1977 Additional Protocol I, Part III, art. 35(3): "It is prohibited to employ methods and means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment"

³¹⁸ CRAMRA, art. I para. 15: "Damage to the Antarctic environment or dependent or associated ecosystems" means any impact on the living or non-living components of that environment or those ecosystems, including harm to atmospheric, marine or terrestrial life, beyond that which is negligible or which has been assessed and judged to be acceptable pursuant to this Convention"

³¹⁹ Convention on the Protection and Use of Transboundary Watercourses and International Lakes, (Helsinki), 17 March 1992, not in force, 31 ILM (1992) 1312, Art. 1(2) (1992 Watercourses Convention).

³²⁰ UN/ECE Convention on the Transboundary Effects of Industrial Accidents, (Helsinki), 17 March 1992, not in force, 31 ILM (1992) 1330, Art. 1(d) (1992 Industrial Accidents Convention).

³²¹ 1993 Lugano Convention, Art. 8(d).

³²² Article 8.

³²³ Art. 8(d).

damage; while all environmental damage is likely to be included in the definition of pollution, not all pollution will give rise to liability. Moreover, it does not define a "tolerable level" of pollution, which is problematic in the absence of agreed international standards. Finally, it recognizes that tolerable levels are not absolute and may vary between localities or regions, and implements a shift in the burden of proof requiring the operator to prove that the pollution is at a tolerable level, and not for the victim to prove that the level of pollution is intolerable.

2.3.2 State practice under general international law

The exchange between the then President of the International Court of Justice, Sir Humphrey Waldock, and the Government of Australia in the *Nuclear Tests Case* reflects the view that not every transmission of chemical or other matter into another state's territory, or into the global commons, will create a legal cause of action in international law. Australia was asked by the President of the Court whether it took the view that "every transmission by natural causes of chemical or other matter from one state into another state's territory, air space or territorial sea automatically created a legal cause of action in international law without the need to establish anything more"? In response, Australia stated that,

...where, as a result of normal and natural user by one state of its territory, a deposit occurs in the territory of another, the latter has no cause of complaint unless it suffers more than merely nominal harm or damage. The use by a state of its territory to conduct atmospheric nuclear tests is not a normal or natural use of its territory. The Australian Government also contends that the radioactive deposit from the French tests gives rise to more than merely nominal harm or damage to Australia.

By way of elaborating...the basic principle is that intrusion of any sort into foreign territory is an infringement of sovereignty. Needless to say, the Government of Australia does not deny that the

practice of states has modified the application of this principle in respect of the interdependence of territories. It has already referred to the instance of smoke drifting across national boundaries. It concedes that there may be no illegality in respect of certain types of chemical fumes in the absence of special types of harm. What it does emphasise is that the legality thus sanctioned by the practice of states is the outcome of the toleration extended to certain activities which produce these emissions, which activities are generally regarded as natural uses of territory in modern industrial society are tolerated because, while perhaps producing some inconvenience, they have community benefit.³²⁴

The Tribunal in the *Trail Smelter Arbitration* held that the injury must have a "serious consequence" to justify a claim.³²⁵ In its claim against Australia, Nauru argued for general principle based upon an obligation not to bring about changes in the condition of territory which will cause "irreparable damage to, or substantially prejudice" the legal interest of another state.³²⁶ A similar approach underlies the original Hungarian Application in the *Gabcikovo-Nagymaros Case*.³²⁷ The Canadian claim following the crash of Cosmos 954 was brought in the context of damage to land which made it "unfit for use", a level of damage supporting the view that the impact on the environment must be more than nominal to support a claim.³²⁸

2.3.3 The practice of international and regional organisations

The 1993 EC Commission Green Paper on Environmental Liability³²⁹ recognises the need for thresholds in a liability regime and identifies several possibilities for determining the level of environmental damage triggering liability. These include:-

- defining environmental damage by reference to "critical loads", which describe the point at which a pollutant becomes concentrated in the environment at a level which cannot be diluted or broken down by natural processes;³³⁰ or

³²⁴ *Nuclear Tests Case*, (Australia v. France) ICJ Pleadings 1974, 525-526

³²⁵ *Trail Smelter Arbitration*, *Supra*. n. 114, p. 317.

³²⁶ *Case Concerning Certain Phosphate Lands in Nauru*, *supra*. n. 117, p. 244.

³²⁷ *Case Concerning the Gabcikovo-Nagymaros Project*, *supra*. n. 118; see Declaration of the Government of Hungary on the Termination of the Treaty Concluded between Hungary and Czechoslovakia on the Construction and Joint Operation of the Gabcikovo-Nagymaros Barrage System, signed in Budapest on 16 September 1977, 32 *ILM* (1993) 1260, 1261.

³²⁸ Canada, claim against the USSR for damage caused by Soviet Cosmos 954, 23 January 1979, 18 *ILM* (1979) 899-908.

³²⁹ *Supra*. n. 124.

³³⁰ See also 1992 Climate Change Convention, Art.2 (stabilisation of greenhouse gas concentrations) *supra*. n. 60; Protocol to the 1979 Convention on LRTAP on the Reduction of Sulphur Emissions or their Transboundary Fluxes (Helsinki), 8 July 1985, in force 2 September 1987, 27 *ILM* (1987) 707, Art. 2; Protocol on the Control of Emissions of Volatile Organic Compounds and Their Transboundary Fluxes (Geneva), 18 November 1991, not in force, 31 *ILM* (1992) 568, Art. 2 (critical levels).

- by reference to environmental indicators and environmental accounting to measure environmental performance, pressures and conditions;³³¹ or
- by reference to existing international legislation which establishes quality requirements for flora and fauna, water and air quality and which might be considered to establish a threshold for environmental damage above which a person responsible for the increase would be considered liable for the consequences (international instruments which set environmental quality standards, or product, emission or process standards, may provide some guidance as to the level of environmental damage considered to be tolerable or acceptable by the international community).

The International Law Commission in its work on non-navigational uses of international watercourses recently amended the threshold of harm in its draft articles from "appreciable" to "significant", in response to comments from states.³³² According to the ILC, "significant" means "something more than measurable, but less than serious or substantial".³³³ The 1982 ILA Montreal Draft Rules on Transboundary Pollution call on states to prevent "substantial injury".³³⁴

The UN-ECE Task Force which has been considering rules on responsibility and liability for transboundary water resources has set out non-binding Guidelines³³⁵ which, *inter alia*, seek to establish criteria for determining the threshold for determining whether damage has arisen:

- (i) damage may be actual or potential damage, it also includes the threat of damage. A threat of damage exists if the amount of risk of pollution exceeds that what is generally tolerable; this could result from high probability (great risk of pollution) or lower probability but intolerable amount of damage (product formed by risk and damage exceeds that what is tolerable).
- (ii) the threshold of damage (as distinguished from mere harm) is that which is accepted by the States

universally or by the concerned States. If no such level is agreed, damage occurs where an affected State is required, as the result of the activity on the territory of the State of origin, to take measures in the interest of the protection of the environment or population or rehabilitation measures'.³³⁶

Establishing the appropriate threshold must turn on the facts and circumstances of each case, and may vary according to local or regional circumstances. The limited state practice supports the view that the threshold to be crossed may still be established at a relatively high level of environmental damage. The difficulty of agreeing a threshold is illustrated by the Chernobyl accident, which raised numerous issues over what constituted harmful levels of radioactivity in the absence of legally binding international standards.³³⁷

2.3.4 Possible tasks for the UNEP Working Group

In the context of the claims likely to be brought to the Compensation Commission the Working Group might usefully address the following issues:

- how should the Commission deal with the question of what constitutes "direct" environmental damage as a result of Iraq's unlawful invasion and occupation of Kuwait? How should the Commission deal with a situation where intervening factors may have caused or exacerbated environmental damage?
- how should the Commission deal more generally with the difficult question of proof of causation of environmental damage?
- notwithstanding that Security Council Resolution 687 and Decision 7 do not explicitly impose a threshold below which liability does not arise, should the Commission utilise a threshold approach? Is there in effect an implied threshold?
- if the Commission does set a threshold, at what level should this be set and what methods and indicators might the Commission use to determine whether the threshold has been met in each case?

³³¹ OECD Council Recommendation on Environmental Indicators and Information C(90)165/FINAL (1991).

³³² See *supra*, n. 125.

³³³ See S. McCaffrey in ASIL/NVIR Proceedings, 1993, 378. The draft articles were adopted by the ILC at its forty-sixth session in June 1994, see EPL 24/5 (1994), 230-231.

³³⁴ Art. 3(1).

³³⁵ Report and Guidelines on Responsibility and Liability Concerning Transboundary Water Pollution, (ENWWAR.45), 1990, as described in A. Rest, "Ecological Damage in Public International Law", 22 EPL 31 (1992).

³³⁶ Guidelines, C, I, 2, as quoted in A. Rest, *supra*.

³³⁷ See P. Sands, *Chernobyl: Law and Communication* (1988), p. 15, 18-19.

2.4 Issues related to quantum

2.4.1 General issues

The principle is well established that the perpetrator of an internationally wrongful act is under an obligation to make reparation for the consequences of the violation. As expressed in the judgment of the *Chorzow Factory (Indemnity)* case, the Permanent Court of International Justice stated that

The essential principle contained in the actual notion of an illegal act — a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals — is that reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed. Restitution in kind, or, if this is not possible, payment of a sum corresponding to the value which a restitution in kind would bear; the award if need be, of damages for loss sustained which would not be covered by restitution in kind or payment in place of it — such are the principles which should serve to determine the amount of compensation due for an act contrary to international law.³³⁸

However, the statement of the PCIJ in that case relates to the standard of compensation but does not tell us how to value the harm done. The issue of valuation has proved problematic in cases involving tangible property or other economic loss,³³⁹ but raises even more complex issues in relation to environmental damage.

In most environmental cases the victim is likely to seek financial reparation to cover the costs associated with material damage to environmental resources (pure environmental damage) and consequential damage to people and property (consequential environmental damage), including restoration or reinstatement.

The Security Council Resolution and Decision 7 do not specifically direct the Commission as to how to deal with issues of quantum in relation to claims for environmental damage. As previously noted, Decision 7 does set out certain heads under which losses and expenses can be recovered, for example: abatement and prevention of environmental damage, including expenses directly relating to fighting oil fires and stemming the flow of oil

in coastal and international waters; reasonable measures already taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment; and depletion of or damage to natural resources.³⁴⁰

These categories, which are not exhaustive, set out certain elements or types of damage for which compensation might be payable. However, they do not address certain other complex questions related to assessing and valuing the proper level of compensation for environmental damage. The present state of international law on these issues remains undeveloped, particularly in relation to state liability. This is an area where the Commission will need to further develop international law, and where its work will act as a source of guidance for international tribunals in the future.

2.4.2 What types of damage are to be compensated?

As noted above, some of the heads of damage have been specified, if not fully elaborated by the Governing Council's Decision 7. In clarifying what types of damage are compensable, the Commission might build on some of the precedents established under, for example, the *Trail Smelter* case and limited state practice, including the submission of claims. The approach taken under certain civil liability arrangements may also be helpful in this respect.

The extent to which compensation will be payable for environmental damage and particularly for "pure" rather than "consequential" environmental damage has been dealt with in various ways by various tribunals operating under customary law and under various treaty regimes. In some cases, tribunals have avoided the question of whether pure environmental damage should be compensable. In other examples of state practice, it is not entirely clear whether the compensation paid included an element for environmental damage.

(i) *Trail Smelter Arbitration*

For example, the Tribunal in the *Trail Smelter Arbitration* found that the smelter at Trail had caused damage in the United States and was called upon to decide what indemnity should be paid for the damage. In applying the "law and practice followed in dealing with cognate questions in the United States of America as well as international law and practice,"³⁴¹ the Tribunal considered

³³⁸ [1927] PCIJ, Series A, No. 17, at 47.

³³⁹ See, for example, *Starrett Housing Corporation v. Islamic Republic of Iran* (1983) 4 Iran-US 176; *Amoco International Finance Corporation v. Islamic Republic of Iran* (1987) 15 Iran-US 189.

³⁴⁰ See *supra*, n. 43.

³⁴¹ See 1935 Convention for Settlement of Difficulties Arising from Operation of Smelter at Trail, 3 UNRIAA 1905, Art. IV.

the indemnity claimed by the United States for damage occurring after January 1932 in respect of (a) cleared land and improvements thereon; (b) uncleared land and improvements thereon; (c) livestock; (d) property; (e) the wrong done to the United States in violation of sovereignty; (f) interest on the \$350,000 awarded by the ICJ on 1 January 1932 but not paid until 2 November 1935; and (g) business enterprises. The United States did not put forward a pure environmental damage claim, although this could be read into the claim in respect of "uncleared land".

In its 1938 award the Tribunal found that damage had occurred to cleared land used for crops in varying degrees from 1932 to 1936 but not in 1937. It adopted the measure of damages applied by the American courts for nuisance or trespass, namely "the amount of reduction in the value of use or rental value of the land caused by fumigations". The Tribunal also recognized some evidence of "special damage" (rust and destruction of metal work) which entitled owners to a nominal amount.

As to damage for cleared land not used for crops and to all uncleared land other than that used for timber, the Tribunal adopted the same measure of damages. It rejected the US claim to the value of uncleared land a ratio of loss measured by the reduced crop yield on cleared land. No damages were awarded for pasture lands, and as to cleared land used for merchantable timber the measure of damages was also that applied by American courts, namely "the reduction in the value of the land due to such destruction of timber". For growing timber the measure of damages was "the reduction in the value of the land itself due to such destruction and impairment", but the Tribunal rejected the claim for damages due to lack of reproduction. On the basis of these considerations the Tribunal awarded \$62,000 for damage to cleared and uncleared land (other than land used for timber), and \$16,000 for damage to uncleared land used for timber.

The Tribunal rejected the claim for damage to livestock (due to the failure to prove injury from fumes from the smelter), damage to property in the town of Northport (lack of proof), and damage to business enterprises ("too indirect, remote and uncertain to be appraised and not such for which an indemnity can be awarded"). The Tribunal also rejected the US claim for damages from the "injurious effects" to the Columbia River caused by the disposal of waste slag. The Tribunal held that it was "unnecessary to decide whether the facts proven did or

did not constitute an infringement or violation of the sovereignty of the United States under international law independent of the Convention" since the Convention only submitted to the Tribunal the question of damages caused by the Trail Smelter in the state of Washington, and it interpreted the intention of the Parties in the 1935 Convention not to include money's spent by the US in investigating the problems, since the agreement used the words "damages caused by the Trail Smelter".³⁴² For the same reason the Tribunal rejected the claim for interest on the earlier payment of \$350,000.

In its 1941 award the Tribunal held that the United States had failed to prove that any fumigation between 1 October 1937 and 1 October 1940 had caused injury to crops, trees or otherwise and that no indemnity was due.³⁴³ As to any damage occurring after 1 October 1940, irrespective of compliance with the regime it had established, the Tribunal held that an indemnity should be paid for such damage when and if the two Governments arrange for the settlement of claims under article XI of the Convention, as well as up to \$7,500 per year to be paid to the United States as compensation in order to ascertain whether damage had occurred, provided that the two Governments have determined under Article XI of the Convention that damage has occurred in the year in question.

The two awards of the Arbitral Tribunal in Trail Smelter did not deal with pure environmental damage *per se*, and rejected the opportunity to assess damages in respect of injurious consequences to the Columbia River. The Tribunal basically took a market value approach which did not take account of loss of environmental amenity. In so doing it took the measure of damage used by US courts, an approach which would most likely produce a different result today because of changes in US law which reflect loss of environmental amenity or resources as a separate measure of damage.

(ii) Other practice

In January 1955 the US Government paid \$2 million to Japan for "purposes of compensation for the injuries or damage sustained" by Japanese nationals as a result of thermonuclear tests carried out by the US near the Marshall Islands in March 1954.³⁴⁴ The payments were made *ex gratia* and "without reference to legal liability", and it is unclear whether the compensation included an amount for damage to the marine environment or loss of environmental amenity.³⁴⁵

³⁴² *Trail Smelter Arbitration*, *supra*. n. 114, p. 321.

³⁴³ *Supra*. n. 114, pp. 322-323.

³⁴⁴ See Margolis, "The Hydrogen Bomb Experiments and International Law", 64 *Yale LJ.* 629, 638-9 (1955).

³⁴⁵ *Ibid.*, 639.

In its argument in the *Nuclear Tests Case*, Australia argued that if the existence of harm or damage was essential to liability, it could point to, *inter alia*, the "harm, all the more real for being incapable of precise evaluation, to which its population, both present and future, and environment have been subjected for no benefit to them".³⁴⁶

In April 1981 the USSR agreed to pay, and Canada to accept, Canadian \$3 million in final settlement of the Canadian claim, under the 1972 Space Liability Convention and general principles of international law, for damage incurred by way of expense in locating, recovering, removing and testing radioactive debris and cleaning up affected areas following the crash of Cosmos 954 in January 1978.³⁴⁷

And Nauru claimed "appropriate reparation" in respect of the losses it has suffered as a result of Australia's alleged breaches of legal obligations relating to, *inter alia*, changes in the condition of Nauru's territory causing irreparable damage.³⁴⁸

(iii) Civil liability approaches

Civil liability approaches to compensating for environmental damage as such appear to be fairly restrictive. For example, the International Oil Pollution Convention Fund (IOPC Fund) has received several claims for environmental damage, and its practice may prove instructive. It will be recalled that the Fund pays compensation for pollution damage, which means "loss or damage outside the ship carrying oil by contamination". The first claim to the Fund, arising out of the grounding of the USSR registered Antonio Gramsci off Ventspils, in the former USSR, on 27th February 1979, raised the question of whether this definition included environmental damage or damage to natural resources, as claimed by the USSR and others. The response of the Fund Assembly is to be found in Resolution No.3, adopted in 1980, which determined that "the assessment of compensation to be paid by the IOPC Fund is not to be made on the basis of an abstract quantification of

damage calculated in accordance with theoretical models".³⁴⁹

In 1985, on the basis of Resolution No.3, the IOPC Fund addressed a £9.2 million claim (later reduced to £2.3 million) by the Italian Government for damage to the marine environment arising out of a spillage from the Patmos, a Greek registered tanker, off the coast of Calabria on 21st March 1985. In the absence of any documentation from the Italian Government indicating the nature of the damage which had been caused or the basis on which the amount claimed had been calculated, the IOPC Fund rejected the claim.³⁵⁰ The Italian Government took the case to the Italian courts, and in 1986 the Court of First Instance rejected the Government's claim for compensation for ecological damage to marine flora and fauna on the grounds that the territorial sea was not crown or patrimonial property of the State but a "res communis omnium" which could not be violated by private parties, and that even if it was the state had not incurred any direct or indirect loss as a result of the oil spill since no disbursements for the cleaning of the coastline had been incurred nor had any loss of profit occurred.³⁵¹

In 1989, the Court of Appeal overruled the decision, interpreting the Convention to include as environmental damage "everything which alters, causes deterioration in or destroys the environment in whole or in part".³⁵² The Court of Appeal interpreted the terms of the 1969 CLC by reference to the 1969 Intervention Convention, which defines the threat to "related interests" justifying intervention as including "the conservation of living marine resources and of wildlife".³⁵³ The Court of Appeal went on to hold that

the environment must be considered as a unitary asset, separate from those of which the environment is composed (territory, territorial waters, beaches, fish etc) and it includes natural resources, health and landscape. The right to the environment belongs to the State, in its capacity as representative of the collectivities. The damage to the environment

³⁴⁶ Oral Arguments of Australia (Australia v. France) [1978] I.I.C.J. Pleadings (Nuclear Tests) 481 (1973).

³⁴⁷ *Supra.* n. 137.

³⁴⁸ *Certain Phosphate Lands in Nauru (Nauru v. Australia)*, Preliminary Objections, Judgement, 1992 ICJ Rep 240, 244.

³⁴⁹ See further below, Part 2.4.3. 10 October 1980, FUND/A/ES 1/13, para. 11(a) and Annex (1980). An Intersessional Working Group used similar language in finding that compensation could only be granted if a claimant had suffered economic loss.

³⁵⁰ FUND/EXC.16/8, 220, October 1986 para. 3.3, 1985 Patmos decision.

³⁵¹ Joined Cases Nos. 676/86 and No. 337 and others, *General Nation Maritime Transport Company and others v. The Patmos Shipping Company and others*, Court of Messina, 1st civil Section, 30 July 1986, unofficial translation (on file with author) pp. 27, 28.

³⁵² Cases 391, 392, 393, 398, 526, 459, 460 and 570/1986, Court of Appeal of Messina, Civil Section, judgement of 30 March 1989, unofficial translation (on file with the author), p.57.

³⁵³ *Ibid.*, p. 58; 1969 Intervention Convention, Art. II(4)(c).

prejudices immaterial values, which cannot be assessed in monetary terms according to market prices, and consists of the reduced possibility of using the environment. The damage can be compensated on an equitable basis, which may be established by the Court on the grounds of an opinion of experts... The definition of "pollution damage" as laid down in Article I(6) is wide enough to include damage to the environment of the kind described above.³⁵⁴

The Court of Appeal held that the traditional view of property damage was no longer valid and the owner of the *Patmos*, the UK Club (an insurers group) and the IOPC Fund were liable for the environmental damage claimed by the Italian Government.³⁵⁵ It appointed three experts to ascertain the existence, if any, of damage to the marine resources resulting from the oil spillage.³⁵⁶ In their March 1990 Report the experts found that, with the exception of damage to fishing activities which they valued at approximately £465,000, there was a lack of data to evaluate the economic impact on other activities and that a precise assessment of damage to such activities was impossible. The experts also determined that the Court was the appropriate body to carry out the evaluation.³⁵⁷ Judgement of the Court of Appeal had been expected in 1994.³⁵⁸

Another case involving environmental damage is pending before the Fund. On 11 April 1991 the *Haven*, a Cypriot registered tanker caught fire and broke apart seven miles from Genoa in Italy and released over 10,000 tonnes of oil, causing damage to the Italian and French coasts and necessitating extensive clean-up operations.³⁵⁹ The Italian Government submitted a claim for damage to the marine environment, this time in the provisional amount of 100,000 million Italian lire (£47 million), a figure which the Region of Liguria requested should be doubled.³⁶⁰ 1200 Italian claimants, the French Government, twenty

two French municipalities and two other public bodies also submitted claims. In the subsequent court proceedings at the Court of First Instance in Genoa, the question arose as to whether claims for damage to the marine environment could be pursued against the shipowners outside the Conventions under the relevant Italian law if such damage was not admissible under the 1969 CLC and the 1971 Fund Convention.³⁶¹

In his report on this matter the Director of the Fund concluded that the 1969 and 1971 Conventions were designed to provide compensation to victims of pollution damage, that claims which did not relate to such compensation fell outside the scope of the Conventions, and that claims relating to non-quantifiable elements of damage to the environment were of a punitive nature and beyond the scope of the Convention.³⁶² The Director took the view that the drafters of the 1971 Fund Convention could not have intended that the Fund should pay damages of a punitive character calculated on the basis of the seriousness of the fault of the wrong-doer or the profit earned by the wrongdoer, and that the result of including such damage would be unacceptable.³⁶³ On this basis the Director concluded that such claims could be pursued outside the Conventions on the basis of national law.³⁶⁴

In rejecting the Director's analysis during a session of the Executive Committee, the Italian delegation maintained its view that the 1969 and 1971 Conventions did not exclude compensation for environmental damage which was non-quantifiable, that the State had a legal right to compensation for damage to the environment which had irreversible consequences or where the environment could not be reinstated, and that Italian law envisaged the possibility of compensation for damage to the marine environment for quantifiable and non-quantifiable elements.³⁶⁵ The Director's point of view was supported by France, the United Kingdom, Japan, and the observer

³⁵⁴ Summary of judgement of the Court of Appeal, Doc. FUND/EXC.30/2, para. 4.15, 29 November 1991.

³⁵⁵ *Ibid.*, pp. 59-60.

³⁵⁶ See *Annual Report 1991 of the International Oil Pollution Convention Fund*, *infra* n. 171, p. 30.

³⁵⁷ *Ibid.*

³⁵⁸ *Ibid.*, para. 4.21.

³⁵⁹ See *Annual Report 1991 of the Oil Pollution Convention Fund*, *infra* n. 171, pp. 59-62.

³⁶⁰ *Ibid.*, p. 63.

³⁶¹ *Ibid.*, p. 68. The relevant Italian legislation relating to the protection of the marine environment is the Act of 31 December 1982 (No. 979), containing provisions for the protection of the sea, and the Act of 8 July 1986 (No. 349) establishing the Ministry of Environment. The issue also raised the question of the relationship under Italian law between the legislation implementing the 1969 and 1971 Conventions (Act No. 506 of 27 May 1978) and this later legislation.

³⁶² The study is set out in Doc. FUND/EXC.30/2 and summarised in the *Annual Report 1991* at pp. 68-69.

³⁶³ *Ibid.*

³⁶⁴ *Ibid.*

³⁶⁵ See FUND/EXC.30/5, paras. 3.1.5 to 3.1.7. Article 1226 of the Italian Civil Code allows for the possibility that the amount of damage could be determined in an equitable manner if it was not possible to achieve a precise quantification; see also text of Italian statement, in Doc. FUND/EXC.30/WP.1, 16 December 1991.

delegation of the International Group of P & I Clubs.³⁶⁶ The matter remains pending.

2.4.3 How to value environmental damage

The approach taken by the IOPC Fund in Resolution No. 3, cited above, raises another question which will need to be addressed by the Commission: will the Commission only compensate directly quantifiable loss arising out of environmental damage or will it be prepared to utilise abstract theoretical models to quantify the appropriate level of compensation for damage done to the environment?

In its Original Application in the *Gabcikovo-Nagymaros Project Case* Hungary claimed that Czechoslovakia was under an obligation to "cease the internationally wrongful act, re-establish the situation which would have existed if the act had not taken place and provide compensation for the harm which resulted from the wrongful act".³⁶⁷ Such a claim raises the problem of assessing the measure of environmental damage: should it be by reference to the costs of measures of reinstatement, or on the basis of an abstract quantification calculated in accordance with a theoretical model, or on some other basis?

The problem arises because environmental damage does not fit easily with the traditional approaches of civil and state liability which are designed to compensate an injured person by requiring the responsible person to pay the economic costs of resulting damage, which is frequently calculated by reference to a depreciation of the economic value of the damage or the cost of repairing the damage. Pure damage to the environment may be incapable of calculation in economic terms. One method of valuation is by reference to measures which would be required to restore the environment to the state which existed before the damage occurred.³⁶⁸

The rules of international law relating to reparation for environmental damage are undeveloped, as evidenced by the lack of legal precedents. Similar limitations exist at the national level. In the United States restoration of damaged environments has been described as a "fledgling activity shot through with uncertainty and controversy".³⁶⁹ Alternative methods include:-

- the price that the environmental resource commands in the market; or
- the economic value attached to the use of environmental resources (such as travel costs methods or a hedonic pricing method (discussed further below));
- or contingent valuation methods to measure the willingness of individuals to pay for environmental goods such as clean air or water or the preservation of endangered species (usually taken from public opinion surveys).³⁷⁰

Valuation problems arise in the US in relation to the 1980 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the 1990 Oil Pollution Act which provide for certain public authorities to bring actions for damage to natural resources caused by releases of hazardous substances and by oil spills respectively. Damages recovered under both must be devoted to the restoration of the damaged resource or the acquisition of their equivalent.³⁷¹

In relation to valuing natural resources, it has been recognised that the traditional tort approach of using economic value as the basis for damages is inadequate. With regard to CERCLA, a number of alternative possibilities for valuing natural resources have been considered. As noted above, one method is to use a traditional approach utilising the price that the environmental resource commands in the market. However, there may be no market price or the market price of the resource may not reflect its true value, for example in the case of endangered species. As an alternative, some economists have attempted to calculate the use value of certain public natural resources (ie. value based on actual use of a resource, eg. through fishing) relying on travel cost methods or hedonic pricing. In relation to travel cost methods, expenditures made by individuals to visit and enjoy resources form the basis of the calculation. Hedonic pricing methods look to the added market value commanded by private property with designated environmental amenities and seeks to transpose such values to public resources with comparable amenities. For non-use values, for example, the value that an individual might put on the preservation of an

³⁶⁶ *Ibid.*, paras. 31.1.13-31.1.18.

³⁶⁷ Hungary, Original Application, 22 October 1992, para. 32.

³⁶⁸ See Part 2.4.4 and 2.4.5 below.

³⁶⁹ R. Stewart, Pricing Nature (draft, October 1993)

³⁷⁰ See generally R. Stewart, *supra*. See also D. Pearce et al, *Blueprint for a Green Economy*, 51-81 (1989).

³⁷¹ R. Stewart, *supra*, n. 178, p.2.

endangered species, albeit that he may never see that species, a contingent valuation methodology (CVM) has been developed which seeks to measure value by asking individuals how much they would pay, for example in terms of increased taxation, to preserve a given natural resource from injury. Criticisms of CVM suggest that it can be an unreliable method which does not reflect actual economic behaviour and gives inflated values.³⁷² It has also been argued that the value of environmentally significant resources to society collectively cannot be reduced to an aggregation of individual willingness to pay.³⁷³

In relation to CERCLA, there has been some dispute as to which valuation methodologies should be used. CERCLA provides that natural resource damages "shall not be limited by the sums which can be used to restore or replace such resources".³⁷⁴ It also directs that the damage assessment regulations prepared by the Department of Interior shall "identify the best available procedures to determine [natural resources damages], including both direct and indirect injury, destruction, or loss and shall take into consideration factors including, but not limited to, replacement value, use value, and the ability of the ecosystem to recover".³⁷⁵ Regulations issued in 1986 set out a hierarchy of methodologies to be used, preferring the use of market value, if available, followed by travel time, hedonic pricing and CVM methodologies. In *State of Ohio v. Dept of the Interior* in the DC Circuit Court of Appeals this over-reliance on market values was subject to some criticism in that it could result in significant undervaluation.³⁷⁶

2.4.4 *References to reasonable measures of reinstatement in international treaties*

Decision 7 includes as one of the heads of damage for which compensation will be recoverable, losses or expenses arising from "reasonable measures already taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment". This type of formula as an element of environmental damage

has appeared in several international instruments.

The Convention on International Liability for Damage Caused by Space Objects (1972 Space Liability Convention) is one of the few treaties to establish a clear rule of state liability.³⁷⁷ Subject to the exceptions set out in Articles VI and VII, a State which launches a space object is "absolutely liable to pay compensation for damage caused by its space object on the surface of the earth or to aircraft in flight".³⁷⁸ "Damage" is defined as "loss of life, personal injury or other impairment of health; or loss of or damage to property of States or of persons, natural or judicial, or property of international intergovernmental organisations".³⁷⁹ Although the definition does not refer to "environmental" harm it can be interpreted to allow compensation claims for the "property of States" which are environmental assets or other natural resources. Under Article XII,

Compensation is to be determined in accordance with international law and the principles of justice and equity, in order to provide such reparation in respect of the damage as will restore the person, natural or judicial, State or international organisation on whose behalf the claim is presented to the condition which would have existed if the damage had not occurred.

The 1988 CRAMRA was the first Antarctic treaty to address liability, although it is now unlikely to enter into force. Under Article 8, the operator is under an obligation to take necessary and timely response action if its activities result in, or threaten, damage to the Antarctic environment or its dependent or associated ecosystems. Such action includes prevention, containment, clean-up and removal measures.³⁸⁰ The operator will be strictly liable for damage to the Antarctic environment or dependent or associated ecosystems (including payment in the event that there has been no restoration to the *status quo ante*); loss of or impairment to established use; loss of or damage to people and property; and reimbursement of reasonable costs relating to necessary response action to restore the

³⁷² Stewart, pp.51-63.

³⁷³ Stewart, p.6.

³⁷⁴ Sec 107(f), cited by Stewart.

³⁷⁵ Sec 301(c)(2), cited by Stewart.

³⁷⁶ Stewart, pp. 35-36.

³⁷⁷ 29 March 1972, in force 1 September 1972, 961 UNTS 187. The Convention establishes procedures and timetables for the presentation of compensation claims.

³⁷⁸ Art. II.

³⁷⁹ Art. I(a).

³⁸⁰ Art. 8(1).

status quo ante (including prevention, containment, clean-up and removal).³⁸¹

Chapter IV of the ILC Draft Articles on the liability of states for acts not prohibited by international law addresses the issue of liability if transboundary harm arises. Bearing in mind that the harm must, in principle, be fully compensated, concerned states would be required to negotiate to determine the legal consequences of the harm.³⁸² The Draft Articles propose that an affected state may agree a reduction in payments for which the state of origin is liable if it appears equitable for certain costs to be shared.³⁸³ Under Draft Article 24, a distinction is drawn between different harms. With regard to environmental harm, the state of origin would be required to "bear the costs of any reasonable operation to restore, as far as possible, the conditions that existed prior to the occurrence of the harm" or, if that proves impossible, to reach agreement on monetary or other compensation for the deterioration suffered.³⁸⁴ Harm to persons or property as a consequence of environmental harm would also be compensated.³⁸⁵ The draft Articles have not settled on the consequences if there is more than one state of origin: two options being considered are joint and several liability, or liability in proportion to the harm caused by each State.³⁸⁶

The terms of and practice under certain of the civil liability conventions may be instructive as to what types of measures might be compensable. A number of the civil liability conventions contain definitions of "damage" which include the costs of reasonable preventive and clean up measures.³⁸⁷

TOVALOP comprises a Standing Agreement and a Supplement.³⁸⁸ It is a private agreement governed by English law between shipowners and bareboat charterers

under which they agree to assume responsibility, without admitting liability, for pollution damage caused by oil which has escaped or which has been discharged from a tanker, and the cost of threat removal measures taken as a result of an incident.³⁸⁹ The definition of pollution damage is similar to that in the 1969 CLC, with the addition that it excludes "any loss or damage which is remote or speculative, or which does not result directly from such escape or discharge".³⁹⁰ The 1987 amendment to the TOVALOP Standing Agreement³⁹¹ established a Supplement which contains a different definition of "pollution damage" to that found in the TOVALOP Standing Agreement: it includes proven economic loss actually sustained as a direct result of contamination and costs "actually incurred in taking reasonable and necessary measures to restore or replace natural resources damaged as a direct result of an Applicable Incident, but excluding any other damage to the environment".³⁹²

Reasonable measures of reinstatement are also referred to in the Geneva Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels, which was adopted under the auspices of the ECE.³⁹³ It provides for the liability of the carrier (the registered owner or person controlling the road vehicle or inland navigation vessel or operator of a railway line) for damage caused during the transport of dangerous goods.³⁹⁴ Compensable damage includes loss of life or personal injury, loss of or damage to property, and

loss or damage by contamination to the environment caused by dangerous goods, provided that compensation for impairment of the environment other than for loss of profit caused from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken;³⁹⁵

³⁸¹ Art. 8(2).

³⁸² Art. 21.

³⁸³ Art. 23.

³⁸⁴ Art. 24(a).

³⁸⁵ Art. 24(b).

³⁸⁶ Art. 25.

³⁸⁷ See eg. 1993 Council of Europe Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, Art. 2(7)(d); 1969 Convention on Civil Liability for Oil Pollution Damage, Art. II.

³⁸⁸ Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution, 7 January 1969, in force 6 October 1969, 8 *ILM* (1969) 497.

³⁸⁹ Clauses IV(A) and VIII(J).

³⁹⁰ Clause I(k).

³⁹¹ Effective 20th February 1987.

³⁹² Clause I(G).

³⁹³ 10 October 1989, not in force; *ECE/TRANS/79*.

³⁹⁴ Art. 5.

³⁹⁵ Art. I(10)(c). 'Damage' also includes the costs of preventive measures, defined as 'any reasonable measures taken by any person after an incident has occurred to prevent or minimize damage': Art. I(10)(d) and I(11).

The 1993 Council of Europe Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (1993 Lugano Convention)³⁹⁶ aims to provide adequate compensation for damage resulting from activities dangerous to the environment, and means of prevention and restitution.³⁹⁷ The Convention is a regional instrument, which is open to signature by the members of the Council of Europe, non-member States which have participated in its elaboration, and the EC, although it is possible for any other state to become a Party after its entry into force, and is potentially applicable regardless of where the damage is suffered when the incident occurs in the territory of a Party.³⁹⁸

Under the terms of the Lugano Convention, damage includes loss of life or personal injury, loss of or damage to property, and the costs of preventive measures and any loss or damage caused by preventive measures.³⁹⁹ The Convention also applies to environmental damage, which is

loss or damage by impairment of the environment in so far as this is not considered to be damage within the meaning of [Article 2(7)(a) or (b) ...] provided that compensation for impairment of the environment, other than for loss of profit from such impairment, shall be limited to the costs of reasonable measures of reinstatement actually undertaken or to be undertaken...⁴⁰⁰

The environment includes natural resources, property forming part of the cultural heritage, and the characteristic aspects of the landscape. Measures of reinstatement under the Lugano Convention means

any reasonable measures aiming to reinstate or restore damaged or destroyed components of the environment, or to introduce, where reasonable, the equivalent of these components into the environment. Internal law may indicate who will be entitled to take such measures.⁴⁰¹

Further guidance on current thinking as to the nature and scope of the concept of "environmental damage"

has been provided by the work of the UN-ECE Task Force on transboundary water resources.⁴⁰² The non-binding Task Force Report and Guidelines define damage as including personal injury and property loss or damage (or loss profit), the costs of preventive measures, and a significantly expanded definition of environmental damage, being

detrimental changes in ecosystems including

- (i) the equivalent costs of reasonable measures of reinstatement actually undertaken or to be undertaken and
- (ii) further damages exceeding those referred under (i).⁴⁰³

This extensive definition includes cases for which restoration costs might be unreasonable or disproportionate or where no restoration costs could arise (such as removal of oil from the seabed) and for which new forms of reparation might be needed, such as 'measures for the replacement of habitats of particular conservation concern'.⁴⁰⁴

2.4.5 What guidelines are there for assessing what constitute reasonable measures of reinstatement?

Despite the broad range of instruments which include references to reasonable measures of restoration or similar terms, there remains little actual practice of assessing the reasonableness of measures taken. Again, this aspect will require further consideration by the Commission.

The only claim under the Space Liability Convention was presented by Canada in 1979 to the former USSR for damage caused by the crash of Cosmos 954, a nuclear powered satellite which disintegrated over Canada.⁴⁰⁵ Canadian authorities took steps to locate, recover, remove and test the radioactive debris and to clean-up the affected areas of the Northwest Territories and the Provinces of Alberta and Saskatchewan, claiming \$6,041,174.70 from the USSR. The matter was settled

³⁹⁶ *Supra*. n. 102.

³⁹⁷ Art. 1.

³⁹⁸ Arts. 32, 33(1) and 3(1).

³⁹⁹ Art. 2(7)(a), (b) and (d).

⁴⁰⁰ Art. 2(7)(c) (emphasis added).

⁴⁰¹ Art. 2(8) and (10).

⁴⁰² *Supra*. n. 144.

⁴⁰³ *Ibid.*, A, No. 13.

⁴⁰⁴ *Ibid.*, Rest, at 35, and Guidelines, E.5.

⁴⁰⁵ *Supra*. n. 137.

in 1981 when the USSR agreed to pay \$3 million in full and final compensation, and Canada agreed to accept such payment in full and final settlement.⁴⁰⁶

The question of restoration measures is discussed in the EC Green Paper on Liability for Environmental Damage, which recognises that:

An identical reconstruction may not be possible, of course. An extinct species cannot be replaced. Pollutants emitted into the air or water are difficult to retrieve. From an environmental point of view, however, there should be a goal to clean-up and restore the environment to the state which, if not identical to that which existed before the damage occurred, at least maintains its necessary permanent functions. [...] Even if restoration or cleanup is physically possible, it may not be economically feasible. It is unreasonable to expect the restoration to a virgin state if humans have interacted with that environment for generations. Moreover, restoring and environment to the state it was in before the damage occurred could involve expenditure disproportionate to the desired results. In such a case it might be argued that restoration should only be carried out to the point where it is still "cost-effective". Such determinations involve difficult balancing as well as of economic and environmental values.⁴⁰⁷

The proposed Directive on civil liability for damage caused by waste provided that a plaintiff may take action to obtain, *inter alia*, the restoration of the environment to its state immediately prior to the occurrence of the injury to the environment or the reimbursement of expenditure incurred in connection with measures taken to this end, except when the costs substantially exceed the benefit arising for the environment from such restoration and other alternative measures to the restoration of the environment may be undertaken at a substantially lower cost, in which case the plaintiff could seek implementation of these other measures or reimbursement of this expenditure.⁴⁰⁸

The question of what types of measures constitute reasonable measures of restoration has been faced in a US case, *Commonwealth of Puerto Rico v. SS Zoe Colocotroni*,⁴⁰⁹ which involved an oil spill in 1973 on the

Puerto Rican coast. The national legislation in question provided that the federal government and states were authorised to recover "costs or expenses incurred...in the restoration of natural resources damaged or destroyed as a result of a discharge of oil or a hazardous substance. At first instance, the District Court awarded damages based, *inter alia*, on the cost of replacing, through biological supply laboratories, the millions of tiny aquatic organisms destroyed by the spill. The Court of Appeals vacated the District Court's decision in this respect and held that the appropriate primary standard for determining damages in such a case was the cost reasonably to be incurred by the sovereign or its designated agency to restore or rehabilitate the environment in the affected area to its preexisting condition, or as close thereto as is feasible without grossly disproportionate expenditures.

Factors to be taken into account would include technical feasibility, harmful side effects, compatibility with or duplication of such regeneration as is naturally to be expected, and the extent to which efforts beyond a certain point would become either redundant or disproportionately expensive. The Court of Appeals also recognised that there may be circumstances where direct restoration of the affected area would be either physically impossible or so disproportionately expensive that it would not be reasonable to undertake such a remedy. With respect to the District Court's decision, the Court of Appeals found that the replacement costs were excessive, particularly since Puerto Rico had not represented that it intended to replace the lost organisms (whose damaged habitat would, in any event, have been unable to support them). In effect, the alleged replacement value had been used as a yardstick for estimating the quantum of harm done. Instead, the Court of Appeals found that the plaintiff should have the opportunity to show what other more reasonable steps, if any, might be taken which would have a beneficial effect on the damaged ecosystem, and that the projected costs of such measures should form the basis of any award.

Issues of what constitute appropriate restoration measures also arise at the national level in the US under CERCLA and the 1977 Amendments to the Clean Water Act.⁴¹⁰ Damages recovered in actions brought under CERCLA by certain federal or state authorities as trustees must be used "to restore, replace or acquire

⁴⁰⁶ Protocol between Canada and the USSR, Arts. I and II, 2 April 1981, 20 ILM 689 (1981).

⁴⁰⁷ Communication from the EC Commission to the EC Council and European Parliament on Environmental Liability, para. 5.2, *supra* n. 124, p. 32 (1993).

⁴⁰⁸ *Supra* n. 123.

⁴⁰⁹ United States Court of Appeals, First Circuit, 628 F.2d 652 (1980).

⁴¹⁰ For further detail on the issues raised in the remainder of Part 2.4.5, see Stewart, *supra* n. 178.

the equivalent of "the injured resource. Under the 1977 Amendments to the Clean Water Act, damages are limited to the costs of restoring or replacing the damaged or destroyed natural resources, and do not include interim or continuing injuries. Again, trustees must spend recoveries for such restoration or replacement.

In relation to CERCLA clean up cases, critics of Superfund have complained that the clean up standards imposed are excessively stringent. There have been disputes as to whether costly permanent remedies that involve complete removal of contamination from sites are justified or whether management solutions that tolerate a degree of continuing contamination, subject to certain safeguards should be utilised instead. In claims for environmental damage similar issues will arise and it can be expected that there might be protracted disputes over the suitability, effectiveness and cost of the measures taken.

Moreover, as Stewart has pointed out,⁴¹¹ in relation to assessing what constitutes a reasonable level of restoration, a fundamental problem will be how to establish the baseline measure of the character and quality of the environment prior to the spill or release, against which the restoration measures are to be judged.⁴¹² A well-documented baseline of the pre-existing quality of all environmental resources damaged as a result of Iraq's invasion of Kuwait is unlikely to exist, and may be very difficult, if not impossible, to determine retrospectively. In relation to fixing the baseline against which measures should be judged, a further problem which has been identified is whether the pre-injury resource should be defined strictly in terms of its physical and biological characteristics, in which case restoration should, so far as possible, aim at replication, or whether the baseline should be defined in terms of the services, both use and non-use, previously provided by the damaged or destroyed resources. The second approach might be cheaper (and more feasible) to implement, but may be less acceptable in the context of rare or unique resources or resources not within the jurisdiction or ownership of any one state.

2.4.6 Possible tasks for the UNEP Working Group

The above represent only a sample of the issues which will face the Commission in deciding claims for environmental damage arising out of Iraq's unlawful invasion and occupation of Iraq. Among the other issues which might arise, the Commission may wish to consider whether a cap or ceiling on liability for individual claims or an overall cap for claims in respect of environmental

damage might be imposed, particularly in the light of the potential extent of claims for environmental damage arising out of the invasion and occupation. A number of the civil liability conventions impose such liability ceilings in respect of liability arising out of individual incidents. For example, the 1969 CLC, and the Paris and Vienna Conventions in respect of liability for nuclear installations. The Working Group might wish to consider whether such a cap would be appropriate in the context of the Commission, or, indeed, whether the Commission, under the its governing instruments, could impose such a cap.

Among the specific issues relating to quantum which the Working Group might usefully address are the following:-

- can compensation be awarded for "pure" environmental damage?
- if so, how can damage to the environment be valued in economic terms?
- assuming that restoration or remedial work is compensable (as suggested by paragraph 35(b) of Decision 7), how should one determine what constitute "reasonable measures" of restoration?
- what should the measure of compensation be if the damage in question is irreversible insofar as restoration measures are not feasible for economic or ecological reasons?
- might certain awards of compensation by the Commission include a "punitive" element reflecting the unlawful nature of the activities giving rise to damage?
- what levels of compensation have in fact been awarded by international tribunals in claims for environmental damage? How has compensation been assessed under private sector compensation schemes and under national liability regimes? On what basis have negotiated settlements been reached? To what extent might the Commission usefully draw on these approaches?

PART 3

CAPACITY OF INTERNATIONAL ORGANISATIONS TO BRING ENVIRONMENTAL CLAIMS TO THE COMPENSATION COMMISSION

A further task for the Working Group will be to consider which international organisations might be entitled under the terms of Decision 7 to bring environmental claims

⁴¹¹ Supra. n. 178.

⁴¹² Stewart, pp. 24-25.

to the Compensation Commission. In particular, it will be appropriate to consider whether UNEP is entitled to present such claims, and if so in relation to what types of damage. In addressing this issue the Working Group might also consider which environmental claims could be brought by particular States or groups of States.

3.1 *Decision 7 of the Governing Council of the United Nations Compensation Commission*

As noted above, Decision 7 provides that only states and international organisations are entitled to bring environmental claims, although it does not specify which environmental claim or claims each of these actors may actually bring. Further, Decision 7 does not define the term "international organisation", leaving open the possibility that it might include international "non-governmental" organisations or international organisations whose membership comprises both governments and non-governmental organisations (such as IUCN).

In this context it will be recalled that various international organisations participated in the mission leading to the preparation of the 1991 UN Report (UNEP, UNESCO, WHO) and in the preparation of the 1991 UNEP Report (IMO, WHO, WMO, UNESCO, IAEA, UNCHS/Habitat, UNEP and UNIDO).⁴¹³ IUCN (which is described as an "International Non-UN Organisation") also participated in the preparation of the 1991 UNEP Report,⁴¹⁴ which Report notes also the activities of three international non-governmental organisations.⁴¹⁵

Claims submitted by international organisations will in the first instance be assessed by the Secretariat to determine whether all relevant formal requirements have been met. The claims will then be submitted to a panel of three Commissioners for review and there is a time-limit for this stage. It is intended that as far as possible claims with significant common legal or factual issues should be processed together. Once the Commissioners report to the Council their recommendation, the Council ultimately decides on the total financial allocation. Further, it is envisaged that where complex claims are made, additional written submissions and oral proceedings may be required, and in particular where an international organisation is involved, it would be allowed to present its case directly to the panel. Decision 7 further specifies that all F category claims must be supported by documentary and other evidence demonstrating the circumstances and

amount of the claimed loss.⁴¹⁶ It details the form that the submission of claim must include.

3.2 *The capacity of international organisations to bring Decision 7 claims for environmental damage*

In determining whether UNEP and other international organisations are entitled to bring environmental claims to the Compensation Commission it will be necessary to consider whether particular organisations have a legal interest in bringing such a claim, and if so whether they also have the requisite legal capacity to bring such a claim.

An international organisation's legal interest might arise as a result of its general interest in and competence over *inter alia* international environmental matters (such as UNEP or the ROPME), or as a result of its research or clean-up or other environmentally-related activities in the Gulf area during or following the conflict (such as participation in the preparation of the 1991 UN Report or 1991 UNEP Report), or as a result of an interference of its international legal rights occasioned by the conflict. In each case the Compensation Commission will be entering uncharted waters, since there is apparently no precedent in international law for an international organisation bringing an international environmental claim. In this context the Working Group could very usefully assist the Commission by identifying the possible bases upon which different international organisations might assert an international legal interest.

Even if an international organisation can demonstrate an international legal interest, it must also demonstrate that it has the requisite international personality endowing it with the capacity to bring an international environmental claim to the Compensation Commission. The basic approach to addressing this issue may be found in the ICJ's 1949 Advisory Opinion in the Reparations for Injuries Suffered in the Service of the United Nations.⁴¹⁷ The Court considered that international personality and the capacity to bring an international claim flowed from the organisation's constituent instrument (in that case the UN Charter) and its practice thereunder, as well as its implied powers in the context of the need to ensure the effective fulfilment by the organisation of its objects and purposes. Since the UN Charter did not expressly include a provision on international personality, the Court asked whether such personality was "indispensable" to achieve the UN's purposes and principles. The Court

⁴¹³ *Supra.* n. 10 and 15.

⁴¹⁴ *Supra.* n. 15, p. 36.

⁴¹⁵ Earthtrust, Friends of the Earth, and Green Peace (sic): *supra.* n. 15, p. 40.

⁴¹⁶ Para. 37.

⁴¹⁷ (1949) I.C.J. Reports 174.

stated that:

the rights and duties of an entity such as the [UN] must depend upon its purposes and functions as specified or implied in its constituent document and developed in practice.⁴¹⁸

In holding that the UN was a "subject of international law, capable of possessing international rights and duties, and that it has capacity to maintain its rights by bringing international claims" (emphasis added), the Court stated that "its Members by entrusting certain functions to it, with the attendant duties and responsibilities have clothed it with the competence required to enable those functions to be effectively discharged".⁴¹⁹

This approach provides the basis for determining whether UNEP and other international organisation's have the requisite capacity to present claims to the Compensation Commission. The Working Group will therefore need to consider the constitutional provisions and the practice thereunder of particular international organisations.

However, the constitutional law of each organisation provides only the first point of reference. Other issues will be of relevance, including the intention behind its establishment, its structure, organisation and range of activities. The constituent instruments of the various organisations differ markedly on the question of international personality and capacity. Thus, the constitution of the Food and Agricultural Organisation provides that the "Organisation shall have the capacity of a legal person to perform any legal act appropriate to its purpose which is not beyond the powers granted to it by their constitution."⁴²⁰

UNEP's constituent instrument is General Assembly resolution 2997 (1972), which is silent on the matter of international personality and capacity.⁴²¹ It is important to recall that UNEP is not a UN Specialized Agency, but rather a programme of the United Nations whose Governing Council reports to the UN General Assembly through the Economic and Social Council. The silence of resolution 2997 on personality and capacity need not be fatal to any effort by UNEP to bring a claim to the Compensation Commission, or for some other entity to bring a claim on its behalf. In considering the matter the

Working Group will need to pay careful regard to the terms of resolution 2997 and to UNEP's practice thereunder, in particular evidence of activities which might support the view that it is endowed with at least a degree of international personality. In this regard, the Working Group might consider UNEP's functions as the "permanent institutional arrangement within the United Nations system for the protection and improvement of the environment",⁴²² and the decision at UNCED that one of UNEP's priority areas is the "[f]urther development of international environmental law".⁴²³

A number of other international organisations might also have an interest in bringing an environmental claim to the Compensation Commission. Amongst intergovernmental organisations each involved in the preparation of the UN and UNEP Reports might properly assert an interest, as would ROPME, the regional organisation established under the 1978 Kuwait Regional Convention for Co-operation on the protection of the marine environment from pollution.⁴²⁴ Consideration would have to be given to the international personality and capacities of each.

3.2.1 Possible tasks for the UNEP the Working Group

The Working Group might therefore usefully assist the Compensation Commission by addressing the following issues:-

- under what conditions may a state bring an environmental claim in accordance with Decision 7?
- as a general matter, which entities are "international organisations" within the meaning of Decision 7, paragraph 35?
- what conditions must a particular "international organisation" fulfil in order to bring an environmental claim under Decision 7?
- which "international organisations" might fulfil those conditions?
- is UNEP entitled to bring an environmental claim under Decision 7, and if so in respect of which heads of damage? In the event that UNEP is so entitled, should it bring such a claim?

⁴¹⁸ *Ibid.*, p. 180.

⁴¹⁹ *Ibid.*

⁴²⁰ Constitution of the Food and Agriculture Organization of the United Nations, Art. XVI para. I

⁴²¹ Institutional and Financial Arrangements for International Environmental Co-operation G.A. Res.2997, 27 UN GAOR Supp. (No. 30) at 43 UN Doc. No A/8730

⁴²² Resolution 2997, *supra.*, preamble.

⁴²³ UNCED, Agenda 21, para. 38.21 (h).

⁴²⁴ *Supra.* n. 29.

Section II

SHORT PAPERS BY SELECTED EXPERTS

SCOPE OF DEFINITION OF ENVIRONMENTAL DAMAGE

Prepared by Thomas A. Mensah

1. In international conventions dealing with the environment, and in some national laws, the term "environmental damage" appears to be used to refer to two different but related categories of damage, namely:

- (a) Damage which may be caused to persons or property as a result of an "environmental incident"; and
- (b) Damage caused to the environment itself

I. Damage to persons or property

2. The term "environmental damage" may be used to cover any damage that is caused to a person or property if it results from an incident or occurrence which is described as "environmental". This generally means an incident or occurrence which affects, or has the potential to affect, the environment.

3. There is no agreed definition of the term "environmental incident" or clear guide as to the factors which make an incident or occurrence properly describable as "environmental". In general, the expression is used to refer to any incident which occurs as a result of, or in connection with, the production, transportation, handling or use of substances and wastes if the incident results in the release of substances or energy in such a way as to affect adversely the quality or viability of a sector of the environment. Where such an incident causes damage to persons or property, the damage may be described as "environmental damage".

4. Environmental damage in this sense may be:

- (a) Damage to human life (loss of life or personal injury);
- (b) Damage (actual or potential) to human health;
- (c) Damage to living or non-living resources (destruction or diminution of resources);
- (d) Damage to amenities (destruction or reduction in natural, social or cultural amenities);
- (e) Damage to property (damage to or loss of property).

5. In some cases "damage to person or property" may include certain heads of financial loss resulting from the damage itself.

6. Questions of liability and compensation in respect of the damage to persons or property are generally determined by reference to the traditional rules of tort law. Special "environmental" legal rules and provisions are applied to them only to the extent that the occurrence (activity) from which the damage resulted are characterized as "environmental", in the sense indicated in paragraph 3 above.

II. Damage to the environment itself

7. The term "environmental damage" may also refer to "impairment of the environment" (or "pure environmental damage") i.e. a change in a particular sector or the whole of the environment which has a measurable adverse impact on the quality of the environment itself or on its ability to support and sustain an acceptable threshold of quality of life or viable ecological balance.

8. While impairment of the environment could also result in damage to persons, property or resources, impairment of the environment is recognized as a separate category of damage in its own right. In that sense "environmental damage" may be defined as "any significant physical, chemical or biological deterioration of the environment", not necessarily connected with or resulting in any specific damage to persons or property.

III. Definition of the term "environment"

9. To be able to itemize the possible categories of damage to the environment for which compensation may be payable, it is helpful to have some working definition of the term "environment" itself. The simplest and yet most comprehensive definition appears to be the one under which the environment embraces "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" (article 2(10) of the 1993 Council of Europe Convention on Civil Liability).

10. Defined in this way, "environment" encompasses a number of elements which are "non-functional". Some international conventions contain provisions which attempt to clarify the non-functional elements covered by them. (Examples of these provisions are cited in the original report).

11. The categories of damage resulting from "pure impairment of the environment" which may be recognized as entitled to compensation will depend on the specific interests which are deemed to deserve protection in any particular context. Thus compensation may be allowable, *inter alia*, for:

(a) *Costs of preventive measures*

Costs incurred in taking (reasonable) measures to prevent or reduce environmental damage before, during or after an incident, where damage has been caused, or there is reasonable threat of damage.

(b) *Costs of clean-up and restoration measures*

Restoration costs may be of two types, namely:

- i. the costs of measures to eliminate or reduce the impact of damage already caused;
- ii. the costs of measures to restore, conditions which would enable the environment to provide the same value or serve the same purpose as it would reasonably have been expected to provide without the incident which caused the damage.

(c) *Pure environmental damage*

Compensation just for the "deterioration of the

environment" is based on the principle that such deterioration constitutes a "loss" to the community. This loss may be due to the total destruction of, a significant reduction in:

- i. the value of the environment itself; or
- ii. a special use or amenity which the environment provides to the community, the society as whole or some identifiable sections of the community.

(d) *Specific (and quantifiable) economic loss*

Actual economic loss (other than any of the above categories) which may be suffered as a direct consequence of impairment of the environment. (Examples of such loss are given in the original report).

12. Although the above categories of damage are generally recognized in concept, not all of them may be accepted as entitled to compensation in every case. (For example the 1969/71/92 Conventions on Civil Liability and Compensation for Oil Pollution Damage exclude compensation for "pure environmental damage").

13. Furthermore, even where international conventions (or national law) recognize these categories of damage, there may be disagreement about the conditions under which compensation may be payable for the various categories in particular jurisdictions and situations. And, of course, there will be questions about the burden of proof in relation, for example, to causation; about the actual level of damage sustained; about the level of compensation which would be fair and reasonable in any given situation; and about the persons or entities who are entitled to compensation.

"OTHER RELEVANT RULES OF INTERNATIONAL LAW" UNDER ART. 31 OF THE PROVISIONAL RULES FOR CLAIMS PROCEDURE

Prepared by Prof. Dr. Michael Bothe

1. Basis of jurisdiction and applicable law

Art 31 of the provisional rules for claims procedure approved by the Governing Council of the United Nations Compensation Commission (UNCC) determines the law which is applicable for the adjudication of claims. This provision has to be interpreted in the light of the relevant rules which establish the jurisdiction of the UNCC. There is always a link between the jurisdiction of a judicial or quasi judicial body and the law that body has to apply. The jurisdiction of arbitral tribunal is for example very often limited to the interpretation of a specific treaty which is also the basis of its jurisdiction.

The basis of the UNCC jurisdiction is part E of the United Nations Security Council resolution 687 of 3 April 1991. The basis of that resolution are the powers granted to the Security Council under Art 24 and Chapter VII of the Charter of the UN. In order to determine the scope of the jurisdiction of the Claims Commission and, on that basis, the law it has to apply, it is thus necessary to have a closer look at the scope of the powers which are granted to the Security Council.

In general terms, it is the power of the Security Council to take measures to maintain or restore international peace and security in a situation where they are threatened or violated. The Security Council is not a legislative organ which has the power to create norms of general application. Its powers relate to specific situations. But as part of the solution of problems posed by a specific situation, the Security Council has the power to ensure that rules of international law which are applicable for other reasons are indeed implemented in that particular case. If the Security Council, under Art 39 of the Charter has the power to determine that there exists a threat to or a violation of peace and to take measures to redress that situation, it must also have the power to define the conditions under which that threat or violation ceases to exist. The implementation of the rule of state liability by paying compensation for the violation of applicable norms may be considered a constituting part of that restoration of normalcy which the Security Council may define. This line of argument

is the only possible foundation, if there is any, for the powers the Security Council claims for itself in the Iraq case. This concept is clearly underlying Part F of Res 589. The Security Council does not invent any new form of state responsibility, but it "reaffirms a duty to pay compensation which exists under general international law". It "only" creates a *procédure* to make that obligation effective. The rule the Security Council refers to is the general law of state responsibility. A state has to pay compensation for damage caused by a wrongful act. In this case, the wrongful act is, in the terms of the Security Council Resolution, the "unlawful invasion and occupation of Kuwait", i.e. a violation of the prohibition of the use of force established by the Charter of the UN and customary international law.

2. The applicable law

It follows from the preceding reasoning that the jurisdiction of the UNCC only relates to a particular unlawful act and that therefore other basis for compensation which may also exist are not relevant. The activities which have caused damage may also constitute violations of peacetime rules concerning the protection of the environment. But this question is not in the jurisdiction of the Commission. Certain acts may or may not constitute violations of the laws of war. Again, this is not part of the mandate of the Commission. The only rule which the Commission has to apply is that of the duty to compensate damage caused by the violation of the prohibition of the use of force.

Being determined by the Security Council that there is an illegal use of force, two further requirements must be met in order to give rise to a duty to pay compensation there must be a damage, and, secondly that damage must be "caused" by the unlawful act.

3. The relevant damage

It is not the purpose of this paper to address the question what constitutes an environmental damage. A few other more general questions arise, however, in respect of the relevant damage. The essential question is that of entitlement. Who is entitled to claim damages?

Obviously, it is the victim of the violation of the rule which is entitled to claim damages, i.e. the victim of the aggression which occurred, in this case Kuwait. The Security Council, however, seems to imply that it is not only the government of Kuwait, but also other governments, nationals or corporations. The Resolutions generally speaks of "foreign governments." This raises the question whether damage caused not to the victim of the aggression but to third states and their nationals is damage which can be claimed under the rule discussed here. It is submitted that the answer is yes. The prohibition of the use of force is a rule which does not only protect the potential victim, it is a rule which protects the general international order and all members of the international community. Therefore, any "collateral damage" caused by an act of aggression has to be compensated, regardless of the question whether that damage could be considered as resulting from an illegal act or also under other accounts, for instance the law of neutrality.

This rule covers harm which occurs

- in the territory;
- in the territorial sea;
- in the exclusive economic zone (EEZ) of states, in the latter case limited to damages of the resources of the EEZ over which the state has jurisdiction.

In respect of sea areas, it seems possible that the member states of a regional organization like Regional Organization for the Protection of the Marine Environment (ROPME) may delegate their claims to the organisation. But what about damage to the high seas or those elements of the EEZ which are not covered by the adjacent state's jurisdiction? Two lines of argument may be used to give an answer to this question. The first one is the text of the relevant provision of the Res. 687. There, the Security Council speaks of injury "to foreign governments, nationals and corporations", the negative implication being that the uses and resources of the global commons are not

covered. That could be an omission to be overcome by interpretation if the basic rule which the Resolution is enforcing also covered damage to the global commons. This brings us to the second line of argument. There is a certain trend in international environmental law to apply the prohibition of causing transboundary environmental harm, a fundamental rule of international environmental law, not only to harm caused to another state, but generally to areas beyond national jurisdiction (see principle 21 of the Stockholm Declaration, principle 2 of the Rio Declaration on Environment and Development). If one considers that this rule of international environmental law has become part of customary international law, it would be possible to apply it by analogy to a situation where a damage to the environment is caused by a violation of another rule, namely the prohibition of the use of force. But the practical implementation of that rule would require that there is a trustee which were in a position to submit a claim on behalf of the resources of the global commons. Such a trustee cannot be shown to exist. It would also be difficult to accept that the Security Council had the power to create such a trustee for the purposes of claiming damages against Iraq. But that question does not arise as the Security Council, as has already been shown, makes no reference to damages caused to the global commons.

4. Causality

The damage which can be claimed before the Commission must be "caused" by Iraq's unlawful invasion and occupation of Kuwait. It must, thus, be specifically related to the activity of Iraq which constitutes the violation of the prohibition of the use of force, i.e. military activities and also the activities as occupying power in Kuwait. Damage caused by normal activities in Iraq which have no relations with the military action against Kuwait would not be covered. The destruction of the oil production facilities which resulted in the oil leakages and also the burning of the oil wells constitute destructions which form an integral part of the activities determined to be unlawful. The question of causality, thus, should not pose any problem.

THE DEFINITION AND VALUATION OF DEPLETION OF NATURAL RESOURCES

Prepared by Rodman R. Bundy

In view of the fact that most of the discussion at the Working Group's first meeting was devoted to "environmental damage", it was thought useful to prepare a brief note on "depletion of natural resources" in order to raise a number of issues that may be relevant for the Group's next meeting.

While "depletion of natural resources" appears to constitute a separate head of damage under Security Council Resolution 687, there may be some overlap between this concept and "environmental damage". Consequently, it may be desirable for the Working Group to address the question of definitions - particularly the relationship between depletion of natural resources and environmental damage - an issue which is taken up in the first part of this paper. Thereafter, the paper addresses two other issues: situations where depleted resources may straddle international boundaries and the question of valuation.

Issues Relating to Definitions

The legal definition of "depletion" taken from Black's Law Dictionary is: "An emptying, exhausting or wasting of assets". Similarly, the verb "to deplete" means "to reduce or lessen, as by use, exhaustion or waste"⁴²⁵.

This definition suggests a more restricted notion than "environmental damage" - one that is related to the using up of a natural resource having an economic value, but which may not cause environmental damage in and of itself (although the possibility of collateral environmental damage is not excluded). Moreover, the fact that Resolution 687 refers to two different categories of damage - environmental damage and the depletion of natural resources - suggests that the concepts were considered to be distinct.

As the Working Group recognised at its first meeting, the most obvious example of the "depletion of natural resources" in the Iraq-Kuwait context was the loss of oil and gas from sabotaged wells. The burning of oil and gas and the release of oil onto the ground may have had

serious environmental side effects, but it can be argued that claims for "depletion of natural resources" should only relate to the actual lost hydrocarbons and not to any corresponding environmental damage (which presumably could be addressed under a separate claim).

While lost oil and gas is the most important example of a natural resource which suffered depletion as a result of Iraq's invasion, the Working Group acknowledged that it should not prejudge the issue and that conceivably other resources could be involved. For example, the Report assessing the damage inflicted on Kuwait during Iraqi occupation prepared for the UN Secretary-General in 1991⁴²⁶ suggests that other kinds of degradation may have occurred such as the destruction of vegetation and trees, the killing of wildlife, the contamination of soil and groundwater, and the harming of shrimp and other fish stocks. It can be imagined, therefore, that agricultural or marine resources may also have been "depleted".

Given that paragraph 35(e) of Decision 7 by the Governing Council of the UN Compensation Commission (UNCC) refers to losses or expenses resulting from "depletion of or damage to natural resources" the issue arises whether the inclusion of the words - "or damage to" - which do not appear in Resolution 687 broadens the types of claims that may be compensable under this heading. Is "damage to natural resources" synonymous with "environmental damage" and, if so, does it make any difference for valuation purposes?

To give an example, if an underground aquifer was damaged as a result of Iraq's invasion, would this constitute an "environmental damage" or a "depletion of or damage to natural resources"? The working Group may wish to consider whether the classification of a particular claim under one or the other heading makes any difference for purposes of liability or compensation, or whether the Security Council's aim (as well as that of the UNCC) was to cast the net as wide as possible so that any environmental or resource related claim could be entertained as long as damage could be shown?

⁴²⁵Black's Law Dictionary, 5th Ed (West Publishing Co., 1983) p.227.

⁴²⁶Report to the Secretary-General by the United Nations mission led by Mr. Abdulrahim A. Farah, assessing the scope and nature of damage inflicted on Kuwait's infrastructure during the Iraqi occupation of the country from 2 August 1990 to 27 February 1991. UN Doc. S/22535

Resources which Straddle International boundaries

A further interesting question arises in connection with resources which straddle international boundaries. In theory at least, it is possible to identify several kinds of natural resource which could have been subject to depletion because they straddle international boundaries. For example, it is well known that certain oil fields extend on both sides of the Iraq-Kuwait frontier, and fish stocks or fresh water resources could also theoretically cross over existing boundaries. A further potential area of investigation for the Working Group is thus whether the depletion of these kinds of natural resources as a result of Iraq's invasion are covered by Resolution 687 and paragraph 35(e) of Decision 7.

The Rumaila oil field offers a concrete example. Without pre-judging the facts, it would appear that production on the Kuwait side of this field ceased during the invasion and for a period afterwards. Depending on the geophysical characteristics of the reservoir, there is a distinct possibility that oil which could have been produced from the Kuwait side of the field migrated towards Iraq. An interesting question for the Working Group is whether such a situation, if proved, constitutes a "depletion of a natural resource" subject to compensation.

Under international law, it is submitted that the production of petroleum from a shared field is still largely governed by the rule of capture. In other words, a State has the unilateral right to explore for and exploit hydrocarbon resources falling within its sovereignty or jurisdiction. Rules of "equitable apportionment" or a "just and equitable share" which may exist with respect to fresh water resources have not, as yet, been applied to oil and gas reserves.

It is true that there is a growing body of State practice favouring unitisation agreements for oil and gas fields which straddle international boundaries. This includes, of course, the domestic practice of many States, particularly the United States, where unitisation is mandatory. However, this practice has not yet attained the requisite degree of uniformity or acceptance to represent the *opinio juris* of States. Consequently, it cannot be said that States are under a customary obligation to enter into joint development agreements covering shared oil and gas resources or to adjust their production profiles in co-ordination with their neighbours⁴²⁷.

It is also true that in 1974 the United Nations General Assembly adopted the Charter of Economic Rights and Duties of States (G.A. Res. 3281) which provided in part that:

"In the exploitation of natural resources shared by two or more countries, each State must co-operate on the basis of a system of information and prior consultation in order to achieve optimum use of such resources without causing damage to the legitimate interests of others".

Nonetheless, in view of the controversial nature of some of the provisions of the Charter and the fact that General Assembly resolutions do not generally create legal obligations, it is doubtful whether Resolution 3281 affects a State's right unilaterally to develop oil and gas reserves found on its side of an international boundary⁴²⁸.

This being so, the question arises whether the migration of oil from the Kuwait side of the Rumaila field to the Iraqi side due to the cessation of production from Kuwait during the invasion constitutes a "depletion of natural resources" within the meaning of Resolution 687 and Paragraph 35(e) of Decision 7. Had Kuwait unilaterally decided to restrict its production, the answer probably would be no. Given that Iraq itself was responsible for the stoppage and that it stood to benefit from any migration, the answer may well be different. But the question remains: is a resource "depleted" if it simply migrates to the other side of a boundary where a neighbouring State has the right to produce it?

Issues Relating to Valuation

As suggested by the Background Paper dated January 1995 prepared by FIELD, the natural starting point for assessing compensation lies in the favours *dictum* of the Permanent Court in the Chorzow Factory case:

"... reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed"⁴²⁹.

This definition may be satisfactory as a declaration of principle, but it does not furnish any indication as to the method of valuation that should be used, particularly for depleted natural resources having an economic value such as oil and gas.

Some additional guidance may be provided by the

⁴²⁷See, for example, the judgment of the International Court of Justice and the separate opinion of Judge Jessup in the *North Sea Continental Shelf Cases*. I.C.J. Reports 1969.

⁴²⁸See: Charles Robson, "Transboundary Petroleum Reservoirs: Legal Issues and Solutions" (Graham & Trotman, 1995), p.8.

⁴²⁹*Factory at Chorzow, Merits, Judgment, No.13, 1928, P.C.I.J. Series A. No.17 (1927)*, p.47.

recent case law of the Iran-United States Claims Tribunal which dealt with the valuation of oil and gas reserves. Although these cases focused primarily on the amount of compensation due as a result of expropriation, the analysis adopted for valuation purposes may be applicable to the Iraq-Kuwait situation.

There can be little doubt that one of the most hotly debated issues in international law revolves around the standard of compensation owing in cases of expropriation. It has been argued by one school of thought, for example, that compensation should be "prompt, adequate and effective", while others maintain that the correct standard is simply "appropriate compensation". Similarly, whether the lawful or unlawful nature of the taking has a bearing on the issue, and whether net book value or "market value" measured by discounted cash flow (DCF) methodology provides the relevant starting point for calculating compensation are also contentious questions.

It is not proposed that the Working Group be diverted by this controversy since a number of issues that arise in connection with expropriation disputes do not appear to be present here.

For example, in the light of Resolution 687, there does not appear to be any scope for arguing that the Iraqi invasion and subsequent conduct was lawful. Therefore, the "lawful-unlawful" distinction sometimes present in nationalisation cases disappears, and compensation may not need to be tempered by considerations which come into play when the State action complained of is lawful.

Moreover, given the context of Resolution 687 and paragraph 35(e) of Decision 7, it appears that only the actual losses caused by the depletion of the natural resource in question are compensable. It follows that it will not be necessary to evaluate contractual rights or the value of an on-going business (questions which often arise in expropriation cases), but simply the value of the oil and gas (or other natural resources) that were lost.

One of the approaches adopted by the Iran-U.S. Claims Tribunal for valuing oil and gas reserves was based on a calculation of the "market value" of the reserves in question. While it is not always easy to determine what the "market value" of oil is, DCF methodology can provide a possible starting point⁴³⁰. The Working Group may wish to consider whether such an approach is appropriate for valuing claims for the depletion of natural resources.

For lost oil and gas resources it may be helpful to identify four different kinds of damage which can be separately valued. These are: (i) lost hydrocarbons from well blowouts (*i.e.*, damages resulting from the oil and gas that was burned at the wellhead or that escaped without being able to be recovered); (ii) delays in production due to the consequential damage to the wells and installations; (iii) damage to the underlying reservoirs; and (iv) oil that migrated to the Iraqi side of transboundary oil fields. Each of these is discussed below.

(i) *Lost Oil and Gas From Blowouts*

In order to "value" this oil, four steps are required.

First, the quantity of oil (or gas) that was actually lost in the blowout must be estimated. Presumably this is a technical evaluation, but it is striking that the U.N. Report refers to losses of between 2 million and 6 million barrels per day despite the fact that Kuwait's pre-invasion production was about 1.5 million barrels per day⁴³¹.

Second, the "market value" of that oil must be calculated. This, in turn, depends on several factors since it is apparent that not all of the lost oil would have been produced at the same time had it not been lost.

Consequently, it will be necessary to calculate when the oil would have been produced under normal circumstances, what its price would have been at the time of production, and what the cost of production would have been since these costs would have been borne in any event under normal operations.

Third, since the "lost" hydrocarbons would have been produced over time, it will be necessary to discount the value of the oil lost back to a "net present value" on the premise that a barrel of oil produced several years in the future is not worth the same as a barrel of oil produced today. One possibility would be to use the date of the destruction of the wells as the "valuation date" by applying a discount rate which takes into account inflation and the degree of risk inherent in the production and price assumptions.

If the experience of the Iran-U.S. Claims Tribunal is of any guidance, each of these steps is fraught with a number of controversial issues.

Obviously, the quantity of oil or gas lost hinges on a technical evaluation which probably requires expert advice. Nonetheless, there is a legal question which may affect the estimation of how much lost oil would have

⁴³⁰See, for example, *Phillips Petroleum Co. v. Iran*, 21 Iran-U.S.C.T.R. 79, Award No. 425-39-2 (29 June 1989), at pp. 122-145. It should be noted that this award was challenged by Iran and that ultimately the Parties decided not to recognise its validity. Nonetheless, the award is useful in so far as it sets out in some detail a valuation methodology for oil and gas resources using the DCF method.

⁴³¹U.N. Report (Doc. S/22535), *supra* at p.26.

been produced had it not been depleted or lost. Should the estimated production rate from Kuwait's wells be calculated on the basis of their production rate immediately prior to the invasion (on the grounds that this was their "normal" or expected rate of production); or should a higher rate be used to take into account the fact that with the removal of Iraq's production from the world market as a result of the U.N. embargo, Kuwait would have been able to produce a higher quota of oil?

The oil price issue gives rise to similar questions. It is no secret that oil prices can fluctuate widely and that price forecasts are notoriously unreliable. Yet a price (or prices) must be fixed in order to assess compensation for the amount of oil lost. What price does one use?

As a result of Iraq's invasion, oil prices rose because of the absence of Kuwaiti production from the world market and the embargo placed on Iraq's oil. Since that time, there can be little doubt that prices have remained higher than they would have been had full production from both countries taken place (in other words, if the invasion and subsequent embargo had not occurred). In a sense, therefore, as a result of the invasion Kuwait's oil has become more valuable. Should these higher prices be used as the basis for assessing compensation?

If reference is again made to the law of expropriation, it is reasonably well settled that in calculating compensation for expropriated property and diminution in value of the claimant's property resulting from the taking itself or from any prior threats by the expropriating State should be excluded⁴³². In other words, the value of the asset before the specific threat of expropriation is taken as the benchmark for assessing compensation.

By the same reasoning, the oil lost by Kuwait as a result of Iraq's invasion should arguably be valued on the basis of price forecasts carried out before the invasion, since these would have assumed that sales from both States would have continued on the international market. But this may be controversial.

Finally, it should be noted that the discount rate to be applied to the projected cash flow can also be contested. Because DCF methodology rests upon a large number of assumptions (prices, production schedules, costs, risks), it has sometimes been thought to be too speculative for assessing compensation. As the late Professor Michel Virally stated in one of his arbitral awards involving oil and gas reserves:

"As a projection into the future, any cash flow projection has an element of speculation associated

with it.... For this very reason it is disputable whether a tribunal can use it at all for the valuation of compensation. One of the best settled rules of the law of international responsibility of States is that no reparation for speculative or uncertain damage can be awarded"⁴³³.

Does this kind of reasoning vitiate the use of DCF methodology in the Iraq-Kuwait context?

(ii) Delays to Production

There is a question whether the delay in producing oil that Kuwait experienced following the invasion falls within the ambit of "depletion of or damage to natural resources" under Resolution 687 or paragraph 35(e) of Decision 7. Strictly speaking, the mere fact of delay may not have resulted in any depletion of the resource - the oil was simply produced later than originally envisaged. Nonetheless, a damage may still have been suffered. Consequently, the Working Group may wish to consider whether this kind of damage should be deemed to fall within the meaning of Resolution 687.

In the event that such claims are covered by Resolution 687, it appears that many of the same issues of valuation discussed above will arise. Thus, it will be necessary to determine (i) how much oil was affected and when it ordinarily would have been produced, and (ii) the "value" of that oil. In essence, the claimant State will have lost a stream of revenues for the period of the delay, which presumably will at least be partially offset by the fact that oil will be able to be produced in the future.

In these circumstances, one question for the Working Group is whether an interest calculation would be more appropriate for assessing compensation under these particular circumstances.

(iii) Damage to the Reservoirs

In order to maximise production from oil and gas wells over time, it is crucial to maintain reservoir pressure in accordance with good oilfield practice. The rapid dissipation of reservoir pressure - which provides the driving force for producing oil - can result in significantly lower levels of recovery over the life of a field.

The U.N. Report summarised this situation as follows:

"In addition, as the fires continue to rage out of control, major damage may be inflicted on the reservoirs. A number of wells are already yielding water mixed with oil and gas, turning the smoke from black soot to a grey mixture of soot and steam. Wells undergoing this process may be rendered

⁴³²Phillips Petroleum Co.v. Iran, 21 Iran-U.S. C.T.R., supra, at p.133

⁴³³Amoco International Finance Co. v. Iran, 15 Iran-U.S. C.T.R. Award No.310-56-3 (14 July 1987), at p.262.

useless for future production and the drilling of replacement wells, expensive remedial drilling techniques or other types of rehabilitation may be required to recover the oil. Furthermore, pressure in the reservoirs is also diminishing, thereby lessening considerably the ease by which the oil is currently produced"⁴³⁴.

One question is whether loss of reservoir pressure constitutes a "depletion of a natural resource". While the ultimate resource is perhaps the oil and gas, it is clear that reservoir pressure plays a key role in how much oil and gas can be recovered. From the industry perspective, reservoir pressure would probably be considered to be integrally related to the resource itself. In any event, under the broader definition contained in paragraph 35(e) of Decision 7, dissipation of reservoir pressure would certainly seem to constitute a "damage" to the natural resource if not an actual depletion.

For valuation purposes, it would appear that a technical exercise calculating how much oil was lost due to reservoir damage, and what that oil was worth, is needed. This would involve many of the same issues noted above.

The U.N. Report suggests that certain rehabilitation efforts might also be undertaken, such as drilling

replacement wells and other remedial techniques. Were this to take place, and separate claims made for the cost of these repairs (perhaps as "E" Claims), care would have to be taken not to double count. In other words, oil that is deemed to be "lost" as a result of reservoir damage might subsequently become recoverable as a result of remedial actions. In this situation, there would be no real claim for depletion.

(iv) *Migration of Oil Across Boundaries*

It is submitted that similar issues relating to the amount of oil lost and its "value" arise in this context. The Working Group may wish to consider whether DCF methodology would be best suited for valuing such losses or whether international law favours a different approach.

Conclusions

There are a number of potentially interesting questions of definition and valuation which arise in connection with assessing "depletion of or damage to natural resources". This paper has attempted to raise some of these issues for discussion and to suggest various approaches to the issue without prejudging any views that the Working Group may decide to adopt.

⁴³⁴UN Report (Doc. S/22535), *supra* at p.27

THE VALUATION OF ENVIRONMENTAL DAMAGE: A COMPARATIVE NOTE

Prepared by Ruth Khalastchi

I. Introduction

Environmental impairment may cause damage to the environment *per se*, i.e. to natural habitats, species of fauna and flora and to aesthetic and natural values, in addition to causing personal injury, loss or damage to property and economic losses. The valuation or assessment of damage to the environment *per se*, also referred to as ecological damage or 'pure' environmental damage, cannot be considered in isolation from other questions relating to the general topic of environmental damage. Assessment of damages is directly dependent on the exact meaning of the term "environment", on the definition of "environmental damage", and on issues related to responsibility in civil and administrative law. The focus of this note is on any existing methodologies for valuing damage to the environment *per se*, in national legal regimes and practice. Particularly in the United States, a number of methods have been developed for natural resources assessment. This note does not, however, address the US approach which has been extensively documented elsewhere.⁴³⁵

Most national jurisdictions have developed laws on environmental liability which generally call for preventive measures, clean-up and for measures of reinstatement of the environment to the *status quo ante*. This paper, however, is limited to any existing legislation and case law which address specifically the assessment of damage to the environment *per se* where reinstatement is either impossible, unreasonable or not the desired remedy.

A number of methodologies to assess such environmental damage have been developed by national legislation and

state practice. Broadly, these can be grouped into the following categories:⁴³⁶

- ◆ Valuation by a Court or Tribunal/appointing experts.
- ◆ Fixed sum payments/lump sum assessment for the damage.
- ◆ Valuation by administrative authorities.

This paper will first examine any legislation and thereafter any case law which are relevant to the valuation of damage to the environment *par se*.

II. National Legislation

Valuation by a Court or Tribunal and Experts

Italian domestic legislation provides the clearest example of a written law which places on the Court the task of valuing the damage to the environment. The relevant legislation is the Italian Law No. 349 of 8 July 1986 regarding the establishment of the Ministry of the Environment and rules on environmental damage.⁴³⁷ In particular, Article 18 is now the sole basis upon which environmental damage can be claimed, and jurisdiction in such cases is vested in the ordinary courts.⁴³⁸ According to Article 18, paragraph 1, anyone who, acting by fraud or fault, violates any laws or regulations on environmental protection and thereby causes harm to the environment is held liable to pay compensation to the State. Whilst restoration in kind is the preferred option, where however this is not viable, the alternative is an award for damages. According to Article 18,

⁴³⁵ See, for example, P. Sands and R. Stewart, "Valuation of Environmental Damage - US and International Approaches", 5(4) *RECIEL* (1996) p.290; R. Stewart, "Liability for National Resource Injury: Beyond Tort", in R. Revesz and Richard Stewart (ed.), *Analyzing Superfund: Economics, Science and Law*, (Resources for the Future, Washington D.C., 1995); R. Stewart, James Connaughton and Simon Steel, "Evaluating the Present Natural Resource Damages Regime: The Lawyer's Perspective", in R. Stewart (ed.), *Natural Resources Damages: A Legal, Economic and Policy Analysis*, (The National Legal Center for the Public Interest, Washington D.C., 1995); Thomas J. Schoenbaum, "Environmental Damages: The Emerging Law in the United States" and Charles B. Anderson, "Litigating and Setting a Natural Resource Damage Claim in the United States: The Defence Lawyer's Perspective", in Peter Wetterstein (ed.) *Harm to the Environment: The Right to Compensation and the Assessment of Damages* (Clarendon Press, Oxford, 1997).

⁴³⁶ See F. Giampetro, "Damage to the Environment: Meaning and Function of the Assessment of Damage", in *Assessment of Damage to the Environment*, (Council of Europe, 1992), Part I pp. 9-28 at pp. 25-28.

⁴³⁷ Law No. 349 of 8 July 1986, *Istituzione del Ministero dell'ambiente e norme in materia di danno ambientale*, in (1986) 162 *Italian Official Journal*, Supp. Ord. No.59.

⁴³⁸ Andrea Bianchi, "Harm to the Environment in Italian Practice: The Interaction of International Law and Domestic Law", in Peter Wetterstein (ed.), *Harm to the Environment: The Right to Compensation and the Assessment of Damage*, (Clarendon Press, Oxford, 1997) pp.103-129 at p.105.

paragraph 6, if a precise quantification of the damage is impossible, the amount of compensation payable is calculated on the basis of equitable criteria. Article 18, paragraph 6 states:

"The judge, in cases where a precise quantification of the damage is not possible, fixes the amount in an equitable way, taking into account the seriousness of the individual negligence, the costs of restoration, and the profit obtained by the transgressor in consequence of his damaging behaviour to the environmental goods."⁴³⁹ (emphasis added)

Other examples of relevant legislation include the Conservation Act of 31 March 1987 of New Zealand which requires the Tribunal to consider all the pertinent factors, including the incurred expenses of remedying the damage caused.⁴⁴⁰ The Swiss Federal Code on Fisheries (BGF) has a provision which allows for the compensation of the "reduced capacity" of the waters.⁴⁴¹ Article, 15, section 2 BGF provides that the Court is to allow claims for abstract damages calculated on the basis of the capacity of a river or lake, without the need to show individual losses.⁴⁴² Compensation includes the costs of repopulation, lost profits due to the reduced capacity of the damaged waters and any ancillary or consequential damages.⁴⁴³

Fixed Sum/Lump Sum Payments

Certain national jurisdictions have adopted a system whereby the value of a particular species or natural habitat is assessed to an established scale.⁴⁴⁴ For example, under Spanish legislation the value attached to various species start from 2500 pesetas up to a million and a half pesetas for certain species in danger of extinction, such as the monk seal, the bear and the Iberian lynx. In the autonomous region of Asturias there

also exists such a scale for freshwater fish (from 100 000 to 500 000 pesetas) and another scale for marine organisms. This system is adopted in other States including Hungary, Mongolia and Latin American States. Under Hungarian legislation (Decree of 15 March 1982 on the Law on the Conservation of Nature) the infringer may be ordered to pay ten times the value of the species destroyed where the animals and plants which had been destroyed were specially protected species. The same Hungarian legislation ascribes a value of 100 000 forints per hectare for any degradation without authorisation of a protected zone. In any case, any compensation which is forthcoming must be used for the protection of the environment. In Hungary, any indemnity paid out goes into a centralized Environment Fund.⁴⁴⁵

Valuation by Administrative Authorities

In certain national jurisdictions the amount of compensation is fixed by an administrative decision.⁴⁴⁶ This method is used in Spanish legislation, for example, in the Decree of 28 June 1986 on environmental impact assessment. Where damage is caused by projects carried out in violation of the Decree or following an incorrect impact assessment, such damage is valued by the relevant public authority. Similarly, in the Australian States of New South Wales and Victoria, evaluation of environmental damage is made by the public body responsible for the protection of the environment. However, no indication is given to these public bodies on how to quantify the damage.⁴⁴⁷

Other Relevant Legislation

German legislation in the context of the Environmental Liability Act 1990,⁴⁴⁸ which establishes a strict liability regime for owners of certain installations, provides for compensation in respect of damage to privately owned

⁴³⁹ Law No. 349 of 8 July 1986, *supra* n.4; para. 18(6). Other criteria that are relevant to the assessment of ecological damage in Italy were indicated by the Constitutional Court in its judgment No. 641 of 30 December 1987, see below.

⁴⁴⁰ Cyrille de Klemm, "Les apports du droit comparé", in *Le dommage écologique en droit interne, communautaire et comparé*, (Société Française pour le Droit de l'Environnement, Institut du Droit de la Paix et du Développement), 1991, pp.143-164 at p.156.

⁴⁴¹ Hans Rudolf Trueb, "Natural Resource Damages - A Swiss Law Perspective", in *Environmental Law and Policy*, 27/1 (1997) pp. 58-65..

⁴⁴² *Ibid.* p. 63. The author notes that the adoption of this provision was a reaction to a Federal Supreme Court decision 1964, partly denying a claim by two Swiss cantons. A river had been polluted with phenol and formalin which killed approximately 750,000 kg of fish. The Court denied the claims because the cantons had assigned their rights to exploit the river Broye to third parties. While their sovereign rights were still impaired, the cantons had not suffered any financial losses. Consequently, they were only compensated for the (necessary) costs of repopulating the river.

⁴⁴³ *Ibid.* The author also notes the Federal Code on the Preservation of Nature and the Countryside of 1 July 1966 (NHG, as amended in 1995) which in Article 24e lit.c requires "adequate compensation" if damages cannot be remedied. The author considers that this language implies that the legislators had intended to open up the possibility of receiving monetary compensation. *Ibid.* p. 59.

⁴⁴⁴ C. de Klemm, *supra* n.7; pp. 157-158.

⁴⁴⁵ *Ibid.*, p. 158.

⁴⁴⁶ *Ibid.*, p.159.

⁴⁴⁷ *Ibid.*

⁴⁴⁸ Umwelthaftungsgesetz of 10 December 1990.

natural resources. The Act recognizes the value of such resources beyond strictly economic standards,⁴⁴⁹ by providing:

§ 16 Costs of Restoration

"(1) If damage to property also constitutes an impairment of nature or scenery, then, to extent that the damaged person restores the state that would exist if the impairment had not occurred, § 251 para. 2 of the Civil Code shall apply, provided that expenses for restoration of the previous state shall not be considered unreasonable for the sole reason that they exceed the value of the property.

(2) The liable person must, upon the damaged person's demand, advance the necessary expenses."⁴⁵⁰

§ 251 (2) of the Civil Code provides:

"(2) The person owing compensation may compensate the creditor by payment of money if restoration is possible only at unreasonable expense. Costs incurred by treatment of an injured animal shall not be considered unreasonable for the sole reason that they considerably exceed the animal's value."⁴⁵¹

Paragraph 251(2) enables the debtor to pay a monetary indemnification, i.e. the diminution in value of the property instead of the cost of restitution if repairing the damage is unreasonably expensive. In determining what is unreasonably expensive, non-pecuniary interests may be taken into account.⁴⁵² For example, in a case where a mature tree was destroyed the German Supreme Court (BGH) held that §251(2) applied, for it was, although feasible, disproportionately expensive to replace the tree which had been destroyed by a new one of

the same age, but *de facto* the cost of restitution was awarded irrespective of the diminution in value of the property (see further below).⁴⁵³

Accordingly, pursuant to section 16 of the 1990 Environmental Liability Act, owners of damaged natural resources may recover the costs of restoration without being limited to the market value. Section 16 does not however allow for unlimited recovery.⁴⁵⁴

III. Case Law

The Decisions in the Patmos Case

On 21 March 1985 the Greek tanker *Patmos* collided with the Spanish tanker *Castillo de Monte Aragon* in the Straits of Messina. Owing to the collision, approximately 1,300 tonnes of the 80,000 tonnes of oil transported by the *Patmos* spilt into the sea and a few tonnes of the oil came ashore on the coast of Sicily. In accordance with the 1969 International Convention on Civil Liability for Oil Pollution Damage (CLC)⁴⁵⁵ and the 1991 International Fund Convention,⁴⁵⁶ the owner of the *Patmos* and his insurer established a limitation fund of 13,263,703, 650 liras with the Court of Messina. Thereafter, the Italian Government lodged a claim for environmental damage with the Court against the limitation fund amounting to 5,000 million liras.⁴⁵⁷ The Italian Government argued that Articles I(6), II and IX(1) of the CLC and Article 3 of the 1971 Fund Convention provided for compensation for pollution damage caused to the territory of the State, including to its territorial waters. By a decision rendered on 30 July 1986, the Court of Messina rejected this claim, holding that Italy was not entitled to receive compensation for pollution damage.⁴⁵⁸ The Court held that Article II on the CLC was to be interpreted as referring to damage done on the territory and not to the territory or territorial waters of a Contracting State. In the opinion of the

⁴⁴⁹ Werner Pfennigstorf, "How to Deal with Damage to Natural Resources: Solutions in the German Environmental Liability Act of 1990", in Peter Wetterstein (ed.), *Harm to the Environment: The Right to Compensation and the Assessment of Damages*, (Clarendon Press, Oxford, 1997), pp.131-142 at p.135.

⁴⁵⁰ *Ibid.*

⁴⁵¹ *Ibid.* The author notes that the second sentence of this provision did not exist when the Environmental Liability Act was drafted and discussed. It was added in August 1990 in order to lift animals to a legal status somewhat above mere inanimate objects, *ibid.* p. 136.

⁴⁵² R. Pappel, *Civil Liability for Damage Caused by Waste*, (Duncker und Humblot GmbH, Berlin, 1995) p. 64 and footnote 108.

⁴⁵³ Bundersgerichtshof, 13 May 1975, (1975), 28 *Neue Juristische Wochenschrift*, 2061-3. The BGH assessed the value of the trees on the basis of the Koch method. See *infra* the section on valuation of trees.

⁴⁵⁴ Werner Pfennigstorf, *supra* n. 16, p. 136.

⁴⁵⁵ International Convention on Civil Liability for Oil Pollution Damage (Brussels) 29 November 1969, in force 19 June 1975; 973 UNTS 3.

⁴⁵⁶ International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Brussels), 18 December 1971, in force 16 October 1978; I.L.M. (1972) 284.

⁴⁵⁷ See M. C. Maffei, "The Compensation for Ecological Damage in 'Patmos Case'", in F. Francioni and T. Scovazzi (eds.), *International Responsibility for Environmental Harm*, (Kluwer Law International, 1991), pp.381-394.

⁴⁵⁸ ESO Italian S.P.A., SMEB S.P.A., Ministero dell'interno and Ministero della marina mercantile v *Patmos Shipping Co., The United Kingdom Mutual Steamship Assurance Association (Bermuda) Ltd., International Oil Pollution Compensation Fund et al. (Patmos I)* in (1986) *Il diritto marittimo* p.996 et seq.

Court, the right of every State to enjoy sovereignty over its territory and territorial waters could not be violated by a wrongful act of a private nature, nor can any such acts give rise to any obligation to compensate the State.⁴⁵⁹ The Court ruled out compensation for damage to marine flora and fauna. It also held that Italy had not suffered any direct or indirect economic loss nor incurred any clean-up costs. Moreover, in support of rejecting the claim, the Court relied on Resolution No.3 of 1980, adopted by the Assembly of the International Oil Pollution Compensation Fund (IOPC Fund), to which Italy is a party, which provides that compensation to be paid by the IOPC Fund shall not be made on the basis of an abstract quantification of damage calculated in accordance with theoretical models.⁴⁶⁰

The Italian Government appealed the decision of the Court of Messina. It reasserted its claim that damage had been done to the marine environment and to the shores of Calabria and Sicily. It argued, *inter alia*, that since the damage could not be quantified in precise terms, the Court should make use of experts to provide it with useful parameters to enable it to make an assessment on the basis of an equitable appraisal, in accordance with Article 1226 and Article 2056 of the Italian Civil Code.⁴⁶¹

On 22 May 1989 the Court of Appeal of Messina reversed the decision of the court of first instance and recognised the State's claim for ecological damage, confirming that such damage is compensable under the CLC.⁴⁶² The Court considered that the damage to the environment has an economic character even if it does not correspond to an arithmetical concept. It consists in the economic importance that the destruction, the deterioration, or the alteration of the environment has

per se and also towards the community which benefits from environmental resources and, in particular from marine resources in a variety of ways (food, tourism, health, scientific and biological research). The State has a duty to protect these benefit, because it represents the national community and is required to protect its interests.⁴⁶³ As the environment is an immaterial asset with no market value, where damage has been caused to it, the reduction in its value consists in the reduction of the possibility to make use of the asset 'environment'. Consequently, owing to its non-economic character, the ecological damage has to be evaluated on the basis of equitable criteria.⁴⁶⁴

The Court of Appeal authorised the appointment of a group of experts to assess the damage to the marine resources, and on 24 December 1993, the Court of Appeal of Messina issued its final judgment, affirming the existence of the damage to the environment and determining its amount on the basis of equitable criteria.⁴⁶⁵ An appraisal was made by the Court (i) on the basis of objective criteria provided by the expert evidence, such as, damage to benthos, the quantity of fish that had been destroyed and the market value of the fish; (ii) in the light of the circumstances that the damage had affected not only Italian territorial waters; and (iii) taking into account that the negligent conduct of Navy officials had contributed to causing the damage.⁴⁶⁶ The Court fixed the sum payable at 2,100 million liras (\$1,235,000). The damage award did not exceed the limit of liability of the owner and the IOPC Fund did not appeal the decision.

The *Patmos* case may have influenced another claim by the Italian Government for environmental damage, in respect of the *Haven* incident in 1991,⁴⁶⁷ and also more

⁴⁵⁹ A. Bianchi, *supra* n.5, p.113.

⁴⁶⁰ IOPC Fund Resolution No.3 on Pollution Damage (October 1980).

⁴⁶¹ A. Bianchi, *supra* n.5, p. 115. The author elaborates on further arguments by the Italian Government relating to the term pollution damage under the international oil pollution conventions; *ibid.* pp. 115-116.

⁴⁶² *Ministero della marina mercantile e Ministero dell'interno v. Patmos Shipping Co., The United Kingdom Mutual Steamship Assurance Ass., International Oil Pollution Fund (Patmos II)*.

⁴⁶³ M. C. Maffei, *Supra* n.24, at p.386.

⁴⁶⁴ *Ibid.*, p.387. See also A. Bianchi, *supra* n.5, p.116. Bianchi notes that when the Court ruled that the valuation of ecological damage had to be made on the basis of an equitable appraisal, the impression is that it meant to enforce Article 18 of the Italian Law No. 349 of 8 July 1989. However, no express reference was made to the Law.

⁴⁶⁵ *Ministero della Marina Mercantile e Ministeri dell'Interno v. Patmos Shipping Co., the United Kingdom Steamship Co., International Oil Pollution Fund, (Patmos III)*, reproduced in (1994) 9 *Revista giuridica dell'ambiente*, pp. 683-694.

⁴⁶⁶ A. Bianchi, *supra* n.5, p. 120.

⁴⁶⁷ See *International Oil Pollution Compensation Fund: Annual Report 1994*, 46-55. The incident occurred in April 1991 when the Cypriot Tanker *Haven* caught fire and subsequently sank off Genoa, Italy. The incident cause serious pollution in Italy, France and Monaco. See further A. Bianchi, *supra* n.5, pp.121 and Edward H.P. Brans, "Liability and Compensation for Natural Resource Damage under the International Oil Pollution convention", in 5 (4) *RECIEL* (1996) pp. 297-304. The IOPC Fund is currently appealing the decision of the court of first instance in Genoa which determined that the claim for environmental damage was admissible, and awarded ?16.8 million in compensation, assessing the damage which had not been repaired by clean-up operations; *ibid.*, at p. 300.

recently, in 1996, the claim submitted by the United Arab Emirates for environmental damage in the *Seki* case.⁴⁶⁸ In the latter case, the claim for the damage to the environment was calculated on the basis of an abstract method, known as "the Jeddah Method", which the Government contends can produce a result approximating to that of an ecovalue assessment. Factors which are relevant to the method include: the toxicity, degradability and dispersability of the oil and the particular characteristics and sensitivity levels of the marine environment.

The Decision of the Italian Corte Costituzionale

Beside the criteria set forth in Article 18(6) of Italian Law No.349, additional parameters to assess the value of ecological damage were indicated by the Italian Constitutional Court in its judgment No.641 of 30 December 1987.⁴⁶⁹ *Inter alia*, such parameters include the costs to patrol and monitor compliance with law requirements, economic management of the environment so as to maximise its enjoyment either by individuals or by the community at large and to develop environmental resources. Further elements to assess the economic value of damage to the environment may be derived from costs necessary to preserve the environment or to restore it once damage has occurred.⁴⁷⁰

Damage to the Marine Environment

The French *Tribunal de Grande Instance* of Bastia, in its decision of 4 July 1985 concerning the dumping into the sea of red muds coming from a plant located in Scarlino in Italy, considered the issue of compensation for damage to natural resources. The Italian company *Montedison*, which had caused the dumping, was held liable to pay 180,000 francs to the fishermen of Bastia. The Court observed that, whilst the entire impact of the loss in biodiversity can only be determined over a period of time and is not immediately apparent and quantifiable, the loss is nonetheless actual and certain: "les pertes de biomasse ne pouvant être ressenties au niveau de la pêche que sur plusieurs années et ne pouvant donc être immédiatement visibles; qu'il n'en demeure pas moins que

le préjudice est actuel et certain", and decided that the economic damage suffered by private citizens (fishermen's loss of earnings) had to be compensated even if it was difficult to evaluate the amount of the compensation.⁴⁷¹

In determining the sum to be awarded, the experts considered such criteria as the species of fish and the loss in productivity of a marine environment particularly rich in resources.⁴⁷² The Court's decision, however, could be regarded as not relating to ecological damage *stricto sensu* as ultimately the Tribunal made an assessment based on the lost profit of fishermen.⁴⁷³ The Tribunal also decided that compensation had to be paid to the local public bodies (two departments of Corsica) which based their claim on "la diminution de la fréquentation touristique, et un manque à gagner des taxes à percevoir" and on the damage caused to the image of Corsica. The Tribunal estimated this damage at 250,000 francs for each department.⁴⁷⁴

The Valuation of Trees

Following German Supreme Court decision of 1975 (mentioned above),⁴⁷⁵ there is, in Germany, a generally accepted methodology for assessing compensable damage to trees. The 1975 decision concerned the destruction of a 40 year old chestnut tree as a result of a motor vehicle accident. The body in charge of the road replaced it with a 5 year old chestnut tree and claimed damages calculated on the basis of a widely used formula proposed by a private expert. The court of first instance adopted the same formula, known as the *Koch* method, which was also accepted by the Supreme Court. The *Koch* method consists of adding the following items:

1. the cost (purchase price) of the replacement tree;
2. the cost of planting and initial care during the rooting period;
3. a charge reflecting the risk of failure to take root;
4. the cost of regular care up to the time the tree reaches the age of the replaced tree;

⁴⁶⁸ IPOC Fund/EXC.43/3/1 and 47/6. See Edward Brans, *supra* n.34.

⁴⁶⁹ *Foro Italiano*, 1988, II, 694.

⁴⁷⁰ A. Bianchi, "The harmonization of laws on liability for environmental damage in Europe: an Italian perspective" in *Journal of Environmental Law*, Vol. 6, No.1, 1994, pp. 21-42 at p. 23 footnote 10.

⁴⁷¹ M. Maffei, *supra* n.24, p. 392.

⁴⁷² C. Huglo, "La pratique du (ou des) juge(s) français en matière de dommage écologique," in *Le dommage écologique en droit interne, communautaire et comparé*, (Société Française pour le Droit de l'Environnement, Institut du Droit de la Paix et du Développement), pp. 185-199 at p.197.

⁴⁷³ M. Maffei, *supra* n.24 at footnote 14.

⁴⁷⁴ *Ibid.*

⁴⁷⁵ See *supra* n.20.

5. interest on the capital outlay represented by items 1-4, under business accounting rules.⁴⁷⁶

The Koch method is now a well established valuation methodology. It is based on principles and standards that are also used in official guidelines for determining the value of real property. It may in time be used to value other natural resources.⁴⁷⁷

In a judgment delivered on 25 June 1987,⁴⁷⁸ a judge in Anvers, Belgium, confronted with the illegal destruction of three oak trees a century old, estimated their value at respectively 254,702, 200,538 and 11,019 BFR. The judge based these figures on criteria established by the administration which took into account the species of the tree, its size and age and its location and condition.⁴⁷⁹

IV Conclusion

The purpose of this paper has been to outline the

methodologies which have been developed at the national level (other than in the US) for the valuation of damage to the environment *per se*. Such methodologies are few and generally unsophisticated. Wetterstein notes that existing methodologies, including those developed in the US, "are too artificial and arbitrary" and that "they are also very costly". In his opinion, they also "have methodological shortcomings [because] they do not take sufficiently into account differences in environmental damage situations (the migration of sea animals, impacts on reproductive cycles, the longterm effect of, for instance, sunken oil on the ecosystem itself, etc.)".⁴⁸⁰

No doubt this is a novel and problematic area of the law, and one that needs a good deal of further development. Nevertheless, existing practice in the US, in Italy, and to some degree in other jurisdictions might provide a good basis to further develop this area of the law.

⁴⁷⁶ W. Pfennigstorf, *supra* n.16, pp. 139-140.

⁴⁷⁷ *Ibid.* p. 140.

⁴⁷⁸ H. Bocken, "The Compensation of Ecological Damage in Belgium", in Peter Wetterstein (ed.) *Harm to the Environment: The Right to Compensation and the Assessment of Damages* (Clarendon Press, Oxford, 1997), pp. 143-158 at p. 151.

⁴⁷⁹ H. Bocken, "The Compensation of Ecological Damage in Belgium", in Peter Wetterstein (ed.) *Harm to the Environment: The Right to Compensation and the Assessment of Damages* (Clarendon Press, Oxford, 1997), pp. 143-158 at p. 151.

⁴⁸⁰ Peter Wetterstein, "Introduction", in Peter Wetterstein (ed.) *Harm to the Environment: The Right to Compensation and the Assessment of Damages* (Clarendon Press, Oxford, 1997), at p.7.

OUTLINE OF LINKAGES BETWEEN VALUATION METHODOLOGIES AND THE CATEGORIES OF ENVIRONMENTAL DAMAGE IN PARAGRAPH 35 OF DECISION 7 OF THE GOVERNING COUNCIL OF THE UNITED NATIONS COMPENSATION COMMISSION

Prepared by Richard B. Stewart

Article 35:

"These payments are available with respect to direct environmental damage and the depletion of natural resources as a result of Iran's unlawful invasion and occupation of Iraq. This will include loss or expenses resulting from:

"(a) Abatement and prevention of environmental damage, including expenses directly relating to fighting oil fires and stemming the flow of oil in coastal and international waters;"

Comment on (a):

The primary reference is to steps already taken to prevent reduce contact between oil or hazardous substances and the natural environment in quantities that might cause environmental damage including oil removal, burning, and use of dispersants. Also included might be use of chemicals or other interventions to reduce the extent of damage resulting from contact. The methodology for determining the amount of damages would be the costs incurred in taking such measures. Note that, unlike subparagraphs (b)-(d) subparagraph (a) does not require that such measures "reasonable." However, it would seem appropriate to infer limitation on recoveries to measures which themselves are reasonable and to costs that are reasonable in amount, although considerable latitude in the application of a reasonableness standard would be warranted in an emergency situation requiring prompt response. There would have to be appropriate documentation of such costs.

Does the "directly relating to" requirement represent a special requirement or limitation on recoveries of the expenses of fighting oil fires and stemming the flow of oil? A generic issue is the extent to which overhead and other indirect costs can be recovered in connection with recovery of costs under this and other subparagraphs.

"(b) Reasonable measures already taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean or restore the environment;"

Comment on (b):

To "clean" the environment presumably involves the removal of oil or hazardous substances. The requirement that such measures be reasonable indicates that some balance must be struck between the costs and the environmental benefits of increasingly ambitious clean up measures, but presumably not a strict cost/benefit test. The environmental as well as the economic costs of additional clean up should clearly be considered. For example, the steam cleaning of the beaches in Prince William Sound following the Exxon Valdez spill killed almost all life in the intertidal zone and did more environmental harm than good. In addition, the measures taken should presumably be carried out in a cost-effective manner, in accordance with the basic requirement of mitigation or avoidance of damages by plaintiffs.

To "restore" the environment would presumably involve measures in addition to clean up in order to restore the condition or functions of natural resources to what they would have been absent the spill of oil or release of hazardous substances or the other environmentally destructive activity in question. Restoration decisions present two basic questions.

First, the basis and scope of restoration. Should the aim be to replicate, insofar as possible, the precise physical and biological condition that the injured resource would be in but for the injury? Or should the aim be to replace the basic ecological functions and services lost by reason of the injury? The latter approach affords greater flexibility because it may be possible to restore functions or services by acquiring replacement or equivalent resources as well as by rehabilitating the injured

resource. For example, artificial reefs can be constructed to provide habitat for fish in lieu of attempting to restore a damaged natural reef. The functions/services approach is likely to offer a greater array of options and provide significant potential costs savings. This approach presents the question, however, whether the aim should be to replace only functions and services of direct interest to humans, or whether functions and services to other resources should be included. The requirement that the measures undertaken be "reasonable" implies that, regardless of which definition of the basis and scope of restoration is adopted, the most cost-effective means of achieving restoration should be adopted.

Second, at what point do the costs of restoration become so excessive in relation to the environmental benefits that further efforts at restoration can no longer be said to be "reasonable"? If it were possible accurately to determine the full economic value of a resource (see below), traditional principles of remedy would indicate that it would be unreasonable to spend more than the value of a resource in restoring it. The courts in the United States have refused to impose so strict a limitation in natural resource damages cases, but have indicated that restoration measures whose costs are "grossly disproportionate" to the resource's value are unreasonable and may not be recovered. Note that the application of a reasonableness limitation on restoration costs in relation to resource value should be applied on an incremental basis. Some efforts at restoration may clearly be reasonable in many cases; the question then becomes whether the costs of additional measures are reasonable in relation to the incremental benefits.

An issue related to both of the above questions is the extent to which a reasonableness standard requires reliance on natural recovery when affirmative but perhaps costly interventions will achieve restoration sooner.

In the case of clean up and restoration measures already taken, damages would consist of the expenses incurred in carrying out those measures, subject to the reasonableness and cost-effectiveness limitations discussed above. Recoveries are also authorized for the expenses of future clean up and restoration measures provided that they "can be documented as reasonably necessary." Does the requirement that measures be "necessary" require a stricter standard for future as opposed to past measures? Such a requirement might be justified on the basis that a claimant would presumably be very careful in spending his own money for clean up and restoration, even if subsequent application for recovery could be made, but might well be less careful in spending recoveries from others. The requirement of documentation also suggests a more demanding showing that measures to be undertaken in the future are

needed, appropriate, and cost-effective. The reference to documentation raises the further question whether some process for receiving and taking into account the views of liable parties and the public in formulating future measures of clean up and restoration is envisaged. Such a process, accompanied by a reasoned decision on the measures selected, could provide additional assurance that the measures selected are "reasonably necessary."

"(c) Reasonable monitoring and assessment of the environmental damage for the purposes of evaluating and abating harm and restoring the environment;"

Comment on (c):

Presumably the extent of the monitoring and assessment activities must be reasonable in relation to the scope of potential injury and damage, and such measure should be carried out in a cost effective way. Can any more precise criterion of reasonableness be developed? In the United States the government has adopted a rule of thumb; assessments costs are reasonable and recoverable if they do not exceed expected damage recoveries. The courts have upheld this rule. Query the nature and extent of documentation required, including the possibility of a public comment process, to establish the reasonableness of future measures.

"(d) Reasonable monitoring of public health and performing medical screening for the purposes of investigation and combating increased health risks as a result of the environmental damage;"

Comment on (d):

Presumably the scope of the measures to be undertaken must be reasonable in relation to the likely risk in question, and they must be carried out in a cost-effective way. A more definite criterion does not seem feasible. Query the nature and extent of documentation required, including the possibility of a public comment process, to establish the reasonableness of future measures.

"(e) depletion of or damage to natural resources."

Comment on (e):

"Depletion of ... natural resources" would most naturally refer to reductions in the amount of a natural resource, such as oil, that has commercial value.

"[D]amage to natural resources" presumably represents an element of recovery distinct from the costs of clean up and restoration, which are separately provided for. Recoveries for such damage would presumably be of two sorts: (a) recoveries for permanent damage to the

environment resulting from the circumstance that restoration is not undertaken because it is too costly or is infeasible or the circumstance that restoration is not successful;⁴⁸¹ (b) recoveries for interim damage pending full restoration. Such recoveries would be in addition to those provided in subparagraphs (a)-(d).⁴⁸²

In both circumstances the question is how to value the resource loss in question.

Resource values can be divided into use values, including commercial and recreational uses, and non-use values, including existence, bequest and, by some accounts, option value. The established economic methodologies for determining lost use value include market price, appraisal value (appraisal of what market price a resource would command), travel cost methodology (which measures the opportunity costs to persons of visiting and using a resource as a lower bound of its use value to them), and hedonic pricing (which seeks to derive the imputed value of environmental amenities from the sales prices of different properties with different amenity levels). All of these methodologies are well-established and are regarded as generally reliable, although all of the methodologies other than market price are complex and costly to use. A market price measure alone, however, would understate the value of many natural resources.

An important question is the scope of uses recoverable as natural resource damages. Presumably losses to commercial uses of a resource (such as reduced fishing profits) and resource-based governmental revenues (such as taxes on commercial fishing) would not be included as they are separately recoverable. The uses

on which natural resource damages would be based would presumably be uses by the general public.

The only available methodology for assessing non use value is contingent valuation methodology, which seeks to elicit the value of a resource by asking a sample of the population what, hypothetically, they would be willing to pay to preserve it, and then multiplying the value obtained by the number of households in a geographic area deemed relevant. This methodology is very costly to implement and its validity is sharply contested.

As an alternative to relying on one or more established methodologies, one could ask a trier to place a value on a resource based on its best judgment, perhaps aided by the results of one or more of the above methodologies.

Alternatively, one could establish, in lieu of case-by-case assessment of restoration and damage costs, a schedule for damages based, for example, on gallons spilled, the type of oil in question, and the general character of the receiving environment. Such a schedule might be based on average restoration and damage costs.

Concluding comment:

The list of types of recoveries in subparagraphs (a)-(e) is evidently not intended to be exclusive. The opening sentence in the paragraph authorizes payments for "direct environmental damage" which conceivably might be broader than the elements listed in the subparagraphs (including "damage to natural resources" in (e)), but it is not apparent what any additional elements of recovery beyond those listed might be.

⁴⁸¹ Presumably if reasonable prudent restoration measures are undertaken but prove unsuccessful, a claimant should be able to recover both the costs of the restoration measures and for unrestored damage to the natural resource. Similarly, recovery should be available for damage to the environment caused by reasonable, prevention, abatement, and clean up measures.

⁴⁸² Note that under subparagraphs (a)-(d) this valuation problem is avoided because damages are based on the costs of measures undertaken.

APPROACHES TO THE VALUATION OF ENVIRONMENTAL DAMAGE UNDER NATIONAL JURISDICTIONS IN THE GULF REGION

Prepared by Najib Al-Nauimi

Kuwait Convention (1978) as incorporated in the Gulf Legal System

This regional convention reflects co-operation among the Gulf states to protect the marine environment, and recognizes the importance of sound environmental development of the region. The Kuwait Convention is concerned with the protection of environment from pollution in the Arabian Gulf and resulted from increasing pollution from different sources; the most conspicuous of all, oil spillage discharged from off-shore oil wells and from oil tankers.

The Kuwait conference on pollution was commenced in Kuwait among all Gulf states in 1978. The Conference considered a co-ordinated programme to study pollutants and their effects on sealife, development of environmental management activities, water policies, protected areas, industrial engineering and hence debated the need for a regional convention for co-operation on the protection of marine environment generally from pollution. The Kuwait Regional Conference of Plenipotentiaries on the Protection and Development of the Marine Environment and the Coastal Areas was convened by UNEP from 15 to 24 April, 1978; and was attended by several international or specialized organisations. All the Gulf states of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the UAE participated fully in the Conference.

The Gulf states agreed upon a regional convention for Co-operation on the Protection of the Marine Environment from Pollution together with a Protocol in 13 Articles concerning Co-operation in Combating Pollution by Oil and other Harmful Substances in Cases of Emergency. The Conference adopted as well the Action Plan for the Protection and Development of the Marine Environment and the Coastal Areas. The regional conventions and the Action Plan, were signed on 24 April 1978, by all Gulf States except Oman, which signed later.

I. The Elements and Trends in the Action Plan in the Kuwait Convention:

The Action Plan prepared by the 1978 Conference in Kuwait consists of many recommendations for action to

be taken by Governments and international bodies mainly at regional level (1). The frame work of the Action Plan comprises four elements to be achieved as follows:

- “(a) assessment of the state of the environment including socio-economic development activities related to environment quality and of the needs of the region in order to assist governments to cope properly with environmental problems, particularly those concerning the marine environment;
- (b) development of guidelines for the management of those activities which have an impact on environmental quality or on the protection and use of renewable marine resource on a sustainable basis;
- (c) development of legal instruments providing the legal basis for co-operative efforts to protect and develop the region on a sustainable basis;
- (d) supporting measures including national and regional institutional mechanisms and structure needed for the successful implementation of the Action Plan”.(2)

Under the 'legal component' of the Action plan, it is recommended that UNEP should in co-operation with the Gulf Governments and the U.N. bodies concerned, convene intergovernmental groups to prepare additional protocols which will include the following matters:

- “(1) scientific and technical co-operation;
- (2) pollution resulting from exploration and exploitation of the continental shelf and the sea-bed and its subsoil (this protocol was discussed by the Gulf states in Kuwait, 18-19 February 1986);
- (3) development, conservation, protection and harmonious utilization of the marine living resources of the Region;

(4) Liability and compensation for damage resulting from pollution of the marine environment;

(5) pollution from land-based sources".

I. General Obligations:

The Kuwait Convention provides that all Gulf States should take all appropriate measures, by establishing national standards and issuing laws and regulations as required to prevent, abate and combat pollution of the marine environment in the Gulf Sea (Art. 2). In addition, Art. 3(d) calls for cooperation by the parties with all competent international, regional, and sub-regional organisations to establish and adopt regional standards, recommended practices and procedures to prevent pollution from all sources.

2. Scope as to the form of Pollution:

The Kuwait Convention has a wide scope and refers to all forms of marine pollution including pollution from land-based sources, from ships, from sea-bed activities and dumping.

According to Art. 4 Gulf States should "take all appropriate measures in conformity with this Kuwait Convention and the applicable rules of international law to prevent, abate and combat pollution in the Gulf sea caused by international or accidental discharges from ships, and shall ensure effective compliance in the sea area with applicable international rules relating to the control of this type of pollution, including load-on-top, segregated ballast and crude oil washing procedures from tankers".

As to pollution caused by dumping from ships and aircraft, Gulf States, according to Art. 5 should take all appropriate measures and effective compliance under international rules as provided for in the relevant international conventions, to prevent it. Thus the convention provides for relevant international rules to be applicable to prevent environmental damages in the Gulf.

The Convention provides in Art. 6 that Gulf states, should "take appropriate measures to prevent, abate and combat pollution caused by discharges from land reaching the sea area whether water-borne, or directly from the coast including outfalls and pipelines". The Convention requires Gulf states to "take all appropriate measures, to prevent pollution resulting from exploration and exploitation of the bed of the territorial sea and its sub-soil and the continental shelf, including the prevention of accidents and the combatting of pollution emergencies resulting in damage to the marine environment. (Art.

7) The signatory states also pledge to prevent pollution resulting from land reclamation and associated suction dredging and coastal dredging.

For the achievement of these obligations, Art. 16 of the Convention has established a Regional Organisation for the Protection of the Marine Environment, based in Kuwait. This organisation consists of a Council, comprised of the states parties, a Juridical Commission, for the settlement of disputes between the states parties, and a Secretariat. (3)

3. Responsibilities and Liability to the Valuation of Environmental Damages.

There is no specific provision relating to state responsibility and liability for damage to the environment in the convention. Under Art. 13:

"The Contracting states undertake to co-operate in the formulation and adoption at appropriate rules and procedures for the determination of:

- (a) Civil liability and compensation for damage resulting from pollution of the marine environment, bearing in mind applicable international rules and procedure relating to those matters; and
- (b) Liability and compensation for damage resulting from violation of obligations under the present Convention and its protocols".

Thus Art. 13 is a provision for the Gulf states to formulate and adopt appropriate rules and procedures in the future. Art. 13 does not set out rules to govern liability and the amount of compensation for the valuation of environmental damages, as a result of polluting the marine environment of other states. It does indicate that "contracting states", should in the formulation and adoption of such rules, take into account the "applicable international rules" as well as the "procedures relating to those matters". In the context of these provisions, it should be understood that Art. 13(a) envisages a conventional law of environmental pollution. Art. 13() provides that the Gulf States are responsible, and obliged to formulate and adopt appropriate rules and procedures, not only in respect of damage to the environment of other states, but also of damage resulting from violating an obligation to take appropriate measures under the Kuwait Convention and its protocols. In other words, the contracting states are obliged to take appropriate measures by issuing rules or procedures for the protection of environment as the Convention and its protocols instruct. By not doing so, the contracting state would become liable and should pay environmental damage for that violation. The present Convention is to a degree and "agreement to agree". It lays down

guidelines for establishing a legal framework for the protection of environment from all sources of pollution. The Protocol Dealing with Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the sea-bed and its subsoil, is an example which will be dealt with later.

The Protocol Concerning Regional Co-operation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency, provides as follows:

Art. 1(1) defines "Marine Emergency" as "any casualty, incident, occurrence or situation, however caused (armed conflicts fall within this definition) resulting in substantial pollution or imminent threat of substantial pollution to the marine environment by oil or other harmful substances....", such emergency "includes, inter alia, collisions, strandings and other incidents involving ships, including tankers, blow-outs arising from petroleum drilling and production activities, and the presence of oil or other harmful substances arising from the failure of industrial installations". The Gulf states under this Protocol should co-operate in taking the necessary and effective measures to protect their 'interests' from pollution. Art 1(3) defined the 'Related Interests', such as"

- “(a) Maritime, coastal, port or estuary activities, including fisheries activities, constituting and essential means of livelihood of the persons concerned;
- (b) historic and tourist attractions of the area concerned;
- (c) the health of the coastal population and the well-being of the area concerned, including conservation of living marine resources and of wildlife;
- (d) industrial activities which rely upon intake of water, including distillation plants, and industrial plants using circulating water”.

The Protocol established in Bahrain a Marine Emergency Mutual Aid Centre to co-ordinate action against oil spills in the region. The objectives of the Centre are as follows:

“First, to strengthen the capacities of the Gulf states and to facilitate co-operation among them in order to combat pollution by oil and other harmful substances in cases of marine emergencies;

Second, to assist the Gulf states, in the development of their own national capabilities to combat pollution by oil and other harmful substances and to co-ordinate and facilitate information exchange, technological co-operation and training.

Third, the possibility of initiating operations to combat pollution by oil and other harmful substances at the regional level, subject to the approval by the Council after evaluating the results achieved in the fulfillment of the previous objectives and in the light of financial resources which could be made available for this purpose”. (4)

Two major incidents occurred in the Gulf sea before the Iraqi polluted act, resulted in polluting the marine environment. One was in August 1980 when a large oil leak occurred at Saudi Arabia's loading terminal at Juayma. This resulted in a slick of more than 1,000 barrels which swamped a stretch of Bahrain's west coast and affected several fishing communities. (5)

The second was in April 1983 when three damaged oil wells, one struck accidentally by a ship and the others hit by Iraqi missiles, in Iran's Nowyuz offshore field resulted in spilling about 1,200 barrels of crude oil a day. (6) Some estimated that the oil was leaking that the rate of up to 7,000 barrels a day from the damaged Iranian wells north-west of Iran's main terminal at Kharg Island. (7)

The representatives of the Gulf states met at ministerial level in Kuwait, including Iraq and Iran, under the auspices of the Regional Organisation for the Protection of the Marine Environment. Attempts were made to persuade Iran and Iraq to suspend hostilities and allow a time of American experts to repair the damaged wells. Eventually the wells were controlled and repaired. Neither Iran nor Iraq would accept any liability for the oil pollution. (8)

The effects of that huge oil slick, as reported by the World Wild life Fund, were that sealife was being exterminated by high concentrations of toxic hydrogen sulphide from the under water wells mixed with the seawater. This was then poisonous also to coral reefs, mangrove swamps and shallows where shrimp and fish breed. According to one estimate, it could take 30 years to restore the marine environment. (9)

The Legal Framework for the Prevention of Marine Pollution from Offshore Operations in the Arabian Gulf

As a regional issue regarding this matter, the Gulf States following the Action Plan accompanying the Kuwait Convention, which called for the eventual elaboration of a protocol on pollution from sea activities, met in Kuwait in 18-19 February 1986 under the Regional Organization for the Protection of the Marine Environment, to discuss the Protocol, which dealt with pollution resulting from exploration and exploitation of the Continental Shelf and the sea-bed and its subsoil. This Protocol was signed by the Gulf States and form the legal framework for the

prevention of marine pollution from offshore operations in the Arabian gulf Sea.

The sources of pollution from offshore operators are varied, one is a 'well blowout', other possible sources of oil leaks are pipelines, collisions between ships and installations and leaks from equipment on platforms and facilities at oil fields for loading production into tankers.

Section One:

The Protocol Deals with Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Sea-Bed and its Subsoil.

Art. 1(c) defines the meaning of 'Offshore installation' as

"any structure plant or vessel, whether floating or fixed to or under the seabed, placed in a location in the sea area for the purpose and offshore operations, including any tanker for the time being moved and used for the temporary storage of oil, and including any plant for treating, storing or regaining control of the flow of crude oil".

This definition reflects the rapid advances in offshore technology over the last decade and a half in response to the need for better systems of legal classification to define such offshore installations. The protocol applies to all sorts of pollution resulting from offshore operations.

Offshore operations are defined in Art. 1(g) as:

"any operations conducted in the sea area for the purposes of exploring for oil or natural gas (mineral resources of the seabed) or for the purpose of exploiting those resources".

The article illustrates the operations as

"including any transport of the product to shore by pipeline, and any treatment before transport to shore. It includes also any work of construction, repair, maintenance, inspection or like operation incidental to the main purpose of exploration or exploitation".

The protocol provides that contracting states should "take appropriate measures" in the "Sea Area", but "within the limits of their jurisdiction, without prejudice to the more specific obligations imposed under this Protocol". (1) The "appropriate measures" cover, 'Offshore Operators', either owned by the contracting state or private operators granted licence or permission to work in 'Sea Area', who "shall plan, conduct and terminate their operations so as to prevent, abate and

control marine pollution". The Offshore Operators should use "the best available technology, and likewise to minimize the risk of marine pollution". (11) Furthermore, they should ensure that implementing this Protocol "shall not transform one type of pollution into another or transfer pollution from one area to another with any greater detriment to the environment".

Under the Protocol, each contracting state should not permit any offshore operations within its jurisdiction, except under, and in accordance with, the terms and conditions of a licence authorization or permit. The relevant authority of the state should only grant a licence or permit if the person has;

- (1) satisfied the competent state authority that he is of sufficient financial standing; and
- (2) has available to him all the necessary expertise.

In the case of granting a licence by the state, the licence may be granted "subject to such conditions for the protection of the marine environment and coastal areas as the state authority sees fit to impose (may reasonably impose)". (12) Furthermore, the operator must comply with all laws and regulations issued under the authority of the state. The state authority should have the power to revoke the licence for any breach of those laws or regulations by the operator. (13) The licence for offshore operations must govern the method of transport to shore of the oil or gas produced. (14) But in the case where a separate licence is used for transporting the oil or gas to shore, then the operator should meet the requirements the state authority imposes, as above mentioned. (15)

Art. 4(2) provides that

"Before authorizing any offshore operation which could cause significant risks of substantial pollution in the sea Area or any adjacent coastal area, a Contracting State shall call for the submission of an environmental impact statement...."

No authorization shall be granted until the competent authority of the Contracting State is satisfied that the operation will entail no unacceptable environmental damage, or unacceptable risk of such damage, to the Sea Area and adjacent coastal areas. The contracting state should take into account the guidelines issued by the 'Regional Organization' under the Kuwait Convention, in deciding and determining the scope of the "environmental impact statement".

Other contracting states must be informed and given an opportunity to see a copy of the 'Statement', by the competent authority, and be given time to submit

representations, before any final decision to grant approval for the project is made. (16) In addition, all other contracting states also should be informed when the competent authority intends to depart from the guidelines issued by the 'Regional Organization', including occasions when that departure lies in not calling for an environmental impact statement". (17) However, when there is no call for assessment of the environmental impact of a proposed offshore operation, a survey of the marine environment and the aquatic life therein must be carried out by, or under, the direct supervision of a body independent of the operator, before that start of the proposed operation. (18)

The Protocol has in Art. 5(a) incorporated the customary international law rule that offshore operations should not cause unjustifiable interference with navigation, fishing, or other activities carried on as of right under international law, and that in citing an installation, moreover, "due regard shall be had to existing pipelines and cables".

Art. 5(b) provides that contracting states should "ensure that operators of offshore installations, survey the seabed in the vicinity of their installations, and remove any debris resulting from their operations which might interfered with lawful fishing:

- i) in the sea of a pipeline, or other sub-sea apparatus immediately following completion of the work of installation;
- ii) in the case of a drilling rig or production platform, immediately following its removal;
- iii) in any case when the competent state authority might reasonably require survey and clean-up"

The Protocol lays down certain requirements, to be used to evaluate the seaworthiness and structural integrity of an installation, which has to be built to withstand the environmental conditions expected in the area or areas in which it will be working. (19) (Art.VI) Some installations, for example, are 'permanently' affixed to the seabed, others merely rest on it, others are only attached by the drilling column. Other ancillary installations merely float at anchor. (20)

This task is left to the contracting state to take all practicable steps to enforce measures to ensure the fulfillment of the requirements by the Operator, before an installation used in Offshore operations in the Arabian Gulf Sea.

When the Operator has fulfilled the necessary requirements provided in Art. 6 of the Protocol, and this

is certified by an approval certifying authority as meeting the requirements of subparagraph (a) in Art. 6, and the contracting state is satisfied that the requirements of subparagraphs (b) and (c) in Art. 6 have also been met, the installation will be permitted to be placed in a location in Arabian Gulf sea within the contracting state's jurisdiction. (21)

The strict technical requirements, which must be met by all equipment and materials used in building the installation, reflects the need for stringent precautions, for the protection of the marine environment in the Arabian Gulf. Furthermore any contracting state may lay down stricter criteria, more detailed requirements, or further requirements in addition to those in paragraph 1, (Art. 6(2)).

Section Two:

The Operators Obligations under the Protocol

- (1) Operators shall at all times have on their offshore installations, and maintain in good working order, equipment and devices to prevent accidental pollution and to facilitate prompt response to a pollution emergency, in accordance with good oilfield practice.
- (2) Any such plant or equipment examined and approved by or on behalf of the Competent State Authority, which was not included as part of an installation for the purposes of Art. 6(d) should be periodically inspected in accordance with good oilfield practice.
- (3) Blow-out preventers and other safety equipment shall be tested periodically by the operator, or on his behalf, and exercises in their operation carried out periodically, in accordance with good oilfield practice.
- (4) The Operators should make sure all surface installations shall carry lights and other warning instruments, maintained in good working order, and operated in accordance with international maritime practice. The operators should inform the competent authority about the position of each installation, including any sub-surface installation, so they can be published by the Authority on charts and disseminated in accordance with good maritime practice.
- (5) The Operator must not appoint any person to the position of offshore installation manager, or in charge of drilling operations, or as a driller, controlling and supervising work on the drill floor, unless he possesses a qualification approved by the

competent state authority, and has had relevant experience. The Operator should not employ a person with a duty to operate a blow-out preventer, or as a member of a drilling team, unless he has undergone training approved by threat Authority. All other persons engaged in offshore operations shall have had, or been given training in accordance with good oilfield practice. Any person employed on an offshore installation for the first time shall be given an induction course, and a manual which includes instruction or emergency procedures. (22)

There are further precautions which the contracting states should take for the protection of marine environment from pollution. Art. 8 provides that before work is started on any stage of offshore operations in any Contracting State's offshore jurisdiction, the Operator is obliged before the start up to:

- "a) prepare a contingency plan to deal with any event which may occur as a result of the operations, and which may cause significant pollution to the marine environment";
- b) have "the plan approved by the competent state authority";
- c) satisfy the state authority that he "has available to him sufficient expertise and resources to put the plan fully into operation". (23)

The contingency plan must be co-ordinated with any existing national or local contingency plans, and any plans prepared by the Marine Emergency Mutual Aid Centre. (24) In the case of significant pollution resulting from offshore operations, the operator must send immediately a full report regarding the event which occurs as a result of his operations, to the state authority designated to receive such reports. (25)

The protocol empowers the contracting state in such an event in offshore operations, "to direct the operator to take any action it may specify, or to refrain from taking any specified action, in the course of preventing, abating or combating the pollution, or in preparation for further action for that purpose". But no such direction by the state, however, shall apply to actions involving the immediate management of the well. (26)

The Protocol has incorporated the concept of the legal status of a "special area" under the International Convention for the Prevention of Pollution from ships 1973 and its Protocol of 1978, but in respect of the discharge in this case from offshore installations rather than from ships. The Protocol provides that:

- (a) No machinery space drainage from an offshore

installation shall be discharged into the sea unless the oil content thereof does not exceed 15 mg. per litre whilst undiluted. (27)

- (b) No other discharge from an offshore installation into the sea within the Sea Area shall have an oil content, whilst undiluted, greater than that stipulated for the time being by the Organization. The oil content so stipulated shall not be greater than 40 mg. per litre as an average in any calendar month, and shall not at any time exceed 100 mg. per litre.
- (c) Discharge points for oily wastes shall be well below the surface of the sea.
- (d) All offshore installations from which oil or oily mixtures are discharged into the sea in the course of normal operation shall as far as practicable be equipped in accordance with Regulations 16 and 17 of the International Convention for the Prevention of Pollution from Ships 1973, its Protocol of 1978, and any subsequent amendments thereof.
- (e) All oil and condensates from well testing shall be flared, taking all necessary precautions to prevent losses of oil to the sea". (28) Further measures the Contracting States should take are set out in Arts 9(4), Art 10 and Art 11 of the Protocol.

The Protocol does not provide special rules concerning liability for damage caused by sea-bed pollution, but the general provisions contained in the Kuwait Convention and its protocol address general exhortations to contracting states to develop special liability regimes for this, as well as for other forms of marine pollution. One can compare this with North-West Europe where, under the Convention on Civil Liability for Oil Pollution, signed in 1977 (29), the operator of a continental shelf installation causing pollution damage is automatically liable for that damage and any remedial measures taken, unless he can prove that the damage resulted from war or an act of God or from an abandoned well more than five years after it was abandoned, or from an international or negligent act done by the person suffering pollution damage (Art. 3). (3) As *quid pro quo* for this strict liability, the operator's liability is limited to forty million SDR (Art. 6) although it is open to a state party, if it so wishes to provide that the liability of the operators of installations on its continental shelf shall be higher or even unlimited in respect of pollution damage caused in that state (Art. 19). In any case, an operator's liability is unlimited if the pollution damage "occurred as a result of an act or omission by the operator himself, done deliberately with actual knowledge that pollution damage would result" (Art. 6(4)). (31) But in the case of oil companies in the Arabian Gulf have voluntarily accepted strict but limited (\$20 million per incident)

liability through GAOCHMAO (Gulf Area Oil Companies Mutual Aid Organization 1984). This Agreement brings advantages for both operators and the victims of pollution damage. (32)

On a global basis, there are no international agreements to facilitate the bringing of claims for compensation by a national of one State who has suffered damage from pollution emanating from another state (33) except the Nordic Convention on the Protection of the Environment, which is geographically limited. Article 3 of the Nordic Convention provides that a national of one Nordic state may bring an action before the court of another Nordic state to prevent a particular act of pollution from continuing or to claim compensation for damage suffered. If an individual is unwilling or unable to proceed, his role in instituting proceedings may be taken over by the Supervisory Authority which each state party has established for this purpose. (34) The lack of a similar provision in the Kuwait Convention is a weakness for a national of the Gulf states, in the case of his state refusing to bring an action on his behalf before the court of another Gulf State, bearing in mind the variety of pollution sources that the individual national could suffer from. (35).

The Gulf States' Municipal Laws and Regulations On the

Protection of Environment from Pollution

Using the municipal laws of the Gulf States to implement their pollution prevention policies by prescribing standards and practices, and providing for criminal and civil liability in the event of their coasts being polluted or their living resources being damaged by any kind of pollution, from ships or others, would safeguard the environment in the Arabian Gulf.

Some of the Gulf states have issued laws and regulations to control pollution for the protection of their environment in the Arabian Gulf.

Section One:

Kuwait

Kuwait was the first country in the Arabian Gulf to issue national legislation. Law No. 12 of 1964 concerned the prevention of pollution of navigable waters by oil. The purpose of the Kuwait law is to prohibit the discharge of oil or oily mixture in internal waters and the territorial sea adjacent to Kuwait. (36) The Kuwait law implements the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, to which Kuwait is a party. (37) The Kuwait law also applies to Kuwait and non-Kuwait ships which cause pollution, while they are

the internal and territorial sea of Kuwait (Art. 1(a).

The anti-pollution law is applicable in the event of any discharge of oil or oily mixture from devices or equipment, including pipelines used for transferring the oil from the storage tanks in the port to oil tankers or even a pipeline which carried oil from the well to the installation onshore within the jurisdiction of Kuwait. (38)

The Kuwait law No. 12 has employed several methods as the basis for enforcement as follows: (39)

- (1) The Keeping of an 'Oil Record Book'
- (2) Inspection of the 'Oil Record Book'
- (3) Maintenance of oily water separators.
- (4) Facilities for the reception of oil residues.
- (5) The imposition of penalties. (40)

The Kuwait law No. 19 of 1973; Art. 1&3, (concerning the conservation of petroleum resources) mentions oil pollution from the exploration and exploitation of the Continental Shelf, and offshore concession agreements granted by the Kuwait Government also make general reference to the problem of pollution. The operating obligations in the concession agreement, obliged the operator to conduct the drilling, "diligently" and contained provisions relating to work performance, safety of personnel and equipment and the obligation to prevent damage to other interests, including prevention of oil pollution of the sea (41) The latter type of provisions were similarly incorporated in most of the offshore oil concessions in the Arabian Gulf. (42).

The Kuwait law No. 12 provides certain exceptions in which pollution is not considered an offence if the oil or oily mixture is discharged for the purpose of:

- "1) Avoiding danger to the ship
- 2) Ensuring the safety of lives at sea or preventing serious damage to cargo.
- 3) And if the discharge is a result of an accident occurring to the ship or to the equipment, or if an escape has occurred and continued despite all possible precautions to prevent, stop or minimize it." (43)

The Kuwait law is in conformity with international law and state practice for controlling and preventing pollution from damaging the marine environment in the internal and territorial water of Kuwait.

Section Two:

Iraq

The Iraqi government promulgated in the 1970 Law No. 229 on Conservation of Petroleum Resources and National Hydrocarbon Materials, in accordance with the 1968 resolution adopted by O.P.E.C. in Baghdad. The Iraqi Law provides in Art. 2 for the scope of its application as applying to all oil operations in the region of the Iraqi Republic including its territorial sea and continental shelf, and covers its interest in the Neutral Zone. (44) The Iraqi law requires that

"... the operator shall also take every reasonable precaution to prevent pollution of air, surface and underground waters." (45)

Art 44, obliges the operator to

"... prevent spillage of oil on the surface and to take the necessary steps to avoid ground or water contamination by oil."

The Iraqi law gives the Ministry of Petroleum certain powers over oil operators in certain circumstances, e.g. the Ministry shall give its consent before a well can be abandoned, and the operator shall transmit daily reports to the Ministry on the progress and status of the well, including its completion or plugging and in the case of blow-out, a report should be submitted to the Ministry containing:

"... the cause of the blow-out and the steps that have been taken to control it, and an estimate of the quantity of oil and gas lost, destroyed or permitted to escape." (46)

The intention of the Iraqi legislature is primarily to regulate the onshore drilling operations rather than dealing expressly with offshore operations, the freedom of navigation and fishing (138), since Iraq has in fact no offshore petroleum operation. The law gives priority to the conservation of the state's mineral resources. (48)

Section Three

Iran

The Iranian Petroleum Act of 6 August 1974, which is applicable to all petroleum operations onshore, in the territorial sea and on the continental shelf, provides that:

"The National Iranian Oil company shall, during operations related to each agreement, be mindful and pay full attention to the conservation of the Natural Resources (especially Natural Gas) and also the prevention of pollution of the environment (air, water and land). The Party to the Agreement shall

also be bound to observe in its operations all regulations announced and/or communicated to it by the Government or Natural Iranian Oil Company, for this said purpose." (49)

The 1974 Act made the 'NIOC', responsible for the conservation of the natural resources and also for the protection of the air, water, and land environment. On 14 February, 1976 Iran passed the 'Law concerning Protection of the Sea and Frontier Rivers against Oil Pollution'. The Iranian Law extended Iran's jurisdiction to the outer limit of the continental shelf in the Arabian (Persian) Gulf and to 50 miles from the basepoints of the territorial sea in the Gulf of Oman. (50) It was stipulated that for those areas in which the Continental Shelf boundaries are not delineated, the equidistance line will be temporarily regarded as the Offshore boundary for pollution control purposes. (51) The Iranian Law implemented certain provisions from the 1954 Convention for the Prevention of Pollution of the Sea by Oil. This unilateral extension of jurisdiction gives Iran the right to stop and inspect any ship within 50 miles of the Iranian coast, for the purpose of preventing pollution. The Iranian Oil Pollution law, prohibits any discharge of oil or oil mixtures in the internal waters, territorial sea, and the contiguous zone, from Iranian and foreign ships and also from any fixed or floating offshore installation and any pipeline and oil 'reservoir' whether off shore or onshore. Any pollution resulting either from intentional discharge or negligence is a criminal offence. A deliberate discharge of oil or oily mixture is punishable by imprisonment and payment of fine. (52)

Section Four

Oman

The Omani government passed the 'Marine Pollution Control Law of 1974; which entered into force on 1 January, 1975. Under the Omani law the term 'pollutant' is defined to include oil or oily mixture; any substance of a dangerous or noxious nature such as sewage, refuse, waste or garbage which, if added to any waters,, would degrade those waters to an extent that is detrimental to their use by man or by any animal, fish or plant that is useful to man; any water which contains a substance such as the aforementioned; and any substance which may be designated by the minister concerned to be a pollutant. (5) The Omani law extended also to Omani jurisdiction up to 50 miles from the coast for the purpose of pollution supervision. When the coast of another state is opposite or adjacent to the coast of Oman, the limits of the 'pollution-free zone' will not extend beyond such limits as may have been agreed to with such other state or, if there is no such agreement, the median line shall be the boundary line. (54)

The Omani law prohibits any person from discharging

a 'pollutant' into the 'pollution-free zone' from a vessel, land based source, or an oil transmission apparatus. (55) Any vessel registered in the Sultanate of Oman is prohibited from discharging a 'pollutant' into any waters beyond the 'pollution-free zone' of Oman. Art. 5 (4 and 8) imposes restrictions on all non-Omani vessels which navigate within the 12 mile territorial sea not to transfer any oil or other pollutants to or from vessels, in the Omani territorial waters between the hours of 6.000 p.m. and 6.00 a.m., and empowers Omani pollution control officers to detain or seize a vessel within the 50 miles limits. The Omani law contains other provisions to deal with such matters as relate to violations of the law, record-keeping, reporting and insurance requirements; enforcement methods, and civil liability for costs and damages. (56) The Omani law does not give the government powers (as in the case of Canadian Arctic Waters Pollution Act of 1970) to prescribe standards for the construction of vessels exercising a right of passage through the pollution zone, to control standards of navigation and operation, or to prohibit, if deemed necessary, the passage of vessels in those waters, (57) Iran has not purported to take that power. (58)

Section Five:

Saudi Arabia

The Saudi government has ratified the 1954 Convention for the Prevention of Pollution of the Sea by Oil and its amendments, and implemented this in the Anti-pollution Port Regulations 1978. thus the Saudi Port Authorities, particularly at Jeddah, adopted a policy of strict enforcement of regulations with regard to dumping of garbage and flushing of oil tanks in the harbour areas and at anchorage in the immediate area of the open roadstead. The regulations are applicable to Saudi and non-Saudi ships and impose fines for breaches of these regulations. The government agencies such as the Meteorology and Environmental Protection agency, the Department of Environment Protection and Saudi Arabian Port Authorities, are responsible for enforcing the Anti-pollution law. (59)

Section Six:

Bahrain

The Bahraini government passed in 1966 general port rules with regard to the Port of Sitra. The Bahraini law contains general rules and regulations to prevent and control oil pollution in the internal waters and territorial seas of Bahrain. Sections 76, 77 and 78 of the Port Ordinance of 1966 set out three basic formulae:

- "(1) The discharge of water ballast which contains oil or other harmful contaminants is prohibited within the Port of Sitra. Section 77 provides

that certain measures should be taken to prevent oil leakage or spillage during the loading or discharging of petroleum or petroleum products within the port of Sitra.

- (2) The scope of prohibition provided by these Sections is limited to the Port of Sitra, but this port might be situated beyond the internal waters of Bahrain or the territorial sea and contiguous zone." (60)

Section 5 of the Bahraini law gives powers to the Port Manager, and read as follows:

"The application of these rules in such parts of the port of Bahrain as are situated beyond the internal waters shall be so made as not to infringe the right of innocent passage or any acceptable principles of international law relative to territorial waters and the contiguous zone of the high seas." (61)

Section Seven:

United Arab Emirates

There is specific municipal law No. 8 (dealt with in Part 4) issued in 1978 (on the Conservation of Petroleum Resources) in the U.A.E. regarding the control of pollution from petroleum operations within the U.A.E.'s jurisdiction. In addition a number of companies - A.D.C.O., A.D.M.A. - OPCO, A.D.O.CO. and A.H.O.C. are parties to C.A.O.C.M.A.O. Agreement, which provides a joint capability to clean up oil spills larger than could be dealt with by a single party. (62) It further provides for liability upon the party, who breach its obligation. (63) The U.A.E. is showing increasing concern for environmental protection. The federal agency responsible for marine pollution control is the Ministry of Agriculture and Fisheries.

Section Eight

Qatar

The State of Qatar passed Laws No. 4 of 1977 (Art. 4 - on the Conservation of Petroleum Resources) and No. 4 of 1983 on Exploitation and Conservation of Living Aquatic Resources in Qatar. Art. 1 defined fishing waters:

"Territorial waters surrounding the coasts of the mainland and islands of Qatar. The external limits, of these territorial waters are those existing under bilateral agreements, or those to be established in the future. If there are no such agreements the external limits shall be either its continental shelf or median line of equal distances from the baseline from which the territorial waters of Qatar and other

countries concerned shall be measured in conformity with international law."

The Qatari law provides in Art. 17 that

"Without a written approval by the competent authority it shall be unlawful to dump into fishing or inland waters or on the sea bottom any waste from factories, plants, laboratories or sewers, or chemical and petroleum materials, vessel oils or any other liquids that may cause harm to living aquatic resources." (64)

The subject of the Qatari Law No. 4 of 1983 is living aquatic resources, and it is 'unlawful' for any person or company to pollute the sea area, as defined above, in a way which would or may cause harm to living aquatic resources. The power of the competent authority in Qatar (the Fisheries Department) is needed to control pollution in the Territorial Waters surrounding the coasts of the mainland and islands of Qatar. Anyone who violates Art. 17 shall be punishable by a fine in the amount of one-thousand riyals. (65) The Qatari Government has been a member in IMO since 1977, and has ratified the Convention for the Prevention of Pollution of the Sea by oil 1954 and its amendments. The Qatari government has enacted a law called 'The Prevention of Pollution of the Sea by Oil'. Art. 1 of the draft Qatari law defines the meaning of the 'sea' as the sea areas in which the state has interests, including the territorial sea, the Continental Shelf and the Exclusive Economic Zone. The draft law will implement the 1954 Convention for the Prevention of Pollution of the Sea by Oil, and regard it as part of the law (Art. 2). The draft Qatari law prohibits ships registered in Qatar from discharging oil or oily mixture into the sea, as provided in the 1954 Convention, and also controls pollution. Non-Qatari ships are prohibited from discharging oil or oily mixtures while they are in the internal and territorial sea of Qatar. (Art. 1.2) Violation of this law by Qatari or non-Qatari ships is punishable by a money fine and jail sentence for the owner or characters. (66)

The draft Qatari law provides certain exceptions in which an act of pollution is not considered to be an offence if:

- 1) The discharge of oil or oily mixture was done to avoid danger to the ship or preventing serious damage to cargo, or
- 2) to ensure the safety of lives at sea; or
- 3) as a result of an accident occurring to the ship or to the equipment, or if an escape has occurred and continued despite all possible precautions to prevent, stop or minimize it.

These types of exceptions are also provided under Art. IV of the International Convention for the Prevention of Pollution of the Sea by Oil and in the Kuwait Law No. 12 of 1964 Art. 5, and in the Omani Marine Pollution Control Law of 1974 Art. 3 (1.2). Furthermore, the draft Qatari law will oblige the 'Master of the Ship to report immediately any deaths after the incident has occurred or is discovered to the Ports and Customs Authorities. Failure to do so by the 'Master' is punishable by a money fine. (67) Art. 5).

Under Art. 6, the Master or owner of a ship registered in Qatar is required to carry an 'Oil Record Book' in the form specified in Art. 9 of the '1954 Convention'. Art. 7 extends the application of the draft anti-pollution law to installations on land and offshore within the internal and territorial waters, also to equipment such as pipelines or any other devices used for transferring oil from the storage tanks in the port to oil tankers, or a pipeline which carried oil from the well to the installation on the shore. An exception made in this Article is when the discharge of oil or oily mixture resulted during the extraction of oil or its refining and there was no way to avoid this discharge into the sea, on the condition that all necessary measures were taken to prevent that discharge. According to Art. 7 some installations may be exempted from the application of this Article, partially or completely, by a Resolution from the Minister of Transport.

Art 12 provides for the principle of liability for the discharge of oil or oily mixture in the internal and territorial waters. Thus, those responsible for the oil pollution are obliged to compensate those injured for all the effects and consequences resulted from damaging the marine environment. Other Articles such as Art. 15, provides that Qatari law and Courts have full jurisdiction over the offenders, who cause pollution to internal waters and the territorial sea. (68)

The Qatari government promulgated Law No. 29 of 1966 regulating the port of Doha, which prohibits pollution of the port by oil and provides for the punishment of offenders in Art. 60.

In conclusion, the Gulf states seem to rely at present on certain municipal laws and the attempt made at regional level to combat pollution in the areas beyond their territorial seas where their respective municipal laws apply. An attempt through Gulf Cooperation Council to uniform national legislation will be adopted by all the Gulf States soon together with a strict enforcement of the uniform legislation, to deal with environmental damage within and beyond their territorial seas. The protocol dealing with pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its subsoil, is a useful step by the Gulf states.

Conclusion

Conventional Law and Municipal Legislation relating to the protection of environment are established in the Gulf, lack of evaluation of environmental damage between Gulf States is a matter of political police, though

in relation to oil companies activities are available, which might be used as a model for evaluation of environmental damages. To my knowledge, no environmental damages have been awarded by Gulf Court as a result of violation to environmental law by States.

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- (3) *Ibid.*
- (4) See, S.M. Amin
- (5) *Ibid.*
- (6) See Times - 11/7/1983. Gulf Oil Slick threatens survival of wildlife. Se also, crisis talks called on' Gulf Oil Slick - Times - 2/4/1983.
- (7) *Ibid.*
- (8) *Ibid.*
- (9) See, 'Oil Slick Threatens Gulf Fishing Industry', MEED 22 July 1983. p. 12.
- (10) Draft Protocol (1986). Art. II
- (11) Art. II (The Protocol, 1986).
- (12) Art. III.
- (13) The state power to revoke the licence shall be granted by the operator to the state as one of the licence conditions.
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- (15) Art. 3(1)
- (16) Art. 4(c)
- (17) *Ibid.*
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- (20) K. Terry Koonce: 'Advances in Offshore Technology', in Petroleum Engineer. Jan. 1977. p. 24.
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- (23) Art. (A)
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- (27) Art. 9
- (28) Art. 9
- (29) R.R. Churchill & A.V. Lowe, *The Law of the Sea* (1983), p. 242
- (30) *Ibid.*
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- (32) GAOCTAO Agreement 1984, Act.V
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- (46) *Ibid.*
- (47) *Ibid.*
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- (49) For full text of the Iranian Petroleum Act of 1974, see petroleum legislation, Basic Oil and Concession Contracts - Middle East, suppl. No. 44, p. 3
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- (58) *Ibid.*
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- (60) *Ibid.* p. 91
- (61) *Ibid.* p. 92
- (62) GAOCMAO Agreement 1984.
- (63) *Ibid.*
- (64) Art. 17 (under Conservation and Development - Part III)
- (65) *Ibid.*
- (66) Art. 26 (Offences and Penalties)
- (67) At. 5
- (68) Qatar Law No. 4 (1983) Art. 2

RIGHT OF A STATE OR INTERNATIONAL ORGANIZATION TO BRING A CLAIM

Prepared by Laurence Boisson de Chazournes

The establishment of the UN Compensation Commission (UNCC) by Security Council Resolution 687 broke new grounds in the international legal order. For the first time, a multilateral mechanism, under the aegis of a universal organization, has been created to provide redress for consequences of an illegal state action.⁴⁸³ The conditions under which claims may be submitted offer some new perspectives as the interests of a vast number of victims were taken into account, i.e. individuals, corporations and other non-statal legal entities, states and international organizations. In addition, claims may be brought for recovering compensation for a wide array of damages, direct environmental damage and depletion of natural resources (hereinafter, environmental damage) being included among those. For the first time claims for environmental damage have been recognized explicitly in an international claims context.⁴⁸⁴

Eligibility to bring claims for environmental damage before the Commission (also referred to as the "F" claims) is reserved for states and international organizations.⁴⁸⁵ Certain criteria should be fulfilled for claims to be deemed admissible. They are spelled out in the Provincial Rules for Claims Procedure.

Article 5 of these Rules reads as follows:

"1) Governments and international organizations are entitled to submit claims to the Commission.

- a) A Government may submit claims on behalf of its nationals and, at its discretion, of other persons resident in its territory. In the case of Governments existing in the territory of a formal state, one such Government may submit claims on behalf of nationals, corporations or other entities of another such Government, if

both Government agree.

- b) A Government may submit claims on behalf of corporations or other entities that, on the date on which the claim arose, were incorporated or organized under the law of that State. If the Governments concerned agree, one Government may submit claims in respect of joint ventures on behalf of the nationals, corporations or other entities of other Governments.
- c) Claims may be submitted on behalf of an individual, corporation or other entity by only one Government.
- d) International organizations may submit claims only on their own behalf.

2) An appropriate person, authority, or body appointed by the Governing Council may submit claims on behalf of persons who are not in a position to have their claims submitted by a Government.

3) A corporation or other private legal entity is required to request the State of its incorporation or organization to submit its claim to the Commission. In the case of a corporation or other private legal entity whose State of incorporation or organization fails to submit, within the time-limit established by the Governing Council, such claims falling the applicable criteria, the Corporation or other private legal entity may itself make a claim to the Commission within three months thereafter. It must provide at the same time an explanation as to why its claim is not being submitted by a Government."⁴⁸⁶

This note intends to clarify some issues with respect to the right of a state or an international organization to

⁴⁸³ C. Alzamora, *The UN Compensation Commission: An overview*, *The United Compensation Commission*, R.B. Lillich (ed.), Transnational Publishers, Irvington, 1995; C. Romano, *Woe to the Vanquished? A Comparison of the Reparations Process after World War I (1914-18) and the Gulf War (1990-91)*, *Austrian Journal of International Law*, Fall 1997, No. 3 (forthcoming).

⁴⁸⁴ N. Wuhler, *Causation and Directness of Loss as Elements of Compensability before the United Nations Compensation Commission*, *The United Nations Compensation Commission*, *op. cit.*, p. 230.

⁴⁸⁵ Decision 7 of the Governing Council of the UNCC, S/AC.26/1991/7/Rev. 1., para. 30.

⁴⁸⁶ Provisional Rules for Claims Procedure, S/AC.26/1992/10.

bring a claim and to assess the conditions under which such claims may be admissible. Noteworthy is the fact that "when necessary, the Commissioners shall apply the relevant rules of international law".⁴⁸⁷

1. Right of a State to bring a claim to the Compensation Commission

States may submit claims for damages when their own interests have been adversely affected. Decision 7 of the UNCC provides that "each Government will submit claims of its own and those of its political subdivisions, or any agency, ministry, instrumentality, or entity controlled by it" (para. 30).

In defining environmental damages which may be compensated, Decision 7 of the Governing Council mentions losses and expenses resulting from activities which are in great part state-oriented and for which recovery would not be feasible through claims brought by states on behalf of individuals and legal entities.⁴⁸⁸ This being said, the latter possibility, i.e. a state bringing a claim on behalf of individuals and juridical persons, should not be excluded, although it may be difficult for such claims to meet all conditions and criteria set out in Decision 7. States would do so through a procedure which presents significant departure for the classic diplomatic protection procedure.⁴⁸⁹

In this context, mention should be made of non-governmental organizations (NGOs). They should be considered as entities in the sense of Article 5. In order to be granted compensation for expenses incurred by them, claims should be brought by the state under which law they are organized or incorporated.

A state should be able to claim for compensation for damage in areas under its national jurisdiction as well as in areas beyond its national jurisdiction. The first instance may encompass compensation as a result of damage to areas beyond national jurisdiction. Examples include cases of air pollution and marine pollution: A state may also be willing to claim compensation for damage in areas beyond national jurisdiction, without causing a direct damage to the environment of a state. Such possibility should be considered in the light of contemporary trends of international law with respect to *erga omnes* obligations and international crimes.⁴⁹⁰

2. Right of an international organization to bring a claim to the Compensation Commission

Article 1 (14) of the Provisional Rules for Claims Procedure indicates that an international organization "means an international organization of States". Claims brought by intergovernmental organizations are therefore admissible, but not the ones brought by NGOs. With respect to the organizations composed of both states and NGOs (such as the International Union for the Conservation of Nature (IUCN)), it does not seem that the Rules exclude the possibility for such organizations to bring a claim.

Another issue is the conditions under which an international organization may bring a claim. The Provisional Rules state that international organizations may submit claims "only on their own behalf". The meaning of such a provision should be assessed in its context, with reference to other related provisions of the same article. This entails that whereas states may, in certain circumstances, submit claims on behalf of their nationals, of other persons resident in their territory or of corporations or other entities, an international organization is not entitled to bring claims on behalf of individuals or any legal entity. It may only submit claims for damages to its own interests.

An example of a particular case is the situation in which international organizations, such as UNHCR, UNDP and UNRWA, may file claims on behalf of Palestinians and other stateless persons who are not in a position to have their claims submitted by a state. Based on Article 5, para. 2 of the Provisional Rules which states that "an appropriate person, authority, or body appointed by the Governing Council may submit claims on behalf of persons who are not in a position to have their claims submitted by a Government", the UNCC has entered into special arrangements with these organizations. In so doing, "the international community, represented by the UNCC, was taking overall responsibility for protecting the interests of the persons concerned".⁴⁹¹ This commitment on behalf of the international community may inspire the UNCC when dealing with the admissibility of claims brought by international organizations for environmental damages which impair the interests of the international community at large.

⁴⁸⁷ S/AC.26/1992/10, Article 31.

⁴⁸⁸ S/AC.26/1991/7/Rev.1, para. 35.

⁴⁸⁹ J.R. Crook, *The UNCC - A new structure to enforce state responsibility*, *American Journal of International Law*, 1993, p. 150; C. Romano, *op. cit.*

⁴⁹⁰ See *Barcelona Traction case*, ICJ Report 1970, par. 33-34; Article 19 (d) of the International Law Commission's draft articles on state responsibility, ILC Yearbook, Volume II, Part 2, p. 29. See also L. Boisson de Chazourmes, *La mise en oeuvre du droit international dans le domaine de la protection de l'environnement: enjeux et défis*, *Revue générale de droit international public*, 1995, No. 1, p. 53.

⁴⁹¹ C. Alzamora, *op. cit.*, p. 7.

Claims that an international organization may submit may be manyfold and should be assessed in light of the powers of each claimant organization.⁴⁹² This should be the case for international organizations willing for example to submit claims for direct losses and expenses incurred in clean-up and monitoring activities in the Gulf region during or following the conflict. In this context, a cautious note is that recoveries claimed for expenses covered by the regular budget of an international organization should not be considered eligible.

An international organization may also submit claims for losses and expenses incurred while dealing with environmental damages in areas beyond national jurisdiction. Protection of fauna (as for example, migratory species) and flora and the marine environment may have alluded to some recovery activities. UNEP and other organizations may be willing to bring such claims to the Commission. In declaring such claims admissible, the Compensation Commission may want to consider the claiming organizations as "trustees" which are acting on behalf of the international community. Another approach would be to allocate compensation to a special international fund dedicated to "future measures (...) to clean and restore the environment".⁴⁹³ It is to be noted that the recognition of a legal standing for an international organization in order to obtain compensation for damages in areas beyond national jurisdiction is not a novelty in the international legal order. As a matter of fact, the law of the Sea Convention grants the Council of the International Sea-Bed Authority remedial powers before the Sea-Bed Disputes Chamber of the law of the Sea Tribunal.⁴⁹⁴

Last, the right of an international organization to bring a claim before the UNCC should be distinguished from the question of the legal capacity of an international organization to submit a claim. In reference to this latter point, the Commission seems to have adopted a pragmatic approach in considering that each international organization which can claim for compensation due to "direct environmental damage and the depletion of natural resources" (Decision 7) may submit a claim. The

possibility for an organ or a program (such as UNEP) of an international organization to bring a claim before the UNCC should be decided internally within each organization, on the basis of relevant internal rules and practice. Another approach would be for the Commission to rely on the principles as enunciated by the International Court of Justice in its Advisory opinion on the *Reparations for Injuries Suffered in the Service of the United Nations*⁴⁹⁵ for assessing the legal capacity of a claimant organization. This would lead the Commission to decide on a case-by-case basis which may prejudice the effectiveness of the UNCC procedure.

Concluding remarks

The procedure put in place through the establishment of the UNCC is innovative in many respects. References and analogies may be drawn from existing international legal remedies, in particular with judicial and quasi-judicial means of dispute settlement, for interpreting and applying it. Room should, however, be left for the many innovative aspects of the procedure to be explored. This is particularly true in the environmental area where the mechanisms and procedures for recovering compensation are in a nascent status, not to say a rudimentary one.

The interests of a large spectrum of victims of environmental damages have been taken into account through the designing of the procedure set out in Decision 7 of the Governing Council and in the Provisional Rules for Claims Procedure. A next step will be for the Compensation Commission to decide on the admissibility of the claims brought before it. It is hoped that the Commission will take into account emerging trends in international practice. For example, the recent establishment of the Law of the Sea Tribunal exemplifies the fact that the international legal order evolves towards a less state-centric approach, taking into account the role played in the international scene by various actors. Literature also suggests new venues for granting access to international remedies for environmental damages.⁴⁹⁶

⁴⁹² On the notion of powers of an international organization, see *Legality of the Use by a State of Nuclear Weapons in Armed Conflict*, Advisory opinion, 8 July 1996, ICJ Reports 1996, par. 24-25.

⁴⁹³ S/AC.26/1991/7/Rev.1, para. 35(b).

⁴⁹⁴ See Article 162 of the UN Convention on the Law of the Sea.

⁴⁹⁵ ICJ Reports, 1949, p. 174.

⁴⁹⁶ See E. Lauterpacht, *Aspects of the Administration of international Justice*, Cambridge, Grotius Publications Limited, 1991, p. 62. ("If international measures in this field (the area of international environmental protection) are to be effectively applied, the present responsibility of States to ensure that their territories are not used in a manner that occasions harm to other States - a responsibility which is still essentially bilateral as a matter between the States that causes or permits the injury and the State that is injured - may well have to be generalized or multilateralized, in the sense that what has hitherto been seen as a breach of a duty owed only to one State may become a breach of duty owed to all generally. It may therefore be desirable in this connection to accord to a suitable international organization the duty and the capacity to commence legal proceedings on behalf of the international community generally against the wrongdoing State.")

ENVIRONMENTAL DAMAGE

Prepared by Julio Barboza

1. This paper should be read together with my XI Report.

2. *The concept of environment*

A definition of environment should be the starting point, (See XI Report, p. 4. para. 5). Existing conventions include in such definition elements which do not properly belong to the environment. (Id. pp. 5/7). That should be changed.

In such conventions, definitions of environment are not exclusively guided by a scientific criterium. (Id. p. 4, para 6). For the sake of pragmatism, that may be maintained.

I propose that the definition of environment be circumscribed to the notion of "natural" environment, in order to avoid confusions and restrict "environmental damage" to its correct proportions. Protection to non-environmental values, however valid it may be, should not be smuggled in under the guise of environment protection.

3. *Purification of the concept*

Some such elements as do not belong to the notion or "environment", (human health), or to the notion of "natural environment" (cultural elements) should, therefore, be discarded.

3.1 *Human health*

"Environment" is "human environment", i.e. the environment in which mankind lives.

Human health belongs to human beings (mankind), it is in the center and therefore does not form part of the environment. that does not mean that human health is less valuable than the environment; it simply should be covered under other item within the concept of damage.

3.2 *Cultural and other "non-natural" elements*

Damage caused to "cultural property" such as certain monuments, should also be left to be covered by the common notion of damage, be it material or moral.

4. *Environment components and values*

A further distinction should be necessary, namely

between environment proper, that is, the natural resources, and "environmental values". These are not part of the environment, but rather a) human uses of that environment. In the case of a lake, for instance, fishing, skiing, wind-surfing, and commercial uses. They all may be called "use values", b) Emotions that the environment provokes in human beings, such as aesthetic emotions (the landscape), satisfaction for the continued existence of familiar features of the environment, etc., which may be called "non-use values".

5. *Environmental damage*

Environmental values do not form part of the environment proper, but are affected by such damage and their deterioration, as well as the frustration caused by that deterioration or by their loss should be considered environmental damage.

5.1 Then, environmental damage will be damage done to the components of the environment, as well as the loss or diminution of environmental values caused by the deterioration or destruction of such components.

5.2 Most aspects of the damage caused to persons or property as a consequence of the deterioration of the environment, are already covered in the existing notion of damage to persons or property. ^[497]

Example: a small lake is polluted by chemicals, a) The pollution diminishes the fish population of the lake, and changes the quality of the water. It cannot any longer be used for fishing, bathing (because contaminated waters are bad for human health), or wind-surfing (because falls or any other contact with the water are dangerous to people). The vegetation on the coast suffers, the landscape is altered, b) Some people, inadvertently drink water from it, get badly sick and must be hospitalized. The owner of the hotel by the lake suffers heavy economic loss from lack of clients.

The items in a) are cases of damage to the components of the environment. Such deterioration of environment components (water, fish) affect values of the environment (use-values, like fishing or windsurfing, non-use values like aesthetic or other emotional appreciation of the landscape). This is usually called "environmental damage", or damage to the environment *per se*, whereas the cases of b) are forms considered as already covered

by the existing notions of damage to persons or property, (including loss of profit).

6. The injured party

Environment belongs to everybody in general and to no one in particular: it is vital for human beings, and for that reason, communities like the State formulate environment protection policies and enforce them.

Communities also seem to be the natural injured parties in case of environmental damage. As the natural representative of the national community, the State appears as the entity most suited to be considered, on the international plane, as the injured party in such cases and should be entitled to take legal action. (Vid. Report, p. 9, para 22) ^[498]

7. The "intrinsic" value of the environment

(Vid. Report, pp. 8/9, paras 19/20). "Damage" in law is always damage to somebody (a physical or a juridical person, and in the last analysis human beings in both cases).

The utilization of the word "intrinsic" cannot therefore change that essential category of legal thought. Therefore, the so called "intrinsic" damage, or damage to the environment *per se* is, after all, damage to human beings who are affected by the deterioration or destruction of the components of the environment, mainly because some of the use or non-use values of such environment are lost or diminished for them.

7.1 If the previous analysis is correct, damage to the environment *per se* is also damage done to persons through the deterioration of the environment, and there is really no essential difference between environmental damage, i.e. damage produced to persons or property through damage to the environment and the "classical" concept of damage.

Strictly speaking, there would be no need to include this type of damage as a new category; damage to the environment components which affect the life, health or property of people is a form of "material damage" and that which affects the feelings of people could be received within an enlarged notion of "moral" damage.

However, conventions have described damage to the environment as a separate category within the concept of damage (together with the other "classical" items, usually in the same article) in order to make sure that reparation follows in such cases. I propose to continue that practice so as to assure that reparation is forthcoming, but to purify the notion of "environment" and of "environmental damage" as above, in order to avoid doubts and confusions as regards reparation.

7.2 Also, there seems to be two categories of damage caused through the deterioration of environment components. One is the harm which affects a community of people, like in a) of the above example. It affects a community of people because it has *general* consequences.

The cases mentioned in b), however, only affect determinate individuals: those who drank the water, or the hotel owner who happened to have his business in that particular place.

There would be no difficulty - I believe - to make reparation to those individuals under the existing categories of damage; suffice it to prove the causal relationship between the pollution of the lake and the noxious effect.

The consequences of the deterioration of the environment components are, in these cases, *particular* to some people, environment *per se* is only that damage to environment components which immediately affect a collective subject. In International law, that injured party is the State.

8. Reparation

Reparation for environmental damage caused by an wrongful act should follow the Chorzow rule, so as to wipe out all the consequences of the act and re-establish the situation which would, in all probability, have existed if that act had not been committed.

According to the articles proposed by the International Law Commission to codify the field of State responsibility, such consequences are: cessation, *restitutio naturalis*, compensation by equivalent, satisfaction and guarantees of non-repetition.

⁴⁹⁷ What may be called "damage through deterioration of the environment" Dr. Mensah calls in his interesting paper "damage which may result from an incident, occurrence or activity which is considered 'environmental', like "the production, transportation and use of hazardous substances and wastes (oil, chemicals, etc), the production and handling of nuclear substances and activities involving or resulting in the release of substances or energy which adversely affect the quality or viability of the environment." I prefer to call those activities "hazardous" rather than "environment", but also directly to people or property. However the causes, what in my opinion really matters in this category of damage is that the environment is deteriorated, and through that deterioration harm is done to persons or property.

⁴⁹⁸ The State is, on any score, the injured party on the international plane; if damage to the environment *per se* is considered to affect individuals instead of communities, the State is also the representative of such individuals in international law. The damage caused to the nationals of a State by another State is considered to be "mediate damage" to the former, who can extend its diplomatic protection.

Reparation for damage caused under *sine delicto* liability would be fixed by treaty in every particular case, since general international law is not considered to have any rule imposing on States such liability.

In the case of Iraq/Kuwait, it is obvious that the aggression lead by Iraq is at the origin of the consequences imposed by the Security Council. Resolution 674, of 29 October 1990, in its paragraph 8, "Reminds Iraq that under international law it is liable for any loss, damage or injury arising with regard to Kuwait or third States and their nationals and corporations, as a result of the invasion and illegal occupation of Kuwait by Iraq."

This paragraph, then, indicates the nature of Iraq's accountability; that country is responsible for wrongful acts.

Furthermore, paragraph 16 of Resolution 687, states that "Iraq ... is liable under international law for any direct loss, damage including environmental damage and the depletion of natural resources, or injury to foreign governments, nationals and corporations, as a result of [its] unlawful invasion and occupation of Kuwait".

8.1 The consequences

Iraq, I presume that has been achieved.

8.1.2 Restitution in kind, that is, return to the *status quo ante* whenever possible is the best solution. In cases of environmental harm, it is preferable to restore the environment than to pay compensation and on the other hand, the best measure of the value of the loss or injury is the cost of replacement of the damaged components.

8.1.3 However, if restoration is impossible, or its cost unreasonably high, other forms of reparation may be considered, (Id., p. 12, para 28). It seems important, however, that in such case, the author State does not save the costs that would have been on his charge had the restoration been possible.

8.1.4 If reasonable, equivalent elements to those destroyed may be accepted as reparation. Probably, such could be a way of compensation by equivalent, different from monetary compensation.

Another possible way would be a sort of "nature swap" transaction, namely, the improvement of the environment in other parts of the same zone (the creation of a natural park, or some other form of enhancing the existing environment, or of repairing other damages to the environment already existing before the aggression).

8.1.5 As concerns the reparation for the loss of environmental values, I suggest that monetary compensation should be awarded if restoration of former conditions - which would bring about restoration of its values - is impossible. Whenever there is a market price for the damaged components, that price would give a good measure of the damage.

Such market value missing, the Commission should have some leeway to make an equitable assessment of the damage in terms of a sum of money, which could perhaps be used for ecological purposes in the damaged region.

Abstract methods such as the "travel costing method" or "hedonic pricing method" could provide only a very general guide to the sense of justice and equity of the Commission in assessing the monetary compensation to be fixed, but I submit that they would not be resorted to as of necessity.

8.1.6 In the list of consequences are the guarantees of non-repetition. they may have far reaching effects, and they have been applied to Iraq in relation with its aggression to Kuwait.

8.1.7 In case it would be reasonable to wait for some elements environment to restore by themselves through the mere passage of time, compensation for the diminished use of the resource until its full restoration should be in order.

Section III

CHAIRMAN'S SUMMARY OF THE FIRST AND SECOND MEETINGS

WORKING GROUP OF EXPERTS ON LIABILITY AND COMPENSATION FOR ENVIRONMENT DAMAGE ARISING FROM MILITARY ACTIVITIES

First Meeting

London, 27 February - 1 March 1995

Chairman's Summary

I. Opening of the Meeting

The First Meeting of the Working Group of Experts on Liability and Compensation for Environmental Damage arising from Military Activities was held in London from 27 February to 1 March 1995. The Meeting was convened by the United Nations Environment Programme (UNEP) in cooperation with the Foundation for International Environmental Law and Development (FIELD).

Six sessions of the Meeting were held. The first session took place at the premises of FIELD at the School of Oriental and African Studies (SOAS). Subsequent sessions of the Meeting were held at the offices of the Law firm of Frere Cholmeley Bischoff.

The Meeting was opened by Professor Sun Lin, who introduced Dr. Michael Palmer, Head of the Law School at SOAS, and Roger Wilson, Managing Director, FIELD, who welcomed the members of the Working Group to London and wished them success in their efforts.

Professor Sun Lin, Director of the Environmental Law and Institutions Programme Activity Centre at UNEP, then welcomed participants to the Meeting and explained the purpose of the Working Group. In 1993, UNEP Governing Council adopted the Programme for the Development and Periodic Review of Environmental Law for the 1990s. Programme Area "S" dealing with Additional Subjects for Possible Consideration During the Present Decade, identifies Liability and Compensation/Restitution for Environmental Damage as an area where action by the appropriate international bodies to develop international responses may be appropriate during the present decade. Security

Council resolution 687 of April 1991 reaffirmed that Iraq was "liable under international law for any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign governments, nationals and corporations" which occurred as a result of its unlawful invasion and occupation of Kuwait. The United Nations Compensation Commission (UNCC) was established to administer claims. However, resolution 687 did not define environmental damage, or the depletion of natural resources, or provide any guidance to the UNCC as to how it is to be assessed, or what measures of reparation or compensation should be. In furtherance of programme Area "S(c)" of the programme, and with the intention of providing a practical contribution to the work of the UNCC, UNEP, in close collaboration with FIELD, has established this Working Group of Experts. In this regard, Professor Sun Lin stressed the important nature of the workshop and indicated that the project was practical and results-oriented, aimed at providing assistance to the work of the UNCC.

II. Organization of the Meeting

A. Election of Bureau

Mr. Ralph Zacklin was elected Chair of the Working Group, and Mr. Philippe Sands was elected Rapporteur. Dr. Al-Nauimi and Dr. Vanda Lamm were elected as Vice-Chairpersons. Dr. Alexandre Timoshenko acts as Executive Secretary of the Working Group and of the Bureau.

Mr. Zacklin then assumed his position as Chairman of the Meeting.

B. Adoption of the agenda

The Executive Secretary had prepared a provisional

agenda for the Meeting. The following agenda was adopted:-

1. Opening of the Meeting
2. Organization of the Meeting
3. Adoption of the Agenda
4. Review of the Background Paper
5. Discussion of the background paper and possible recommendations
6. Adoption of recommendations
7. Other business
8. Closure of Meeting

C. Documentation and background information

Before the Meeting, the members of the Working Group were provided with a Background Paper with annexed documentation which had been prepared by FIELD. During the course of the Meeting, further documentation was made available to the Working Group by individual participants including the Report and Recommendations made by the Panel of Commissioners of the UNCC concerning the first instalment of individual claims for damages up to US\$100,000 (Category "C" Claims), and literature related to the evaluation of natural resource damages.

The Rapporteur gave a brief introduction to the Background Paper and to the issues to be discussed by the Working Group. In addition, the Chair gave a brief summary of the background to the establishment of the UNCC, indicating that whilst there had been some pressure to create a judicial tribunal along the lines of the Iran-US Claims tribunal, the final decision had been to establish an essentially administrative system.

D. Organization of work

Sessions of the Working Group ran from 10.00a.m. to 1.00p.m. and from 3.00p.m. to 6.00p.m. each day.

It was agreed that at the first Meeting, under Agenda item 5, one session would be devoted to each of the main issues identified in the Background Paper as follows:-

1. Work of the UNCC
2. International Legal Context and Applicable law
3. Definition of Environmental Damage and Depletion of and Damage to Natural Resources

4. Threshold
5. Quantum
6. Interest of a state or international organization in bringing a claim.

It was agreed that the discussion of Quantum would be delayed until the arrival of Professor Richard Stewart on 1 March.

E. Attendance

A list of participants in the Meeting is appended to the Chairman's Summary. It was noted that all members of the Working Group were participating in their personal capacity.

III. Substantive Issues

I. Work of the UNCC

The Working Group discussed the functions of the UNCC and its work to date. It was noted that the aim of the Working Group is to facilitate the work of the UNCC. There followed discussions as to how the work of the Working Group might feed into the UNCC process. The general view was that if the Working Group produced useful conclusions then these would be brought to the attention of the Commissioners either formally or informally. There was consensus that, in relation to most of the issues under discussion, the most useful role for the Working Group might be to identify alternative approaches and to put forward a series of conclusions on certain issues. It is not for the Working Group to substitute itself for the Commissioners nor to make specific recommendations to the UNCC. It was further noted that the Working Group should focus on what the law is rather than on what members of the Working Group think it should be.

In the discussions of the work of the UNCC to date it was specifically noted that in respect of the tranches of "A", "B" and "C" claims already processed, the UNCC has shown that it is prepared to take an innovative approach - for example, it has had some resort to techniques used in the US in relation to mass tort claims. It was further noted that in relation to "A" and "B" Claims decided to date the UNCC had not yet had to resort to the "other relevant rules of international law" referred to in Article 31 of the Provisional Rules for Claim Procedure of the UNCC.

2. International Legal Context and Applicable Law

Reference was made to Article 31 of the Provisional Rules for Claims Procedure which provides that in

considering claims, Commissioners will apply Security Council resolution 687, and other relevant Security Council resolutions, the criteria established by the Governing Council for particular categories of claims, and any pertinent decisions of the Governing Council. Article 31 further provides that "[i]n addition, where necessary, Commissioners shall apply other relevant rules of international law".

The Working Group considered what these other relevant rules of international law might be. Views were expressed as to what might constitute appropriate sources of law in the context of the Iraqi invasion and occupation of Kuwait. A number of sources of potentially relevant rules were identified including rules of international environmental law contained in conventions, and specific conventions aimed at protecting the environment during armed conflict.

It was broadly agreed that by using the phrase "other relevant rules of international law", Article 31 of the Provisional Rules of Procedure had provided the Commissioners with a certain degree of latitude. Accordingly if, in a given category of claims, the Commissioners are unable to reach an evaluation based on Security Council resolution 687 and the criteria and decisions of the Governing Council, then they can go beyond these and can look into relevant rules of international law which may be of assistance in relation to the particular claim or claims. By providing the Commissioners with a certain latitude, the Governing Council has potentially allowed scope for decisions based on general principles, justice and equity.

With regard to the interpretation of Security Council resolution 687, it was noted that Security Council resolutions can be interpreted using the same techniques used in interpreting treaties, and that the UN Office of Legal Affairs has used this approach in the past. However, it was noted that the security Council guards its right of interpretation with regard to its own resolutions and will only recognise another interpreting authority if it itself has requested such interpretation or legal opinion.

Ultimately, it will be for the Commissioners to decide what the other relevant rules of international law are and where to look for clarification of these rules. However, since the decision of the Commissioners may be rejected by the Governing Council of the UNCC, the Commissioners have an interest in demonstrating clearly that their decisions are legally reasoned and motivated.

While members of the Working Group might have different views as to what the relevant rules of international law are in this context, they were able to agree that there are such rules. The Working Group

might discuss further whether the appropriate rules are customary or conventional or whether they are universally applicable. General principles and the deliberations of the International Law Commission may also be of assistance. Determining what the relevant rules might be would assist in determining whether they might be of use in the work of the UNCC.

3. Definition of environmental damage and of depletion of natural resources

There is no definition of environmental damage or depletion of natural resources in Security Council resolution 687 or related Governing Council decisions. The Governing Council has given some guidance on what types of environmental claims might be made in paragraph 35 of its Decision 7, which incorporates a non-exhaustive list of heads of environmental damage.

Among the issues considered by the Working Group in its discussions were the concepts of direct and indirect damage; whether the UNCC should adopt a broad or narrow approach to the question of what constitutes environmental damage; and whether there is any distinction to be made between damage to the environment and depletion of natural resources. There was also some discussion of whether environmental damage in Security Council resolution 687 could include claims for "pure" environmental damage (such as loss of environmental amenity).

There was widespread agreement in the Working Group that there is no single definition in international law of what constitutes "the environment" or "environmental damage". There may be some guidance in the approaches taken in certain treaties, but with regard to the application of conventional law the general view of the Working Group was that given the specific remits of the conventional law, for example the Antarctic regime, it would be difficult to try to put forward any conclusions on the basis of any clear and consistent direction being taken in the conventions.

There was also a widespread view that the concept of environment is evolving and that it would not be productive to try to fix in time what the term might mean. A range of views were expressed in favour of the proposition that for the purposes of the UNCC a broader view of the environment should be adopted. In general, it was felt that the Working Group should not seek to come to a definitive conclusion but should explain the continuing evolution of the concept of environmental damage, for example in the various conventions and in national law, and should identify the various approaches to the question of what constitutes environmental damage. It was noted that the function of the UNCC is not to deal with questions of definition

as such, but to look at the claims before them and the evidence presented to see if they relate to a category of claims established by the Governing Council. In this regard, the UNCC will need some parameters as to what does and does not constitute environmental damage.

On the issue of direct or indirect damage, the conclusion of the Working Group was that this is a generic problem which the UNCC will have to face across a wide range of claims. The question seems to go to the evaluation of damage rather than to the question of whether or not a claim is receivable by the UNCC. Some members of the Working Group questioned whether a distinction could be made between environmental damage caused by actions of Iraqi and that caused by actions of the coalition forces.

There followed some discussion on the concept of depletion of or damage to natural resources, and specifically on whether this was distinct from environmental damage. A number of members of the Working Group felt that in some circumstances it was possible to have depletion of natural resources without damage to the environment and that in relation to Security Council resolution 687 depletion of natural resources referred principally to Kuwait oil losses. Some members noted that the Working Group should not exclude the possibility of claims in relation to depletion of other natural resources. As a general matter, there seemed to be a dominant view that depletion of natural resources referred to the destruction of oil or other assets which had an economic use and value.

4. Threshold

No explicit threshold is included in Security Council resolution 687 or in paragraph 35 of Decision 7 below which liability for environmental damage does not arise. The Working Group discussed whether there was in effect an implicit threshold, and if so at what level such a threshold might be set. It was accepted that the threshold issue is an integral part of discussions on liability for environmental damage generally, but doubts were raised as to whether the discussion had any place within the context of Security Council resolution 687. Most members of the Working Group considered that the threshold question was not of great significance here. The Working Group agreed that liability was established under the terms of Security Council resolution 687 for any direct environmental damage. The question for the Commissioners was not to determine liability but to determine the appropriate compensation in respect of each claim. The level of damage caused would be of more relevance to the question of valuation and compensation than to liability.

5. Quantum

The discussion on quantum was introduced by Professor R. Stewart who explained how valuation of natural resources damages is dealt with in the US under the Superfund legislation and the Oil Pollution Act (which legislation provided a basis for the text of paragraph 35 of Decision 7). Professor Stewart outline a number of possible components of natural resource damages valuation, including restoration, interim lost value and the costs of damage assessment, and describe certain economic models which have been put forward for calculating lost value.

It was noted that in this area the UNCC again faces an evolving area of law. Neither in national systems nor in the international system are there clearly defined rules or judicial practice on the methods of valuation of environmental damage. It was noted that the US system described by Professor Stewart is innovative and controversial. There was widespread agreement that national solutions represent an intellectual resource for the UNCC, which the UNCC may choose to draw upon. However, some members of the Working Group expressed reservations about reliance on economic models for valuing environmental damage and preferred a more traditional tort approach to evaluating non-monetary loss. The aim of the Working Group should be to identify various valuation techniques which the Commissioners might wish to draw upon.

In relation to national approaches, most members of the Working Group agreed that a comparative law analysis would be a useful, and would avoid over-reliance on one national system, which, while well-developed, represented only one possible approach.

It was noted that the Governing Council may well give some further guidance before the Commissioners begin to assess "F" Claims, for example in relation to what might constitute reasonable measures to restore the environment within the context of paragraph 35 of Decision 7. The Working Group might make a valuable contribution here.

6. Interest of a state or international organization in bringing a claim

Category "F" Claims in respect of environmental damage and depletion of natural resources may be made by states and international organizations. The Working Group considered in what circumstances states and international organizations might present a claim to the UNCC. In this regard, the Working Group examined, inter alia, the Provisional Rules for Claims Procedure of the UNCC

contained in Annex 10 of the Background Paper. It was noted that the definition of international organizations in Article 1(14) of the Provisional Rules excluded claims for environmental damage by non-governmental organizations or by organizations such as IUCN.

The Working Group discussed the possibility of UNEP or other international organizations bringing a claim for environmental damage to areas beyond national jurisdiction. However, with regard to the UNCC most members of the Working Group agreed that the answer was to be found in Article 5(1) (d) of the Provisional Rules, which provides that "International organizations may submit claims only on their own behalf", and thus seems to leave no room for a claim by UNEP or any other international organization for damage to the global commons, beyond actual losses and expenses incurred by the organization, for example in clean-up or monitoring activities.

Some members of the Working Group indicated that, on the evidence cited in the Background Paper (UN and UNEP reports), damage to the global commons as a result of the invasion and occupation seemed negligible. However, certain members of the Working Group wished to explore further the possibility of claims being brought before the UNCC in relation to damage to the global commons.

Some members of the Working Group noted that in the event that UNEP was able to present a claim for losses actually incurred, the question of UNEP's capacity to bring claims should not prove problematic since any such claim could be submitted by the UN on behalf of UNEP.

IV. Future Work

- (i) It was agreed that before the next Meeting of the Working Group a number of short background notes on specific issues would be prepared as follows:-

Scope of definition of environmental damage - elaboration of the categories of environmental damage (Dr. T. Mensah)

Definition of environmental damage (Ambassador Barboza)

"Other relevant rules of international law" under Article 31 of the Provisional Rules for Claims Procedure (Professor M. Bothe)

Interests of states or international organizations in bringing claims before the UNCC (Mme. L. Boisson de Chazournes)

Definition and valuation of depletion of natural resources (Mr. R. Bundy)

Approaches to the valuation of environmental damage under national jurisdictions in the Gulf region (Dr. N. Al-Nauimi)

Linkages between valuation methodologies and the categories of environmental damage in paragraph 35 of Decision 7 (Professor R. Stewart).

Any member of the Working Group wishing to do so may submit a paper on thresholds.

- (i) It was agreed that these papers would be sent to FIELD by 1 June 1995, for circulation in a compiled format to all members of the Working Group in mid-June 1995.
- (ii) It was further agreed that FIELD would produce a brief comparative paper outlining difference approaches to the valuation of environmental damage and giving examples from various national jurisdictions. This will be circulated to members of the Working Group together with the papers at (i) above.
- (iii) Additionally, it was agreed that the Bureau would produce a short paper outlining issues for discussion at the next Meeting of the Working Group. This will be circulated to all members of the Working Group at least one month before the next meeting.

- (iv) The Working Group discussed a tentative schedule of future Meetings of the Working Group. The next meeting of the Working Group is provisionally scheduled to take place from 13 to 15 September 1995 (inclusive) in Geneva. This is subject to confirmation by UNEP. Thereafter, two further Meetings are envisaged. It was suggested that the third Meeting might take place in Nairobi in Spring 1996, and the final Meeting in June or July 1996, possible in London or New York.

V. Close of Meeting

The Meeting was closed by the Vice-Chairman, Dr. Vanda Lamm, at 5.00p.m. on 1 March 1995.

WORKING GROUP OF EXPERTS ON LIABILITY AND COMPENSATION FOR ENVIRONMENT DAMAGE ARISING FROM MILITARY ACTIVITIES

Second Meeting
Geneva, 13-15 September 1995

Chairman's Summary

I. Opening of the Meeting

The Second Meeting of the Working Group of Experts on Liability and Compensation for Environmental Damage arising from Military Activities was held at the Geneva Executive Centre from 13 to 15 September 1995.

The Meeting was opened by Dr. Alexandre Timoshenko of UNEP. Dr. Timoshenko remarked that the work of the Working Group should now be seen in the context of Decision 18/9 of the UNEP Governing Council adopted in May 1995 on the further development of international environmental law aiming at sustainable development. Dr. Timoshenko also informed the Group of the informal working arrangements which had been put in place with the United Nations Compensation Commission (UNCC) through the good offices of the Chairman. A participant from the UNCC was welcomed to the Meeting.

Mr. Hans Alders, Director of the UNEP Regional Office for Europe, welcomed the Working Group to the Geneva Executive Centre, noting that the Working Group was dealing with an issue of major importance for the work of UNEP.

II. Organization of the Meeting

A. Election of the Bureau

The Working Group agreed that the Bureau should remain unchanged. The Bureau as elected at the first Meeting is as follows:-

Mr. Ralph Zacklin - Chairman
Mr. Philippe Sands - Rapporteur
Dr. Najeeb Al-Nauimi - Vice Chairperson
Dr. Vanda Lamm - Vice Chairperson

Dr. Alexandre Timoshenko acts as Executive Secretary of the Group.

B. Adoption of the agenda

The Executive Secretary had prepared an annotated provisional agenda for the Meeting. The following agenda was adopted:-

1. Opening of the Meeting
2. Organization of the Meeting
3. Adoption of Agenda
4. Adoption of Chairman's Summary from First Meeting
5. Review of Short Background Notes and Brief Comparative paper
6. Discussion of Short Background Notes and Brief Comparative Paper and possible recommendations
7. Consideration of Recommendations
8. Other Business
9. Closure of Meeting

It was agreed that there should also be a discussion as to the form which the final output of the Working Group will take.

C. Adoption of Chairman's Summary from First Meeting

The Chairman's Summary from the First Meeting held in London from 27 February to 1 March 1995 was adopted by the Working Group.

D. Documentation and background information

Before the Meeting, a package of documentation was circulated to all members of the Working Group. This included the background notes prepared by some members of the Working Group as agreed at the first Meeting, a short comparative note produced by FIELD on valuation of environmental damage, and other relevant papers on valuation of environmental damage. During the course of the Meeting, a participant from the UNCC made available to the Meeting blank copies of the Forms E and F on which Category E and F claims to the UNCC are submitted.

E. Organization of work

Sessions of the Working Group ran from 10.00 a.m. to 1.00 p.m. and from 2.30 p.m. to 5.30 p.m. each day. Six sessions of the Meeting were held. At the end of the first day of the Meeting, it was agreed that the remaining sessions of the Meeting would be devoted to the following issues:-

- (1) Applicable law
- (2) Definition of environmental damage and depletion of natural resources
- (3) Valuation of environmental damage and depletion of natural resources
- (4) Extent of the right of states and international organizations to bring claims.

F. Attendance

A list of participants in the Meeting is appended to the Chairman's Summary. As at the First Meeting, it was emphasized that all members of the Working Group participate in their personal capacity.

III. Working of the UNCC

The substantive work of the Meeting began with a review of the short background notes which had been prepared by members of the Working Group.

The participant from the UNCC then gave members of the Working Group an overview of the activities of the UNCC to date, with respect to Category A, B and C claims. It was noted that although a number of claims had been filed in categories D, E and F, the UNCC had not commenced processing these claims since the Governing Council had indicated that individual claims should be processed first. It was noted, in particular, that Kuwait had filed a category E claim in relation to extinguishing oil well fires in Kuwait. It was also noted that some category B claimants had filed claims for

respiratory problems allegedly caused by air pollution from the oil well fires.

It was suggested that given the February 1997 deadline for the filing of category F claims, from the point of view of the UNCC, mid-1996 would be an opportune time for the completion of the work of the Working Group.

It was noted that the work of the Working Group might be of assistance to the UNCC in a number of ways, for example, by identifying the main issues likely to be raised in consideration of claims for environmental damage, by identifying precedents from national or international tribunals, by highlighting relevant literature addressing environmental damage, liability and compensation. In this regard, it was noted that the output of the Working Group should be as practically-oriented as possible.

Two issues were identified as being of particular interest to the UNCC:-

- (i) the distinction between direct and indirect damage; and
- (ii) the question of whether the exclusion of damage related to the trade embargo and related measures from the jurisdiction of the UNCC has any impact on issues of environmental damage.

There was some discussion as to what form the output of the Working Group should take. The view of UNEP was that the final report would contain a description of the Working Group process followed by a set of Conclusions on key issues accompanied by a legal commentary, reflecting any divergence of view which might exist. Annexed to this would be the initial Background Paper and its Annexes, together with the background notes prepared by members of the Working Group.

IV. Substantive Issues

I. Applicable Law

The Chairman commenced the discussion of the issue of applicable law by reminding the Working Group of the conclusions reached on this issue by the Working Group at its First Meeting. There was recognition that it would be useful for the Working Group to try to indicate what the "other relevant rules of international law" referred to in Article 31 of the Rules for Claims Procedure might include. There was some discussion as to whether the laws of war on the protection of the environment during armed conflict were applicable. The general view was that it was not necessary to have resort to the laws of war for the purposes of determining liability here since liability was established

under the terms of Security Council Resolution 687. Nor should the thresholds of damage established under the instruments relating to the laws of war provide a defence to claims in this case.

Several members of the Working Group expressed the view that comparative national law might be a useful reference point where consistent and general elements of national law could be identified. It was noted that information on the approaches taken under different national jurisdictions might be a useful resource for the UNCC.

The general view was that the reference to other relevant rules of international law in Article 31 was a reference to general international law. Although it would not be useful to try to establish a general list of potentially applicable treaties or customary international law, it might be possible to highlight relevant treaties or references in relation to each of the substantive issues to be addressed - i.e. causation; definition of environmental damage; valuation of damage. It would be also be useful to deal with Article 31 in such a way as to allow some reference to national laws.

It was noted that the Working Group would most likely have to revisit this issue after further consideration of the substantive issues of causation, definitions and valuation.

There was also some discussion under this item of the issue of claims by states for damage to the global commons. The general view was that where a state had suffered loss as a result of damage to the global commons then such claims could not be ruled out. The more difficult issue was whether any state could submit a claim for damage to the global commons where it had itself suffered no damage. In such an instance the potential for overlapping claims might also have to be addressed.

2. Definition of environmental damage and depletion of natural resources

The Chairman referred the Working Group to the conclusions from the Summary of the First Meeting. It was decided that damage to the environment and depletion of natural resources should be discussed separately.

The Working Group discussed what types of damage might constitute environmental damage, and whether a broad or narrow definition should be used. The discussion centred on what elements of damage should be included within the concept of damage to the environment. Although this has been addressed in some international instruments, there is no commonly agreed

definition. The view of the Working Group was that although it would be too ambitious for the Working Group to try to give a conclusive definition of the term "environment damage", it would be possible to develop a menu of circumstances in which damage could be said to arise. In this respect, paragraph 35 of Decision 7 of the UNCC Governing Council provided a good starting point, but did not constitute an exclusive list. It would therefore be useful for the Working Group to work on identifying other elements of damage. These might include, for example, loss of environmental amenity.

There was some discussion as to the distinction between damage to the environment and depletion of natural resources. Some members of the Working Group expressed the view that these issues should not be treated as entirely distinct from each other, but rather that depletion of natural resources should be seen as a type of environmental damage. It was noted that the language of Security Council Resolution 687 reflects the language of the United States Oil Pollution Act, which uses the term natural resources as equivalent to the environment.

Despite some divergence of views as to whether these items should be treated separately, there was a general view that the key effect of any distinction for the purposes of the work of the UNCC may be on the valuation of damage. There was also discussion as to whether the reference to depletion of natural resources in Security Council Resolution 687 was intended to refer only to lost oil reserves, or whether it extended to other resources such as fisheries (e.g. depletion of straddling fish stocks) or groundwater aquifers. There was some divergence of views on this question.

3. Valuation of environmental damage and depletion of natural resources

The discussion on this issue began with presentations by members of the Group on the valuation of environmental damage and on the valuation of depletion of natural resources. The Chairman referred the Working Group to the Summary of the First Meeting.

In relation to restoration costs of damage to the environment, among the issues which arise are what the goal of restoration should be and, following this, what types of restoration costs are reasonable. For example, should the goal be to replicate damaged elements of the environment, to restore ecological functions, or to restore services to human beings provided by the environment. The difficulties associate with non-market use and non-use values were also discussed. It was noted that in the United States, there were now proposals to amend the oil pollution and Superfund legislation so as to eliminate non-market use and non-

use values and to focus instead on the practical issue of restoration.

The general view was that it would be useful to document the trend in national law towards trying to find ways to impose damages for non-market use and non-use values and then using the monies generated towards restoration. It was noted that the methods for valuing non-use value included contingent valuation methodology, the use schedules of damages and determination at the discretion of the judge. With regard to assessment of the reasonable costs of abatement, prevention and restoration, it was noted that this would be a task for the Commissioners to address on a case-by-case basis.

A number of difficulties were discussed with regard to the valuation of the depletion of natural resources. It was noted that a number of these issues had been addressed in cases before the Iran-US Claims Tribunal. In particular, the difficulty of assessing the market value of a lost resource was noted, including for example, establishing the date at which the resource should be valued, determining the production schedules on which to base the valuation, and whether to take into account impact on the market of the events causing the loss.

The Working Group also discussed, *inter alia*, whether the unlawfulness and intentional nature of the Iraqi action should have an impact on valuation. Again the approaches taken in national law on this issue might be a useful resource for the UNCC.

Although the UNCC may be interested to know of any approaches in international environmental law for valuing damage to, for example, fisheries or groundwaters, it was noted that international environmental law remains undeveloped in this area. However, it was noted that within the civil liability scheme for oil pollution damage there had been an explicit rejection of abstract methods of valuation.

4. Extent of the right of states or international organizations to bring claims

The Working Group focussed principally on the possibility of a right of an international organization to bring a claim and the possibility of a right of a state to bring a claim in respect of damage to the global commons. The questions of the respective rights of states to bring claims in respect of straddling fisheries stocks or share natural resources was also raised.

Article 5(1) of the Rules for Claims Procedure provides that international organizations may submit claims only on their own behalf. In relation to international organizations, it was noted that it might be possible for

such an organization to bring claims to the UNCC for actual expenses incurred for activities within the scope of its mandate, where that organization's constituent instrument allowed or required it, for example, to engage in protective activities in relation to the environment. The view was expressed that the issue of possible claims for damage to the global commons should be approached in pragmatic terms, in that if damage could be demonstrated, then it would be for an international organization to show that it had an interest in that area and that it expanded resources in connection with that area. It was acknowledged that it may be difficult to identify an international organization which has incurred such expenses in this case. However, it was noted by some participants that the Working Group may wish to consider the issue of liability for damage to the global commons more thoroughly since the Working Group's deliberations are not intended solely for reference by the UNCC.

IV. Future Work

It was agreed that the Bureau would draft a set of conclusions and a commentary reflecting the opinion of the Working Group. In the first instance, the Rapporteur will draw up draft conclusions, which will be circulated to members of the Working Group for comment well in advance of the third meeting. Once the conclusions have been adopted, a draft commentary on the conclusions will be prepared and circulated to the members of the Working Group for comment. It was noted that in relation to some areas under consideration, the Working Group is likely to be able to agree some conclusions. In relation to issues where there is some divergence of views, it may be appropriate to set out a menu of possible options and approaches. The conclusions are likely to cover eight key areas:-

- applicable law under Article 31;
- the scope of paragraph 35 of Decision 7;
- extent of the right of a state to bring a claim;
- extent of the right of an international organization to bring a claim;
- definition of environmental damage;
- definition of depletion of natural resources;
- valuation methods for environmental damage; and
- valuation methods for depletion of natural resources.

The third and final meeting of the Working Group is likely to be held in April or May 1996.

Section IV

**REPORT OF THE WORKING GROUP OF
EXPERTS ON LIABILITY AND
COMPENSATION FOR ENVIRONMENTAL
DAMAGE ARISING FROM MILITARY
ACTIVITIES**

REPORT OF THE WORKING GROUP OF EXPERTS ON LIABILITY AND COMPENSATION FOR ENVIRONMENTAL DAMAGE ARISING FROM MILITARY ACTIVITIES

Third Meeting
London, 14-17 May 1996

(I) Introduction

1. In 1994, the United Nations Environment Programme ("UNEP") established the Working Group of Experts on Liability and Compensation for Environmental Damage Arising From Military Activities ("the Working Group") within the purview of the UNEP long term Programme for the Development and Periodic Review of Environmental Law for the 1990's ("Montevideo Programme II") adopted by the UNEP Governing Council in 1993. In particular, programme area "E" of the Montevideo Programme II called to assist Governments in prevention and redress of pollution and other environmental damage, through, *inter alia*, developing rules and procedures for appropriate remedies to victims of damage from environmentally harmful activities. Also, programme area "S" identified Liability and Compensation/Restitution for Environmental Damage as a subject where action by the appropriate international bodies to develop international responses may be appropriate during the present decade. The above mandate is consistent with relevant principles of the 1972 Stockholm Declaration on the Human Environment and the 1992 Rio Declaration on Environment and Development, which called for the further development of international law regarding liability and compensation for the adverse effects of environmental damage.

2. The establishment of the Working Group followed the creation by the UN Security Council of the UN Compensation Commission ("UNCC") to receive claims for, *inter alia*, environmental damage and depletion of natural resources resulting from Iraq's unlawful invasion and occupation of Kuwait.

3. Security Council resolution 687 (1991) reaffirmed that Iraq was "liable under international law for any direct loss or damage, including environmental damage and the depletion of natural resources, or injury to foreign governments, nationals or corporations" which occurred as a result of its unlawful invasion and occupation of Kuwait. However, resolution 687 did not define environmental damage or the depletion of natural

resources, and did not provide any guidance to the UNCC as to how the environmental claims should be assessed for purposes of reparation or compensation.

4. In furtherance of programme areas "E" and "S" of the Montevideo Programme II and with the intention of providing a practical contribution to the work of the UNCC the Working Group was entrusted with the following tasks:

- to define the concepts of "environmental damage" and "depletion of natural resources";
- to recommend criteria for determining the reasonableness of measures taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment;
- to recommend the criteria for valuing "environmental damage" and "depletion of and damage to natural resources";
- to consider issues related to the appropriate level of financial reparation; and
- to examine the legal interest and capacity of States and international organizations in bringing environmental claims to the UN Compensation Commission.

5. Members of the Working Group were appointed and served in an individual and personal capacity. The membership, together with observers, is listed at Annex I to this Report. Mr Ralph Zacklin was elected Chair of the Working Group, and Mr Philippe Sands was elected Rapporteur. Dr Najeeb Al-Nauimi and Dr Vanda Lamm were elected as Vice-Chairpersons. Dr Alexandre Timoshenko acted as Executive Secretary of the Working Group and of the Bureau.

6. The Working Group met on three occasions. At the First Meeting, held in London from 27 February to 1

March 1995, the Working Group considered a Background Paper prepared by the Foundation for International Environmental Law and Development⁴⁹⁹ together with annexes. The deliberations of the First Meeting are reflected in the Chairman's Summary of the First Meeting.⁵⁰⁰ At its Second Meeting, held from 13 to 15 September 1995 in Geneva, the Working Group had before it a number of short Papers prepared by members of the Working Group on selected issues.⁵⁰¹ At this meeting the Group agreed that its output should comprise a Report which would include Conclusions. The proceedings of the Second Meeting are reflected in the Chairman's Summary of the Second Meeting.⁵⁰² The Report⁵⁰³ and the Conclusions⁵⁰⁴ were adopted at the Third Meeting of the Working Group, held from 14 to 17 May 1996 in London.

7. The Working Group developed its Report on a consensus basis. It is important to stress that the Conclusions do not necessarily reflect the views of any entity with which any member or observer of the Working Group is affiliated.

8. In accordance with its mandate the Working Group focused on issues of international law concerning liability and compensation for environmental damage, in particular, as they related to the work of the UN Compensation Commission. The Working Group aimed at providing assistance to the UNCC, recognizing that the activities of the UNCC are likely to contribute to the further development or emergence of international law in this area.

9. The Working Group recognized that each environmental claim before the UN Compensation Commission would have to be considered on its own merits, in accordance with its own factual circumstances. Accordingly, the Working Group's Report and Conclusions set forth some general principles which may be applicable to all environmental claims, although the question of whether compensation could be awarded in any particular case must depend on its own facts.

10. In carrying out its tasks the Working Group took into account certain understandings about the nature and function of the UN Compensation Commission. The first understanding concerned the character of the Compensation Commission: it is of a more administrative nature, rather than an adjudicatory or arbitral one. It follows from this that analogies with international legal remedies, in particular judicial settlement of disputes, should not be too far reaching. Moreover, its rather administrative nature may allow it a greater degree of flexibility in reaching decisions, for example in its determination of "relevant rules of international law" (see paras. 14-20 below). The second understanding concerned the importance of the Security Council's reaffirmation in resolution 687 that Iraq had acted unlawfully and thus was liable to pay compensation. This had significant consequences for the Working Group's approach, as indicated at various points in the Report and Conclusions, which served to distinguish the Gulf War situation from other situations in which non-military, lawful activities caused environmental damage.

⁴⁹⁹ See Section I

⁵⁰⁰ See Section III

⁵⁰¹ See Section II

⁵⁰² See Section III

⁵⁰³ Section IV

⁵⁰⁴ See Section V

Section V

CONCLUSIONS BY THE WORKING GROUP OF EXPERTS ON LIABILITY AND COMPENSATION FOR ENVIRONMENTAL DAMAGE ARISING FROM MILITARY ACTIVITIES

CONCLUSIONS BY THE WORKING GROUP OF EXPERTS ON LIABILITY AND COMPENSATION FOR ENVIRONMENTAL DAMAGE ARISING FROM MILITARY ACTIVITIES

I. In the sections below the Working Group addresses the following issues:-

- The law to be applied under Article 31 of the UNCC Provisional Rules for Claims Procedure (paras. 12-20);
- The scope of paragraph 35 of Decision 7 of the UNCC Governing Council (paras. 21-26);
- The extent of the right of a State to bring a claim (paras. 27-33);
- The extent of the right of an international organization to bring a claim (paras. 34-38);
- The definitions of "environmental damage" and "depletion of natural resources" (paras. 39-53); and
- Valuation of "environmental damage" and "depletion of natural resources" (paras. 54-97).

A Summary of Conclusions is set out at paragraph 87.

II The law to be applied under Article 31 of the UNCC Provisional Rules for Claims Procedure

1. Article 31 of the UNCC Provisional Rules for Claims Procedure sets forth four sources of law to be applied by panels of Commissioners in processing claims:

In considering the claims, Commissioners will apply Security Council Resolution 687 (1991) and other relevant Security Council resolutions, the criteria established by the Governing Council for particular categories of claims, and any pertinent decisions of the Governing Council. In addition, where necessary, Commissioners shall apply other relevant rules of international law.

2. The first three sources are easily identifiable. However, they do not provide a complete basis for resolving the various issues which are likely to arise when Commissioners process claims relating to the environment

and to natural resources brought by governments and international organizations (Category "F" claims). After applying these sources there will be many gaps and *lacunae*, including in relation to important matters such as definitions, causation, and valuation criteria which are dealt with subsequently in these Conclusions. These gaps and *lacunae* will have to be filled by relying on "other relevant rules of international law" to supplement the first three sources mentioned and provide an adequate basis for addressing issues raised in processing claims.

3. Rules may be "relevant" because they apply as a matter of law. This law is found in the sources identified in Article 38 of the Statute of the International Court of Justice.

4. Where such rules do not yield a clear result for a specific question, in other words, where there is a *lacuna*, other rules are relevant because they may provide an appropriate pattern for resolving a concrete problem in accordance with equitable principles. These other rules are, thus, applied by analogy or serve as a source of inspiration for the decision of a particular case. Rules that are relevant in this sense include: (a) international treaties not applicable to the particular claim, but dealing with similar questions, (b) customary rules concerning different, but related fields of international law, and (c) acts of relevant international organizations and conferences, including the rules referred to as "soft law". Rules of national law, even if they have not been transformed into general principles within the meaning of Article 38(1)(c) of the Statute of the International Court of Justice, may also provide appropriate solutions for questions deriving from the Iraqi invasion of Kuwait and therefore be relevant. The relative weight or persuasive value of such rules varies according to the circumstances, such as the number of countries adhering to the rules, the absence of opposition to the rule, the authority of the rule as law, and the comparability of its field of direct application with the case to be decided.

5. In relation to the compensation of environmental damages, the rules applicable as a matter of law are those relating to state responsibility, according to which a State must make reparation (including the payment of compensation) for damage caused by a wrongful act. In

the Gulf War context the wrongful act was, in the terms of Security Council resolution 687, the "unlawful invasion and occupation of Kuwait", i.e. a violation of the prohibition of the use of force established by the UN Charter and customary international law. It follows, for example, that thresholds of damage established under instruments relating to the laws of war could not provide a defence to category "F" environmental claims. To that extent the *jus in bello* is not "relevant" for the decisions to be taken by the Compensation Commission. Moreover, it is clear that a State which has committed an act of aggression cannot rely on the rules of international law allowing for exclusions or exemptions of responsibility and liability.

6. As to *treaty rules*, which may be applied by analogy, the Working Group concluded that pertinent regional and global treaties could provide an especially useful source of assistance. The weight and authority of any particular treaty would depend upon the subject it addressed, the extent of the support it had attracted, and the practice which it had supported. On this basis some treaties appeared especially relevant, notably in the field of state responsibility for damage (imposing state liability) and civil liability, and on the global and regional protection of the marine environment, including in particular those in relation to the Gulf region. Treaties addressing other environmental resources which might have been affected by military activities, such as freshwater and the atmosphere, could also be useful. In the absence of relevant regional and global treaties the use of bilateral treaties as a source of inspiration could not be excluded.

7. In addition to the *customary rules* applicable as a matter of law, the Working Group noted that established and emerging rules in other areas (such as causality and the valuation of natural resource damages) could provide some assistance, particularly if they reflect a widespread practise of States, and where they have been applied in awards of international courts and tribunals.

8. As regards *international acts*, the Working Group considered that acts of relevant treaty based organizations such as the International Oil Pollution Convention Fund⁵⁰⁵ could be especially useful. Guidance might also be found in more general acts indicating the views of the international community on definitions or general principles which might be relevant, such as the 1972 Declaration of the UN Conference on the Human Environment, and the 1992 Declaration of the UN Conference on Environment and Development. Reference to the unilateral acts of States as a source of obligations under international law should also not be excluded. Where gaps remained to be filled recourse might also

be had to the draft articles of the International Law Commission, together with relevant commentaries and to instruments adopted by bodies such as the Institut de Droit International and the International Law Association.

9. The Working Group considered that Article 31 of the UNCC Provisional Rules for Claims Procedure also allows for some reliance on *national law*, including that of the Gulf States and other States involved in the Gulf War, particularly where a general approach could be discerned. Given the recent development of some of the concepts likely to be faced by the Commissioners, the possibility could also not be excluded of relying on the domestic law of a single State, although it was felt that this could only occur in exceptional circumstances and where no consistent precedents or practise could be identified in any of the other sources.

III The scope of paragraph 35 of Decision 7 of the UNCC Governing Council

10. Paragraph 35 of Decision 7 provides that payments are to be made available by the Commission with respect to:-

direct environmental damage and the depletion of natural resources ...including losses or expenses resulting from:

- (a) Abatement and prevention of environmental damage, including expenses directly relating to fighting oil fires and stemming the flow of oil in coastal and international waters;
- (b) Reasonable measures already taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment;
- (c) Reasonable monitoring and assessment of the environmental damage for the purpose of evaluating and abating harm and restoring the environment;
- (d) Reasonable monitoring of public health and performing medical screening for the purposes of investigation and combating increased health risks as a result of the environmental damage; and
- (e) Depletion of or damage to natural resources.

11. The Working Group noted that the list of potential environmental and natural resource claims set forth in paragraph 35 of Decision 7 was not intended to be exhaustive. Other types of claims which could be made

⁵⁰⁵ International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, (Brussels) 18 December 1971, in force 16 October 1978; 11 *ILM* (1972) 284.

under paragraph 35 are identified below, in particular in the section on environmental damage (paras. 47-47 and 50-53).

12. As to causality, the Working Group noted that claims under paragraph 35 could only be made in relation to environmental damage or the depletion of natural resources which were a "direct" result of Iraq's unlawful invasion and occupation of Kuwait (see also Security Council resolution 687, para. 16). Damage or depletion which is not direct within the meaning of Security Council resolution 687 or paragraph 35 is to be excluded.

13. The definition of direct damage is a generic problem which the Compensation Commission faces across a wide range of claims concerning consequences on Kuwaiti territory and the territory of other states, and could conceivably also face in relation to claims concerning consequences in areas beyond national jurisdiction. In the case of most environmental claims the question of causality and directness will not be problematic. On Kuwaiti territory it would include the destruction of the oil production facilities which resulted in oil leakages, the burning of oil wells, and the deliberate release of crude oil onto land and into the marine environment, which are clearly directly attributable to Iraq. It would also include damage resulting outside Kuwaiti territory from these acts.

14. In a small number of cases it is conceivable that the question of whether damage is direct may not be immediately apparent. This possibility arises because of the physical interdependence of certain environmental and natural resources, resulting in damage of a type, or at a location, which might be too remote to be considered as compensable damage.

15. For these cases, establishing a general rule as to which claims would be too remote to be appraised will be a difficult task. Each claim should be considered in the context of its particular circumstances. Some guidance might be found in the practise of international courts and arbitral tribunals, in limited state practise concerning claims for environmental and natural resource losses, and in the slightly more extensive practise of organizations such as the International Oil Pollution Convention Fund. Account should also be taken of the clear illegality and gravity of the action occasioning the damage.

IV The extent of the right of a State to bring a claim

16. In its Decision 7 the Governing Council of the Commission decided that governments could bring claims for direct environmental damage and depletion

of natural resources. The Working Group considered the extent of the right of a State to bring such claims, and whether a government could submit an environmental claim on behalf of a non-governmental organization.

17. The Working Group recognized that non-governmental organizations were reported to have carried out a range of activities intended to protect the environment e.g. monitoring and clean-up activities. The Working Group considered that these organizations had made an important contribution to the protection of the environment after the Gulf War. Provided all relevant conditions for making such claims had been satisfied ("direct" damage, "reasonable" costs etc.), there was no reason in principle why a non-governmental organization should not submit a claim through a government under the laws of which it was incorporated or organized. There is nothing in the Governing Council decisions or in the UNCC rules of procedure that would deny the right of such entities from recovering any of their additional costs incurred.

18. As to the issue of the *locus* of the damage which could be the subject of claims, the text of Decision 7 makes it clear that not only Kuwait but also third States which have suffered damage may bring environmental or natural resource claims. This is in conformity with Security Council resolution 687, which is premised upon the prohibition of the use of force and envisages the protection of all members of the international community. The Working Group considered that collateral damage to the environment or depletion of natural resources of third States is also to be compensated.

19. The Working Group considered it clear that any State may bring a claim for damage which has occurred in or to the land within its boundaries (including subsoil); internal waters (including lakes, rivers and canals); territorial sea (including seabed, subsoil and resources thereof); airspace above its land; and exclusive economic zone and continental shelf to the extent that damage occurred to resources over which it has jurisdiction or sovereign rights in accordance with international law.

20. More complex issues arise to the extent that damage has occurred to shared natural resources (such as transboundary freshwaters, straddling fish stocks, migratory species of birds, or oil or gas reservoirs). In theory at least, it is possible to identify several kinds of natural resources which could have been subject to depletion because they straddle national boundaries. States may bring a claim in relation to natural resources which they share with one or more other States, to the extent of their legal interest in that resource. In circumstances where two or more States have been exploiting or benefitting from a shared natural resource on an ongoing basis, and one State suffers a depletion

because its exploitation or benefit is impaired as a direct result of the wrongful act, that party has a claim. In the event that two or more such states submit a claim in respect of the same shared natural resource, the total amount of compensation to be paid should not exceed the total value of that resource.

21. It was recognized that a State may be able to claim for damage to its environment resulting from damage to areas beyond national jurisdiction. A more difficult issue concerns the question of whether a State could bring a claim for damage to the environment or depletion of natural resources in areas outside its national jurisdiction. The information available to the Working Group suggested that claims in relation to areas beyond national jurisdiction were hypothetical insofar as the 1991 Gulf War was concerned, since there were no high seas areas in the Persian Gulf and the evidence available to the Working Group did not disclose measurable damage to areas beyond national jurisdiction.

22. Nevertheless if there was such a claim, the ability of a State (or a group of States on behalf of a collective interest) to bring such a claim will turn on its (or their) ability to show a legal interest in the environment concerned and its or their entitlement to that effect. Such an interest could be established by treaty or customary law. The general view was that the possibility of claims by States in relation to damage to areas beyond national jurisdiction should not be excluded, provided that a clear legal interest could be demonstrated.

V The extent of the right of an international organization to bring a claim

23. By Governing Council Decision 7, international organizations are allowed to bring claims before the Commission under category "F".

24. Article 1(14) of the UNCC Provisional Rules for Claims Procedures defines an "international organization" as an "international organization of States". It follows that claims may not be brought directly by non-governmental organizations (see above para. 28), but the question remains open whether organizations composed of States and non-governmental organizations may bring direct claims.

25. Article 5(1)(d) of the UNCC Provisional Rules for Claims Procedures provides that "International organizations may submit claims only on their own behalf". It follows that whereas a State may bring claims on behalf of a national, or a person resident in its territory or a corporation or other entity, an international organization may submit a claim for damages only to its own interests. This would include claims for direct losses and expenses incurred in clean-up, monitoring,

informational or research activities occasioned as a result of the invasion and occupation of Kuwait. It would be a matter for each organization to decide whether to submit a claim, bearing in mind that expenses which are met out of regular budgets would not normally be recoverable.

26. A more difficult issue (and apparently theoretical on the basis of the facts available to the Working Group) was whether an international organization could submit a claim in relation to environmental damage in areas beyond national jurisdiction. Such a claim might be considered where, for example, an international organization wished to recover the cost associated with carrying out monitoring activities in the atmosphere, or clean-up of environmental damage in areas beyond national jurisdiction, or restoration of environmental damage (i.e. oil pollution) in areas beyond national jurisdiction.

27. The possibility that such a claim could properly be filed should not be excluded, and should be approached on pragmatic terms. It would depend, *inter alia*, upon the organization being able to demonstrate that the activity in respect of which a claim was submitted fell within its objects and purposes and was otherwise *intra vires*, and that the organization had a legal interest in the environment to be protected and the manner of its protection and that it demonstrated an entitlement to that effect. It was noted that in other contexts the legal interest of an organization to act in relation to the environment or resources beyond national jurisdiction has already been recognized.

VI The definitions of "environmental damage" and "depletion of natural resources"

28. Security Council resolution 687 and Governing Council Decision 7 provide for compensation for "direct environmental damage and the depletion of natural resources". These terms are not defined in Decision 7, although paragraph 35 of Decision 7 provides some guidance as to the types of losses or expenses which will be compensable (see further below, paras. 60-73).

29. The Working Group noted that the Security Council had included "direct environmental damage" and "depletion of natural resources" as distinct heads of claim. In the Working Group's view, the term "natural resources" refers to components of the environment that primarily have a commercial value, while "environmental damage" encompasses damage to components of the environment whose primary value is non-commercial, although the Working Group recognized that there is a degree of overlap and complementarity between the two concepts. This distinction has important implications for the criteria for the valuation of damage. While the two concepts will not always be distinct, reference to one only could

exclude some losses. The Working Group concluded that the inclusion of both concepts establishes a comprehensive approach which allows a broader range of claims to be brought.

Environmental damage

30. Defining environmental damage remains a complex issue in national and international law, which requires a two stage approach: defining "environment" and then determining what constitutes compensable "damage" to the environment. The task is complicated by the absence of a commonly agreed definition in international law of either concept, although they are referred to in international environmental agreements, State practise, and the practise of international organizations (including those concerned with the codification and development of international law,) and in various approaches taken under national law and regional agreements, especially in the Gulf region. It is not possible at this time, on the basis of these instruments, to conclude that the international community has taken a clear and consistent direction on definitional aspects. Although no single instrument can be treated as individually authoritative, together these instruments should provide useful guidance to the Commission in its work.

31. An initial issue would be to consider the scope of the definition. It is safe to say that the term "environment" includes abiotic and biotic components, including air, water, soil, flora, fauna and the ecosystem formed by their interaction. There is also authority in international environmental agreements for the proposition that "environment" also includes cultural heritage, features of the landscape and environmental amenity. The Working Group noted that a broad construction of the term would be consistent with the more recent treaties and acts of international organizations.

32. In any event, "environment" does not include persons or the economic value of property, although damage to these may result from environmental damage and may be compensable under other heads of damage.⁵⁰⁶ Since injury to persons or property is included in other heads of damage it should not be included by the Compensation Commission under "environmental damage".

33. On balance, the Working Group concludes that "environment" should tend to be broadly construed, and that a narrow and exclusionary construction should only

be taken if a broad approach would lead to absurd or unreasonable results. This conclusion is consistent with recent State practise, as reflected in contemporary treaties and acts of international organizations.

34. As to "environmental damage", the Working Group concludes that this broadly refers to the "impairment of the environment", that is to say a change which has a measurable adverse impact on the quality of a particular environment or any of its components including its use and non-use values and its ability to support and sustain an acceptable quality of life and a viable ecological balance. Whether such an adverse impact has occurred will need to be decided on a case-by-case basis, taking into account the situation before and after the relevant harmful activity occurred.

35. Environmental damage may result from, among others:-

- the deposit of soot and oil mist on soil surface and vegetation;
- the deposit of oil, oil droplets, soot and particulate on land and into the marine environment;
- the deposit of oil and oil droplets on coral and other sub-surface or surface marine resources, such as sea grass beds and tidal mud-flats;
- disturbance of soils by military activities which might lead to increased exposure to wind erosion;
- damage to and destruction of marine birds as a result of direct exposure to oil;
- damage to marine living resources (dugongs, turtles, shrimps) as a result of damage to sea-grass beds resulting from exposure to oil;
- damage to halophytes growing in salty areas;
- damage to soils and streams resulting from spillage of toxic materials; and
- damage to cultural heritage.⁵⁰⁷

36. The Working Group noted as another example of environmental damage the loss of environmental amenity such as being exposed to high levels of

⁵⁰⁶ See e.g. opinion of the Rapporteur, Article 24 of the ILC's Draft Articles on International Liability, addressing "harm to the environment and resulting harm to persons or property": Barboza, *Sixth Report*, UN Doc. A/CAN.4/428, p. 39 (1990).

⁵⁰⁷ See, Report to the Secretary General by a UN Mission, led by Mr Abulrahim A. Farah, former Under Secretary-General, assessing the scope and nature of damage inflicted on Kuwait's infrastructure during the Iraqi occupation of the country from 2 August 1990 to 27 February 1991, UN Doc. S/22535; UNEP report on the UN Inter-Agency Plan of Action for the ROPME Region - Phase I: Initial surveys and preliminary assessment, 12 October 1991; Abridged and Updated Report on the United Nations Inter-Agency Plan of Action for the ROPME Region, 11 June 1992; Updated Scientific Report on the Environmental effects of the conflict between Iraq and Kuwait (UNEP/GC.17/Inf.9), 8 March 1993. See Annex 3 to this Report, Annexes 1 - 4.

suspended particulate or soot for an extended period in a manner which may be unpleasant, and where it can be established that such loss is significant. This broad construction is consistent with an approach which recognizes that thresholds of damage established under instruments relating to the laws of war should not be a defence against claims arising in relation to the illegal use of force.

37. As indicated in paragraph 59 below, it is expected that the Compensation Commission will require claims for environmental damage to be supported by appropriate evidence. In accordance with the practice in relation to other international environmental claims, the burden of proving the environmental damage and loss resulting from the damage will be on the claimant. When determining the causal link between the hostilities and the damage, the Compensation Commission may take account of the increased risk of causing such damage inherent in these hostilities.⁵⁰⁸

Depletion of natural resources

38. The Working Group noted that the Security Council had included "depletion of natural resources"⁵⁰⁹ as a separate head of damage in resolution 687 and paragraph 35(e) of Decision 7 refers to "depletion of or damage to natural resources". As a result, all possible claims relating to natural resources would be covered. As noted above, this recognizes that reference to "environmental damage" alone would tend to exclude, for example, claims in respect of the exhaustion of oil reserves, whereas reference only to "depletion of natural resources" would tend to exclude, for example, claims relating to pollution of the marine environment.

39. The Working Group concluded that a useful approach would be for the Compensation Commission to treat the "depletion of natural resources" as referring to the destruction of natural resource assets which occur in their natural state (i.e. excluding for example an aquaculture project) and which have a primarily commercial use or commercial value rather than a non-commercial use or value. The latter would be under the head "environmental damage".

40. The members of the Working Group note that paragraph 35(e) refers to "damage to" natural resources, words which do not appear in resolution 687. They

consider, however, that these words are not intended to unduly broaden the scope of claims which may be compensable. They merely clarify the concept of "depletion" by expanding its scope, referring to the situation in which a natural resource such as oil has not been lost but altered in some way (for instance by mixing with water or by loss of reservoir pressure) so as to limit its commercial use in a manner which has an equivalent result to, but is not the same as, depletion. Thus, "depletion of" natural resources is a quantitative notion relating to the reduction in the amount of the resource in question, while "damage to" natural resources entails a qualitative or other change that reduces the realizable commercial value of the resource.⁵¹⁰

41. Examples of what may be considered as "depletion of natural resources" would include:-

- loss of oil or gas, including diminution of the value of oil as a result of its contamination by mixing with water;
- loss of oil and gas due to well blow-outs, oil spillages and leakages;
- loss in relation to commercial value of other natural resources such as fish stocks (including shrimp), soil, vegetation and trees, groundwater aquifers which occur in their natural state where these serve a primarily economic function;
- loss of reservoir pressure resulting in the loss of recoverable oil; and
- losses due to migration of natural resources across national boundaries.

Whether any such loss would be compensable will depend on the extent to which the damage would be characterized as direct.

42. The Working Group noted that the deliberate release of oil into the marine environment could lead to claims under both heads. The physical loss of oil could be claimed as a "depletion of a natural resource", whereas the cost of cleaning or restoring the marine environment could be claimed as "environmental damage". Loss of fish could conceivably be claimed to be both a "depletion of natural resources" and

⁵⁰⁸ See, e.g. Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (Lugano) 21 June 1993; not in force, 32 ILM (1993) 1228. Article 10, Causality, provides: When considering evidence of the causal link between the incident and the damage or, in the context of a dangerous activity as defined in Article 2, paragraph 1, sub-paragraph d, between the activity and the damage, the court shall take due account of the increased danger of causing such damage inherent in the dangerous activity".

⁵⁰⁹ Para. 35(e) of Decision 7 also refers to "damage to natural resources"; the Working Group considers that this does not materially alter its assessment below.

⁵¹⁰ Hereafter "depletion of natural resources" refers to "depletion of" and "damage to" natural resources.

"environmental damage", since the fish served both commercial and non-commercial functions. A similar situation might exist in relation to damage to corals on the sea-bed which might present both a commercial (tourist) and non-commercial value.

VII Valuation of "environmental damage" and "depletion of natural resources"

43. The Working Group considered that the liability established under Security Council Resolution 687 and Decision 7 for environmental damage and for depletion of natural resources is compensatory and not punitive. Decision 7, however, does not indicate precisely how the Commission is to determine the amount of damages to be awarded for these types of damage. Again the matter of valuation is likely to be dealt with by reference to "other relevant rules of international law".

44. Valuation of environmental damage and depletion of natural resources is a challenging task. There are inherent analytical and practical difficulties in specifying the appropriate elements of damage, the nature and extent of the damage required to allow for recovery and the determination of the amount of compensation. The experience in international law and practice with respect to these valuation issues is uneven. While international law and practice provide substantial guidance as to some of the heads of damages identified in paragraph 35 of Decision 7, with respect to others they provide little or no assistance. There has, however, been considerable discussion and debate regarding such elements in the domestic law of a few nations. The options which have been considered with respect to these elements are summarized in paragraphs 75-80 and 84-97 below. The Commission may find in these options and combinations thereof the appropriate approach for making the necessary determinations in discharging its functions in implementation of this matter. Further, the overall amount of damages must be evaluated along with the individual elements of recovery in determining whether just compensation has been achieved.

45. Resolution 687 confirms that compensation is due as a result of the illegality of the act causing damage, and "reaffirms a duty to pay compensation which exists under international law". Since compensation is due for damage caused by a wrongful act, the basis for that compensation under international law is reflected in the judgment of the Permanent Court of International Justice (PCIJ) in the *Chorzow Factory (Indemnity)* case:

"reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed

if that act had not been committed. Restitution in kind, or, if this is not possible, payment of a sum corresponding to the value which a restitution in kind would bear; the award, if need be, of damages for loss sustained which would not be covered by restitution in kind or payment in place of it - such are the principles which should serve to determine the amount of compensation due for an act contrary to international law."⁵¹¹

While the PCIJ decision enunciates the appropriate standard of compensation, it does not provide guidance as to how to value the damage which has occurred.

46. Valuation is especially complex in relation to "environmental damage" and "depletion of natural resources", since the law is only now emerging in relation to the former and is subject to differing approaches in relation to the latter. Because "environmental damage" typically relates to the non-commercial functions of resources and ecosystems, there are serious difficulties in using traditional market-based damage measures to value such injuries. While "depletion of or damage to natural resources" typically concerns resources whose primary value is commercial, there are significant difficulties in determining the economic value of large resource stocks such as oil fields, which will be exploited and sold over a long period of time under changing economic conditions.

47. Paragraph 35 of Decision 7 also imposes the requirement that compensation payments should be made in respect of certain "reasonable" measures. It does not provide guidance as to what constitutes a "reasonable" measure. Subject to the view indicated below (see paras. 67-68), the Working Group considered that the Commissioners would be required to consider the reasonableness of measures which are the subject of a compensation claim on a case-by-case basis. Whether or not a measure is "reasonable" will depend on a balancing of the benefit to be achieved and the cost incurred, taking into account several factors. These factors include:-

- the nature of the environment or the natural resource being protected, including its social, ecological and economic importance;
- the consequences of a failure to protect the environment or resource;
- the existing or potential uses of the resource, including (where appropriate) its use and non-use value;
- the total economic, social and environmental costs

⁵¹¹ [1927] PCIJ, Series A, No. 17, 47.

of the measures taken to protect or restore the resource; and

- the availability of alternative protective or restorative measures at a lower total cost.

48. In accordance with national and international practise relating to claims of this type, the Working Group would expect the Commissioners to require each claim to be accompanied by an appropriate showing of certain elements necessary to make out a claim, including the following:-

- (a) evidence of injury, damage, or depletion. Such evidence may involve special difficulties because, for example, of natural fluctuation in populations, ecosystems, and other changes in environmental or resource functions due to non-human causes. For example, a drop in fish populations following an oil spill may be due to natural population cycles. In the case of environmental damage, moreover, injury should generally be defined in terms of impaired sustainability of communities, populations and ecosystems rather than losses of individuals or physical, chemical, or biological changes alone;
- (b) evidence of the particular conduct that caused the injury in question. Even if damage or depletion has occurred due to human activity, it must be shown that it was caused by the conduct alleged. Proving this element and element (a) will generally require the claimant to establish what the condition of the environment or the condition and amount of the natural resource would have been without such conduct, and the condition and/or the amount as a result of such conduct;
- (c) evidence as to the "direct" relationship between the conduct and the damage or depletion caused;
- (d) the various elements of damages sought; and
- (e) the appropriate methodology for valuation of these elements of damages and the determination of the amount of damages for each.

Valuation of "environmental damage"

- (a) *Abatement and prevention of environmental damage (including expenses directly relating to fighting oil fires and stemming the flow of oil in coastal and international waters)*

49. This head of damages is well recognized in international law and practice. It allows claims for the costs of measures taken or to be taken to abate or prevent environmental damage (rather than clean-up or

restoration including joint or overhead costs attributable and fairly allocable to the measures in question). It encompasses costs associated with measures taken to reduce contact between oil or hazardous substances and the natural environment in quantities that might cause environmental damage, including oil removal, oil burning, and the use of oil dispersants or other removal techniques. It could also encompass costs of the use of chemicals or other interventions to reduce the extent of damage resulting from contact which has already occurred. It does not, however, include costs associated with clean-up or restoration (addressed at paras. 63-69) or other elements of environmental damage, such as loss of environmental amenity.

50. The methodology for determining the amount of compensation would be the costs actually incurred in taking such measures. This approach is consistent with relevant international instruments, as well as national practise under those instruments or otherwise.

51. Unlike the other heads identified in paragraph 35 of Decision 7, this head does not expressly state that such measures should be "reasonable". It would, however, be appropriate to infer a limitation on compensation to measures which themselves are reasonable, and to costs that are reasonable in amount, although in the light of the precautionary principle some latitude would be warranted in relation to costs incurred in an emergency situation requiring a prompt response in the face of limited information. Appropriate criteria to this effect may also be found in contingency plans adopted under internationally agreed standards or regimes.

- (b) *Reasonable measures already taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment*

52. This head encompasses costs or losses incurred by clean-up or restoration of the environment and reasonably necessary future measures, including joint or overhead costs attributable and fairly allocable to the measures in question. It is also well recognized in international law and practise. There is a potential overlap between the previous head of damages and this head. For example, removal of oil on the sea bed or on beaches might be characterized as abatement or prevention of environmental damage insofar as it prevented further migration of deposited oil and resulting harm. A pragmatic distinction would be to limit abatement or prevention measures to those aimed at collecting, dispersing, burning, containing or reducing the toxicity of oil and other contaminants before they come to rest, while clean-up and removal would involve removal or treatment of contaminants after they have

been deposited. The distinction may in any event be without material consequence, because the measure of damages under the heads would appear to be substantially the same.

53. To "clean" the environment in this context involves the removal of oil or other environmentally damaging substances. The requirement that such measures be reasonable indicates that a balance must be struck between the costs and the environmental benefits of clean-up. The environmental as well as the economic costs of clean-up measures should clearly be considered and the measures taken should themselves be carried out in a cost-effective manner, in accordance with the basic requirement of mitigation or avoidance of damage by plaintiffs in international and national laws. In relation to mitigation, Governing Council Decision 15 states that "the total amount of compensable losses will be reduced to the extent that those losses could easily have been avoided".¹

54. To "restore" the environment would involve measures in addition to clean-up in order to restore the conditions or functions of natural resources to what they would have been absent the spill of oil or release of environmentally damaging substances, or the other environmentally destructive activity in question. Restoration decisions present two basic issues: its basis and scope, and the "reasonableness" of measures. While international law and practise recognize liability for restoration or reinstatement of the environment and the principle that measures for restoration or reinstatement must be reasonable, the criteria for determining the scope, and reasonableness of such measures are underdeveloped and in some respects controversial. Appropriate criteria to this effect may also be found in contingency plans adopted under international agreed standards or regimes. In any event they should take into account the precautionary principle.

55. As to the basis and scope of restoration, the Working Group considered that the basic aim should be to reinstate the ecologically significant functions of injured resources and the associated public uses and amenities supported by such functions. Ecological functions are significant to the extent that they affect the sustainability of populations, communities, and ecosystems. Replicating the precise pre-injury physical and biological conditions of a resource is in most cases impossible or impracticable. Thus, the loss of individual members of a species should not form the basis for restoration measures if the population can readily re-establish itself on a sustainable basis though well-recognized mechanisms of biological compensation. In this and other respects, the ability of

ecosystems to recover naturally once clean-up and contaminant removal has been completed must be considered. In many situations, the question is whether additional on-site measures should be taken to accelerate natural recovery. Where the relevant ecological functions and the associated public uses and benefits that they support are significant, such measures may well be justified and their reasonable costs should be recoverable if the measures are cost-effective and reasonable. Whether or not such additional measures are undertaken, when the interval between the selection of a restoration strategy (including, potentially, reliance on natural recovery) and completion of permanent restoration is substantial and the interim loss of public uses and amenities is significant, temporary measures to acquire substitute or equivalent resources for public use and benefit in the interim may be justifiable, and their costs should be recoverable.²

56. The requirement that measures undertaken be "reasonable" implies that, regardless of which approach to the basis and scope of restoration is adopted, the most cost-effective means of achieving restoration should be utilized. Yet even if a given measure is the least costly means of carrying out a given restoration objective the additional question arises whether its costs are reasonable in relation to the environmental benefits that it provides. To a considerable extent, the need to strike a balance can be met by making reinstatement of significant ecosystem functions, as detailed above, the basis and scope of restoration rather than replacement of the precise physical, chemical, and biological status quo ante, giving due weight to the public uses and amenities which these functions support. A somewhat different but not necessarily incompatible approach to striking a balance has been adopted by some national courts, which have refused to impose so strict a limitation in natural resource damages cases, but have indicated that restoration measures whose costs are "grossly disproportionate" to the resource's value are unreasonable and may not be recovered. A similar approach is reflected in the limited international practise.

57. In relation to the "reasonableness" of measures the Working Group also concluded that this limitation on restoration costs in relation to environmental resource value should be applied on an incremental basis: in many cases some basic efforts at restoration may be clearly reasonable; the question then becomes whether the costs of additional measures are reasonable in relation to the incremental benefits.

58. In the case of clean-up and restoration measures already carried out, damages would consist of the

¹Governing Council Decision 15, paragraph 9 (IV), S/AC.26/1992/15.

²E.g. private wetlands can be acquired temporarily for public use and enjoyment, while the injured wetlands are being restored though natural recovery, and, if appropriate, rehabilitation measures.

expenses incurred in carrying out those measures, subject to the reasonableness and cost-effectiveness requirements indicated above (paragraphs 67-68). Paragraph 35 of Decision 7 also authorizes recoveries for future clean-up and restoration measures provided that "they can be documented as reasonably necessary". The Working Group considered whether the requirement that measures be "reasonably necessary" imposed a stricter standard for future, as opposed to past, measures. It concluded that it did not. Whilst such a requirement could be justified on the basis that a claimant would presumably be careful in spending his or her own monies for clean-up and restoration, even if subsequent application for recovery could be made, but might well be less careful in spending recoveries from others, no distinction could, as a matter of principle, be made between damages for past and future measures. The requirement of documentation could suggest a more demanding showing that measures to be undertaken in the future are needed, appropriate and cost-effective. The reference to documentation raises the further question whether some process for receiving and taking into account the views of liable parties and the public in formulating measures of a clean-up or restoration is envisaged. Such a process, accompanied by a reasoned decision on the measures selected, could provide additional assurance that the measures selected are "reasonably necessary".

- (c) *Reasonable monitoring and assessment of the environmental damage for the purpose of evaluating and abating harm and restoring the environment*

and

- (d) *Reasonable monitoring of public health and performing medical screening for the purposes of investigation and combating increased health risks as a result of the environmental damage*

59. These heads of damage are closely related to (a) and (b) above. Again, the Working Group concluded that the extent of the monitoring and assessment activities must be reasonable in relation to the scope of potential harm, and that such measures should be carried out in a cost-effective manner. It should extend to future monitoring and assessment which could reasonably be required to be carried out, as well as past monitoring and assessment already undertaken.

60. The Working Group concluded that expenditures in relation to reasonable monitoring and assessment in relation to environmental damage should be recoverable by Governments in respect of damage occurring within their own territory. In some cases this may include

monitoring and assessment activities conducted outside of national territory in order to assess potential impacts within national territory as well as monitoring and assessment activities in areas beyond national jurisdiction to the extent that such states have a legal interest (see *supra* paragraph 33). In relation to public health monitoring damages should be recoverable by states only in relation to persons within their territory or to their nationals.

61. Subject to the views expressed in paragraph 38 above, reasonable expenditures for monitoring and assessment of environmental damage may also be recoverable by international organizations (in accordance with their objects and purposes) in relation to damage in the territory of States and in areas beyond national jurisdiction. International organizations may also be able to recover for monitoring of public health under similar conditions.

62. The Working Group concluded that the reasonableness of particular activities must be determined in light of the information available to decision-makers at the time that such activities are undertaken regarding the potential magnitude of the harm and the nature and extent of the relevant uncertainties, taking due account of the precautionary principle. In order to be compensable the monitoring and assessment activities selected should be cost-effective and their cost should be measurable in relation to the expected value of the information likely to be generated as a guideline. In the case of monitoring and assessment of environmental damage and depletion of or damage to natural resources, such costs should be deemed reasonable if they do not exceed the reasonably anticipated recoveries for injury.

Other environmental damage

63. These Conclusions have previously noted that the heads of damage identified in paragraph 35 of Decision 7 were not intended to be exhaustive. The Working Group concluded that recoverable loss under this additional head could be categorized into two types: (a) recoveries for permanent damage to the environment where clean-up or restoration would not be physically possible, reasonable or otherwise feasible, or where clean-up or restoration was not successful;³ and (b) recoveries for interim damage pending full clean-up or restoration. Examples of recoverable damage under this head might include loss of environmental amenity (temporary or permanent, full or partial). This head would represent an element of recovery which was distinguishable from and additional to the costs of clean-up and restoration. There is some uncertainty and controversy as to whether these elements of damages are or should be recoverable under existing international

³If reasonable prudent restoration measures are undertaken but prove unsuccessful, there is no reason in principle why a claimant should not be able to recover both the costs of the restoration measures and for unrestored damage to the natural resource. Similarly, recovery should be available for damage to the environment caused by reasonable prevention, abatement and clean-up measures.

instruments relating to environmental and natural resource injury. These elements of recovery are well recognized in some national systems, although there is very considerable uncertainty and controversy over their precise scope and content, and appropriate means of valuation. Developing and applying appropriate principles for determining what recoveries should be available for "other environmental damage" is thus a challenging task. In these circumstances, the Working Group judged that it might be helpful to set forth its views regarding the options and considerations that might inform any such effort, drawing on relevant international and national experience and discussion.

64. In determining the basis and scope for recovery for permanent or interim environmental damage, and appropriate valuation methods, the values attached to environmental resources can be divided into use values and non-use values. Use values can be divided into consumptive uses, such as fishing (which may either be commercial or non-commercial), and non-consumptive uses, such as bird watching; non-use values include values that persons may hold for an environmental resource even if they never use or visit it. These values may include preservation, bequest, and, by some accounts, option values.

65. As to lost use, the established methodologies for determining lost value include market price, appraisal value,⁴ travel cost methodology,⁵ and hedonic pricing.⁶ These methodologies are now used in a few national jurisdictions,⁷ although they remain undeveloped in international law. In those jurisdictions they are regarded as generally reliable, although all of the methodologies other than market price are complex and costly to use. A market price measure alone, however, would understate the value of many natural resources.

66. The Working Group considered the scope of uses recoverable under this head of environmental damage. It concluded that losses relating to commercial uses of an environmental resource (such as reduced fishing profits or tourism) and resource-based governmental revenues (such as taxes on commercial fishing) should not be included as they are separately recoverable. The uses on which this head of environmental damage would be based will be consumptive and non-consumptive uses by the general public.

67. While recovery for lost public uses of injured environmental resources is well recognized in some national jurisdictions, there is controversy over the

proper scope of recovery and the disposition of recoveries obtained. On one view, there should be recovery for lost public uses for the entire period between the occurrence of injury and the completion of restoration. The rationale is that the public has suffered an injury and should be made whole. In the other view, recovery should be limited to the reasonable costs of providing substitute or equivalent environmental resources for public use during the period between the initiation of restoration measures and completion. If restoration of the injured resource is not feasible, then there should be permanent acquisition of substitute or equivalent resources. The rationale is that this is the only appropriate means of compensating the public for lost uses, since monetary recoveries by the government or a non-governmental organization in an amount equal to the economic value of the lost uses suffered by individual members of the public are not paid to the individuals who actually suffered the loss, and in addition that the complexity and costs involved in actually placing a monetary value on such lost uses is excessive.

68. As to non-use, the only available methodology for assessing values is contingent valuation methodology (CVM). This seeks to elicit the value of a resource by asking a sample of the population what, hypothetically, they would be willing to pay to preserve it, and then multiplying the value obtained by the number of households in a geographic area deemed relevant. This methodology is costly to implement and its validity has been sharply contested on the grounds, among others, that there is no objective way to validate survey responses (since respondents do not actually have to make such payments) and that such surveys generate speculative and inflated values. It is also contended that the public's non-use value in long term resource preservation is fully satisfied by clean-up and restoration of the injured resource or, in the rare cases where this may not be feasible, acquisition of substitute or equivalent resources. The opposing view is that the public has suffered losses, including impairment of non-use values, by reason of environmental damage in the interim pending completion of restoration and that CVM is the only available method of determining non-use losses and is sufficiently reliable to be used in order to make the public whole.

69. There are other approaches for valuing environmental damage than the methodologies described above. The Compensation Commission could, for example, ask a person or persons to place a value on

⁴What market price a resource would command.

⁵Which measures the opportunity cost to persons of visiting and using a resource as lower bound of its use value to them.

⁶Which seeks to derive the imputed value of environmental amenities from the sales prices of different properties with different amenity levels.

⁷Including the USA and Canada.

a resource based on their best judgement, possibly taking into account the results of one or more of the above methodologies, or make a valuation based upon equitable considerations. Different approaches of this type which have been utilized in national jurisdictions include valuation by a judge or tribunal and valuation by administrative authorities.

70. Alternatively, one could establish in lieu of case-by-case assessment of restoration and damage costs, a schedule of damages based, for example, on the loss of a particular bird (taking into account, *inter alia*, its rarity), or the quantity of oil spilled into the marine environment (taking into account the type of oil in question and the general character of the receiving environment). Such a schedule might be based on average restoration and damage costs. This practise is adopted in a number of national jurisdictions.

(e) *Depletion of or damage to natural resources*

71. The Working Group considered that this head of damage refers to reductions in the quantity of, or damage to the quality of, a natural resource, such as oil or gas or fisheries, which occurs in its natural state and which has a primarily commercial or economic value (see above paragraph 50).

72. The method of valuation of natural resources in international law is a complex topic. The Working Group considered that many of the doctrinal issues which have arisen in practise and theory in cases of governmental takings of property interests involving natural resources will not apply in this case, since the natural resource loss has arisen as a result of an unlawful act and does not involve an ongoing business or enterprise as such. Nonetheless, it can be instructive to refer to international precedents dealing with expropriation, particularly in connection with oil and gas interests, because they provide useful models for valuing losses related to assets that have a commercial value such as natural resources. The methods set out below provide a basis upon which the UNCC and other bodies faced with similar issues might address the valuation of natural resource depletion.

73. There are various ways to determine the value of an asset: accounting methods such as net book value and replacement cost, and methods designed to calculate market value such as the current market price of the resource, comparable sales values, and net present value calculated according to the discounted cash flow (DCF) method.

74. Net book value is normally based on the historical cost of physical equipment and structures depreciated in accordance with generally accepted accounting principles. As such, it is primarily used in connection with valuing businesses since it refers to an accounting value

of physical assets and goodwill reflected in a company's books and financial records. Whether it could be relevant to valuing natural resources *per se*, which do not always have a listed book value, is open to question (although ongoing records of the estimated value of the natural resources would provide a useful starting point for any method of valuation).

75. Replacement cost measures the cost of acquiring identical assets to those that have been lost or depleted. The usefulness of this method of valuation depends on the ability to identify reasonably comparable assets and their cost of acquisition. In the case of a very large asset stock such as a major oil field there may be no comparable asset available for purchase on the market. When the asset in question was to have been produced over extended periods of time, use of this method raises the difficult question of determining what it would cost to purchase equivalent assets at different points of time.

76. For assets, including natural resources, that are bought and sold on the international market, economic valuation methods based on market value may provide an appropriate means for valuing losses arising from the depletion of, or damage to, natural resources. It is appropriate to draw from international practise in establishing methods for determining market value. It may also be appropriate, where relevant international practise is limited or non-existent (for example in relation to losses of natural resources other than oil and gas) to look to relevant national practise.

77. With respect to particular methods of determining market value, provided that there was an available market for all of the lost or depleted resources at the time of the depletion, then current market price could provide an appropriate standard of compensation. The Working Group noted, however, that a valuation based solely on the current market price of a substantial stock of a natural resource at the date of depletion or damage could be inaccurate in cases where the resource in question was only expected to be produced and marketed over a significant period of time. Such a valuation would fail to take account of factors such as the relationship between current and future market prices, the quantity of the natural resource utilized over time, related extraction or production costs, and risks.

78. Use of the comparable sales method also presupposes that a comparable market in terms of size, geographic location, political setting, and production schedules could be identified.

79. Where the asset being valued is expected to be produced or utilized over a period of time, as with oil and gas reserves, the Working Group considered that a calculation based on the net present value of the

resource in question may offer an appropriate method of valuation.

80. Discounted cash flow methodology provides a widely accepted basis for calculating the net present value of such an asset, although the uncertainties and the magnitude of the assumptions that go into the application of such a method should not be underestimated. Generally, this involves the application of two steps: (1) calculating the amount and timing of the revenue that the asset or resource is expected to generate over its remaining life, less the costs required to produce the asset ("future net cash flow" of the asset); and (2) discounting the projected cash flow of the asset at an appropriate rate to arrive at the "net present value" of that cash flow. Both steps entail the need to take into account a wide variety of factors, although the Working Group was of the view that whether a depleted natural resource was renewable or non-renewable should not *per se* affect the valuation methodology.

81. With respect to cash flows it is first necessary to carry out a technical evaluation of the quantity of the resource that can reasonably be deemed to have been depleted as a result of the unlawful action. This calculation will need to be carried out no matter what method of valuation is chosen.

82. Second, a production schedule must be determined in order to ascertain in what quantities and over what time periods the depleted resource would have been produced if the unlawful act had not taken place. Both of these exercises may require expert assessment.

83. Third, it will be necessary to establish the applicable price to be utilized. This is especially relevant since the price of some of the relevant natural resources (e.g. oil) rose as a result of Kuwait's absence from international markets and because of the UN embargo and other sanctions imposed upon Iraq in August 1990. The question arises as to whether the actual prices should be used to value the oil, or whether prices "reasonably foreseeable" at the time of the loss should be used. Although the use of actual prices arguably would make the task of applying discounted cash flow easier, the case precedents suggest that the valuation should be carried out as of the date of the depletion or damage without taking into account circumstances which arose after that event took place. Moreover, in international law (and national law) relating to expropriations, the effects of a taking of property on its value are generally excluded from the calculation of compensation.

84. Fourth, the costs associated with producing the lost resource must be deducted from the overall cash flows since these would have been incurred in any event had the depletion not taken place.

85. Finally, an appropriate discount rate must be applied to the cash flows in order to take into account various factors including the risk that the actual revenue produced would have been less than the projected cash flow and the time value of money, adjusted for inflation and the real rate of interest. Where a future cash flow is projected in "nominal" terms (i.e. in currency that diminishes in value over time because of inflation), the discount rate must account for the effect of inflation on future income. Where the cash flow projection is made in "real" terms (i.e. in currency of constant purchasing power) the discount rate does not include an inflation component but instead must be expressed as a real rate. Correctly applied either method should produce the same result.

86. In theory, risks can be accounted for by adjusting either the individual cash flow inputs (such as applying more conservative production rates or price forecasts) or the discount rate. In practice, a combination of both is usually applied. Thus, the approach generally used is to apply a discount rate equivalent to the average annual rate of return offered by assets of comparable risk.

VIII Summary of Conclusions

87. The Working Group's Conclusions can be broadly summarised as follows:

On the law to be applied under Article 31 of the UNCC Provisional Rules for Claims Procedure:

(1) gaps and *lacunae* left by the sources expressly mentioned in Article 31 will have to be filled by "other relevant rules of international law" (para. 2);

(2) rules will be "relevant" where they apply as a matter of law in relation to state responsibility (paras. 3 and 5);

(3) other rules may be "relevant" because they provide an appropriate pattern for resolving a concrete problem in accordance with equitable principles. Such rules include: (a) international treaties not applicable to the particular claim, but dealing with similar questions; (b) customary rules concerning related fields of international law; and (c) acts of relevant international organizations and conferences, including the rules referred to as "soft law" (para. 4);

(4) rules of national law may also provide appropriate solutions and may therefore be "relevant" (para. 4);

On the scope of paragraph 35 of Decision 7 of the UNCC Governing Council

(5) the list of potential environmental and natural resource claims set forth in paragraph 35 of Decision 7

is not exhaustive (para. 11);

(6) damage or depletion which is not "direct" (i.e. of a type, or at a location, which might be too remote) will not be compensable (paras. 12 and 14);

(7) each claim should be considered in the context of its particular circumstances, guided by international practise and taking account of the extent of the illegality and gravity of the action occasioning the damage (para. 15);

On the extent of the right of a State to bring a claim

(8) any State may bring a claim for damage which has occurred in or to the land within its boundaries; internal waters; territorial sea; airspace above its land; and exclusive economic zone and continental shelf to the extent that damage occurred to resources over which it has jurisdiction or sovereign rights in accordance with international law (para. 19);

(9) States may bring a claim in relation to natural resources which they share with one or more other States, to the extent of their legal interest in that resource (para. 20);

(10) the possibility that a State may bring a claim in relation to damage to areas beyond national jurisdiction should not be excluded, provided that a clear legal interest can be demonstrated (para. 22);

On the extent of the right of an international organization to bring a claim

(11) since "international organization" means "international organization of States", non-governmental organizations may not directly bring their own claims, although the question remains open whether organizations composed of States and non-governmental organizations may bring claims (para. 24);

(12) an international organization may submit a claim for damages only to its own interests, bearing in mind that expenses which are met out of regular budgets would not normally be recoverable (para. 25);

(13) the possibility that an international organization could file a claim in relation to environmental damage in areas beyond national jurisdiction should not be excluded, and would depend, *inter alia*, upon the organization being able to demonstrate that the activity in respect of which a claim was submitted fell within its objects and purposes and was otherwise *intra vires*, and that the organization had a legal interest in the environment to be protected and the manner of its protection and that it demonstrated an entitlement to that effect (para. 27);

On the definitions of "environmental damage" and "depletion of natural resources"

(14) "natural resources" refers to components of the environment that primarily have a commercial value, while "environmental damage" encompasses damage to components of the environment whose primary value is non-commercial (the inclusion of both concepts establishes a comprehensive approach which allows a broader range of claims to be brought, although there is a degree of overlap and complementarity between the two concepts) (para. 29);

(15) "environment" includes abiotic and biotic components, including air, water, soil, flora, fauna and the ecosystem formed by their interaction, and may also include cultural heritage, features of the landscape and environmental amenity (para. 31);

(16) a broad construction of "environment" would be consistent with recent international practice, and a narrow and exclusionary construction should only be taken if a broad approach would lead to absurd or unreasonable results (paras. 31 and 33);

(17) "environmental damage" refers to the impairment of the environment, that is to say a change which has a measurable adverse impact on the quality of a particular environment or any of its components (including its use and non-use values) and its ability to support and sustain an acceptable quality of life and a viable ecological balance (para. 34);

(18) injury to persons or property is included in other heads of damage and should not be included under "environmental damage";

(19) thresholds of damage established under instruments relating to the laws of war should not be a defence against claims arising in relation to the illegal use of force (para. 36);

(20) "depletion of natural resources" is a quantitative notion relating to the reduction in the amount, or a qualitative notion relating to the realizable commercial value, of natural resource assets which occur in their natural state and which have a primarily commercial use or commercial value (paras. 39 and 40);

On valuation of "environmental damage" and "depletion of natural resources"

(21) where compensation is due for damage caused by a wrongful act, the basis for that compensation under international law is reflected in the approach of the Permanent Court of International Justice in the *Chorzow Factory (Indemnity)* case (para. 45);

(22) that approach relates to the standard of compensation but does not provide guidance as to how to value the damage which has occurred (para. 45);

(23) the reasonableness of measures which are the subject of a compensation claim must be determined on a case-by-case basis, and will depend on a balancing of the benefit to be achieved and the cost incurred, taking into account several factors (para. 47);

(24) each claim must be accompanied by an appropriate showing of basic elements necessary to support a claim (para. 48);

Valuation of "environmental damage"

(a) *Abatement and prevention of environmental damage (including expenses directly relating to fighting oil fires and stemming the flow of oil in coastal and international waters)*

(25) the methodology for determining the amount of compensation would be the costs actually incurred in taking such measures (para. 50);

(b) *Reasonable measures already taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment*

(26) the environmental as well as the economic costs of clean-up measures should be considered, in accordance with the basic requirement of mitigation or avoidance of damage (para. 53);

(27) the basic aim of restoration should be to reinstate the ecologically significant functions of injured resources and the associated public uses and amenities supported by such function (para. 55);

(28) the requirement that measures undertaken be "reasonable" implies that the most cost-effective means should be utilized (para. 56);

(29) for clean-up and restoration measures already carried out, or for future measures, damages would consist of the expenses incurred in carrying out those measures, subject to their being reasonable and cost-effective (para. 58);

(c) *Reasonable monitoring and assessment of the environmental damage for the purpose of evaluating and abating harm and restoring the environment*

and

(d) *Reasonable monitoring of public health and performing medical screening for the purposes of investigation and combating increased health risks as a result of the environmental damage*

(30) monitoring and assessment activities must be reasonable in relation to the scope of potential harm, and measures should be carried out in a cost-effective manner (para. 59);

(31) the reasonableness of activities must be determined in light of the information available to decision-makers at the time that such activities are undertaken, taking due account of the precautionary principle (para. 62);

Other environmental damage

(32) recoverable loss under this additional head could include (a) recoveries for permanent damage to the environment where clean-up or restoration would not be physically possible, reasonable or otherwise feasible, or where clean-up or restoration was not successful; and (b) recoveries for interim damage pending full clean-up or restoration (para. 63);

(33) established methodologies for determining lost value include market price, appraisal value, travel cost methodology, and hedonic pricing (para. 65);

(34) losses relating to commercial uses of an environmental resource and resource-based governmental revenues should not be included under this head as they are separately recoverable (para. 66);

(35) as to non-use, the only available methodology for assessing values is contingent valuation methodology (CVM) (para. 68);

(36) other approaches for valuing environmental damage include approaches based on "best judgement", on equitable considerations, or on a schedule of damages based on average restoration and damage costs (paras. 69-70);

(e) Depletion of or damage to natural resources

(37) there are various ways to determine the value of an asset: accounting methods such as net book value and replacement cost, methods designed to calculate market value (such as the current market price of the resource), comparable sales values, and net present value calculated according to the discounted cash flow (DCF) method (para. 73).

Section VI

ANNEXES

ANNEX I

THE UNEP PROGRAMME FOR THE DEVELOPMENT AND PERIODIC REVIEW OF ENVIRONMENTAL LAW FOR THE 1990S (EXCERPTS)

The UNEP Programme for the Development and Periodic Review of Environmental Law for the 1990s (Excerpts)⁸

E. *Legal and administrative mechanisms for the prevention and pollution and other environmental damage*

Objective:

To assist States in developing and implementing programmes of action for the prevention and redress of pollution and other environmental damage.

Strategy:

Promote development of legal and administrative measures to facilitate access to information on, and effective identification, control and management of, potentially harmful activities prior to their commencement and during their continuance, and to ensure the availability of appropriate redress for environmental damage.

Activities:

- (a) Further develop rules and procedures for appropriate remedies to victims of damage from environmentally harmful activities as well as appropriate provisions for potential victims of such damage by means, *inter alia*, of:
 - (i) Equal and non-discriminatory access to national administrative and judicial processes and procedures;
 - (ii) Use of economic and other innovative incentives for prevention and mitigation of pollution and other environmental damage;
 - (iii) Mechanisms for compensation and restoration, taking into account their potential preventive effects.
- (b) Develop, as necessary, suitable legal instruments, within the framework of global, regional or subregional instruments, on redress, including compensation and restoration, for environmental damage;
- (c) Develop, as necessary, suitable legal instruments, for the prevention of environmental damage;
- (d) Assist States, in particular developing countries and countries with economies in transition, in the development and implementation of necessary legislation and related administrative and institutional mechanisms for the implementation of relevant international instruments or national policies on the prevention of and redress for environmental damage.

⁸Adopted by decision 1725 of the Governing Council of UNEP, 21 May 1993.

ANNEX 2

INTERNATIONAL ENVIRONMENTAL LAW AIMING AT SUSTAINABLE DEVELOPMENT: UNEP POSITION PAPER (EXCERPTS)⁹

Liability and Compensation

50. In accordance with the general principles of international law, every internationally wrongful act of a State entails its international responsibility. This equally applies in the field of international environmental law. Such responsibility would include, apart from cessation of the wrongful act and other obligations, liability for damage caused including payment of appropriate compensation. Transboundary harm caused by an act or activity which is otherwise not prohibited by international law may also entail liability.

51. Both the Stockholm and Rio Declarations have called for the further development of international law regarding liability and compensation for environmental damage. This remains a major challenge for the development of international environmental law. The draft articles developed by the International Law Commission (ILC) so far: deal with prevention; concern themselves primarily with activities bearing inherent risk of transboundary harm; place obligation of due diligence and not obligation of result upon the State; leave open the need to define operator, as opposed to State, liability for significant harm; and emphasize the need to provide fora for expeditious settlement of claims to ensure innocent victims are not left to bear the loss. In addition to already established regimes, questions concerning liability are under negotiation in various other international fora.

52. International instruments that establish procedures or otherwise facilitate the settlement of international environmental damage claims through the use of private international law or national law are increasingly important. In this regard, States should develop national law regarding liability and compensation and ensure equal rights and remedies to victims of environmental harm, including transboundary harm.

53. In addressing issues relating to liability and compensation, the outcome of the Expert Group Meeting on Liability and Compensation for Environmental Damage Arising from Military Activities, organized by UNEP in collaboration with the Foundation for International Environmental Law and Development (FIELD) during 1995-1996 has been taken into account.

57. (a) Developing further international law regarding responsibility, liability and compensation for significant environmental harm caused by activities within their jurisdiction or control to areas beyond their jurisdiction.
- (b) Developing national law regarding liability and compensation and providing equal rights and remedies to victims of environmental harm, including transboundary harm.

⁹Prepared in accordance with decision 18/9 of the Governing Council of UNEP, 26 May 1995

ANNEX 3

UNITED NATIONS SECURITY COUNCIL

RESOLUTION 674 (1990)

UNITED
NATIONS



SECURITY COUNCIL

Distr.
General

S/RES/674 (1990)
29 October 1990

Adopted by the Security Council at its 2951st meeting
on 29 October 1990

The Security Council,

Recalling its resolutions 660 (1990), 661 (1990), 662 (1990), 664 (1990), 665 (1990), 666 (1990), 667 (1990) and 670 (1990),

Stressing the urgent need for the immediate and unconditional withdrawal of all Iraqi forces from Kuwait, for the restoration of Kuwait's sovereignty, independence and territorial integrity, and of the authority of its legitimate Government,

Condemning the actions by the Iraqi authorities and occupying forces to take third State nationals hostage and to mistreat and oppress Kuwaiti and third State nationals, and the other actions reported to the Council such as the destruction of Kuwaiti demographic records, forced departure of Kuwaitis, and relocation of population in Kuwait and the unlawful destruction and seizure of public and private property in Kuwait including hospital supplies and equipment, in violation of the decisions of this Council, the Charter of the United Nations, the Fourth Geneva Convention, the Vienna Conventions on Diplomatic and Consular Relations and international law,

Expressing grave alarm over the situation of nationals of third States in Kuwait and Iraq, including the personnel of the diplomatic and consular missions of such States, Reaffirming that the Fourth Geneva Convention applies to Kuwait and that as a High Contracting Party to the Convention Iraq is bound to comply fully with all its terms and, in particular is liable under the Convention in respect of the grave breaches committed by it, as are individuals who commit or order the commission of grave breaches,

Recalling the efforts of the Secretary-General concerning the safety and well-being of third State nationals in Iraq and Kuwait,

Deeply concerned at the economic cost, and at the loss and suffering caused to individuals in Kuwait and Iraq as a result of the invasion and occupation of Kuwait by Iraq,

Acting under Chapter VII of the Charter of the United Nations,

* * *

Reaffirming the goal of the international community of maintaining international peace and security by seeking to resolve international disputes and conflicts through peaceful means,

Recalling also the important role that the United Nations and its Secretary-General have played in the peaceful solution of disputes and conflicts in conformity with the provisions of the United Nations Charter,

Alarmed by the dangers of the present crisis caused by the Iraqi invasion and occupation of Kuwait, directly threatening international peace and security, and seeking to avoid any further worsening of the situation,

Calling upon Iraq to comply with the relevant resolutions of the Security Council, in particular resolutions 660 (1990), 662 (1990) and 664 (1990),

Reaffirming its determination to ensure compliance by Iraq with the Security Council resolutions by maximum use of political and diplomatic means,

A

1. Demands that the Iraqi authorities and occupying forces immediately cease and desist from taking third State nationals hostage, and mistreating and oppressing Kuwaiti and third State nationals, and from any other actions such as those reported to the Council and described above, violating the decisions of this Council, the Charter of the United Nations, the Fourth Geneva Convention, the Vienna Conventions on Diplomatic and Consular Relations and international law;
2. Invites States to collate substantiated information in their possession or submitted to them on the grave breaches by Iraq as per paragraph 1 above and to make this information available to the Council;
3. Reaffirms its demand that Iraq immediately fulfil its obligations to third State nationals in Kuwait and Iraq, including the personnel of diplomatic and consular missions, under the Charter, the Fourth Geneva Convention, the Vienna Conventions on Diplomatic and Consular Relations, general principles of international law and the relevant resolutions of the Council;
4. Reaffirms further its demand that Iraq permit and facilitate the immediate departure from Kuwait and Iraq of those third State nationals, including diplomatic and consular personnel, who wish to leave;
5. Demands that Iraq ensure the immediate access to food, water and basic services necessary to the protection and well-being of Kuwaiti nationals and of nationals of third States in Kuwait and Iraq, including the personnel of diplomatic and consular missions in Kuwait;
6. Reaffirms its demand that Iraq immediately protect the safety and well-being of diplomatic and consular personnel and premises in Kuwait and in Iraq, take no action to hinder these diplomatic and consular missions in the performance of their functions, including access to their nationals and the protection of their person and interest and rescind its orders for the closure of diplomatic and consular missions in Kuwait and the withdrawal of the immunity of their personnel;
7. Requests the Secretary-General, in the context of the continued exercise of his good offices concerning the safety and well being of third State nationals in Iraq and Kuwait, to seek to achieve the objectives of paragraphs 4, 5 and 6 and, in particular, the provision of food, water and basic services to Kuwaiti nationals and to the diplomatic and consular missions in Kuwait and the evacuation of third State nationals;
8. Reminds Iraq that under international law it is liable for any loss, damage or injury arising in regard to Kuwait and third States, and their nationals and corporations, as a result of the invasion and illegal occupation of Kuwait by Iraq;

9. Invites States to collect relevant information regarding their claims, and those of their nationals and corporations, for restitution or financial compensation by Iraq with a view to such arrangements as may be established in accordance with international law;

10. Requires that Iraq comply with the provisions of the present resolution and its previous resolutions, failing which the Council will need to take further measures under the Charter;

11. Decides to remain actively and permanently seized of the matter until Kuwait has regained its independence and peace has been restored in conformity with the relevant resolutions of the Security Council;

B

12. Reposes its trust in the Secretary-General to make available his good offices and, as he considers appropriate, to pursue them and undertake diplomatic efforts in order to reach a peaceful solution to the crisis cause by the Iraqi invasion and occupation of Kuwait on the basis of Security Council resolutions 660 (1990), 662 (1990) and 664 (1990), and calls on all States, both those in the region and others, to pursue on this basis their efforts to this end, in conformity with the Charter, in order to improve the situation and restore peace, security and stability;

13. Requests the Secretary-General to report to the Security Council on the results of his good offices and diplomatic efforts.

ANNEX 4

UNITED NATIONS SECURITY COUNCIL

RESOLUTION 687, 3 APRIL 1991

S/RES/687 (1991)

3 April 1991

Adopted by the Security Council at its 2981st meeting,
on 3 April 1991

The Security Council,

Recalling its resolutions 660 (1990) of 2 August 1990, 661 (1990) of 6 August 1990, 662 (1990) of 9 August 1990, 664 (1990) of 18 August 1990, 665 (1990) of 25 August 1990, 666 (1990) of 13 September 1990, 667 (1990) of 16 September 1990, 669 (1990) of 24 September 1990, 670 (1990) of 25 September 1990, 674 (1990) of 29 October 1990, 677 (1990) of 28 November 1990, 678 (1990) of 29 November 1990 and 686 (1991) of 2 March 1991,

Welcoming the restoration to Kuwait of its sovereignty, independence and territorial integrity and the return of its legitimate Government,

Affirming the commitment of all Member States to the sovereignty, territorial integrity and political independence of Kuwait and Iraq, and noting the intention expressed by the Member States cooperating with Kuwait under paragraph 2 of resolution 678 (1990) to bring their military presence in Iraq to an end as soon as possible consistent with paragraph 8 of resolution 686 (1991),

Reaffirming the need to be assured of Iraq's peaceful intentions in the light of its unlawful invasion and occupation of Kuwait,

Taking note of the letter sent by the Minister for Foreign Affairs of Iraq on 27 February 1991 and those sent pursuant to resolution 686 (1991),

Noting that Iraq and Kuwait, as independent sovereign States, signed at Baghdad on 4 October 1963 "Agreed Minutes Between the State of Kuwait and the Republic of Iraq Regarding the Restoration of Friendly Relations, Recognition and Related Matters", thereby recognizing formally the boundary between Iraq and Kuwait and the allocation of islands, which were registered with the United Nations in accordance with Article 102 of the Charter of the United Nations and in which Iraq recognized the independence and complete sovereignty of the State of Kuwait within its borders as specified and accepted in the letter of the Prime Minister of Iraq dated 21 July 1932, and as accepted by the Ruler of Kuwait in his letter dated 10 August 1932,

Conscious of the need for demarcation of the said boundary,

Conscious also of the statements by Iraq threatening to use weapons in violation of its obligations under the Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, and of its prior use of chemical weapons and affirming that grave consequences would follow any further use by Iraq of such weapons,

Recalling that Iraq has subscribed to the Declaration adopted by all States participating in the Conference of States Parties to the 1925 Geneva Protocol and Other Interested States, held in Paris from 7 to 11 January 1989, establishing the objective of universal elimination of chemical and biological weapons,

Recalling also that Iraq has signed the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, of 10 April 1972,

Noting the importance of Iraq ratifying this Convention,

Noting moreover the importance of all States adhering to this Convention and encouraging its forthcoming Review Conference to reinforce the authority, efficiency and universal scope of the convention,

Stressing the importance of an early conclusion by the Conference on Disarmament of its work on a Convention on the Universal Prohibition of Chemical Weapons and of universal adherence thereto,

Aware of the use by Iraq of ballistic missiles in unprovoked attacks and therefore of the need to take specific measures in regard to such missiles located in Iraq,

Concerned by the reports in the hands of Member States that Iraq has attempted to acquire materials for a nuclear-weapons programme contrary to its obligations under the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968,

Recalling the objective of the establishment of a nuclear-weapons-free zone in the region of the Middle East,

Conscious of the threat that all weapons of mass destruction pose to peace and security in the area and of the need to work towards the establishment in the Middle East of a zone free of such weapons,

Conscious also of the objective of achieving balanced and comprehensive control of armaments in the region,

Conscious further of the importance of achieving the objectives noted above using all available means, including a dialogue among the States of the region,

Noting that resolution 686 (1991) marked the lifting of the measures imposed by resolution 661 (1990) in so far as they applied to Kuwait,

Noting that despite the progress being made in fulfilling the obligations of resolution 686 (1991), many Kuwaiti and third country nationals are still not accounted for and property remains unreturned,

Recalling the International Convention against the Taking of Hostages, opened for signature at New York on 18 December 1979, which categorizes all acts of taking hostages as manifestations of international terrorism,

Deploing threats made by Iraq during the recent conflict to make use of terrorism against targets outside Iraq and the taking of hostages by Iraq,

Taking note with grave concern of the reports of the Secretary-General of 20 March 1991 and 28 March 1991, and conscious of the necessity to meet urgently the humanitarian needs in Kuwait and Iraq,

Bearing in mind its objective of restoring international peace and security in the area as set out in recent resolutions of the Security Council,

Conscious of the need to take the following measures acting under Chapter VII of the Charter,

1. Affirms all thirteen resolutions noted above, except as expressly changed below to achieve the goals of this resolution, including a formal ceasefire;

A

2. Demands that Iraq and Kuwait respect the inviolability of the international boundary and the allocation of islands set out in the "Agreed Minutes Between the State of Kuwait and the Republic of Iraq Regarding the Restoration of Friendly Relations, Recognition and Related Matters", signed by them in the exercise of their sovereignty at Baghdad on 4 October 1963 and registered with the United Nations and published by the United Nations in document 7063, United Nations, Treaty Series, 1964;
3. Calls upon the Secretary-General to lend his assistance to make arrangements with Iraq and Kuwait to demarcate the boundary between Iraq and Kuwait, drawing on appropriate material, including the map transmitted by Security Council document S/22412 and to report back to the Security Council within one month;
4. Decides to guarantee the inviolability of the above-mentioned international boundary and to take as appropriate all necessary measures to that end in accordance with the Charter of the United Nations;

B

5. Requests the Secretary-General, after consulting with Iraq and Kuwait, to submit within three days to the Security Council for its approval a plan for the immediate deployment of a United Nations observer unit to monitor the Khor Abdullah and a demilitarized zone, which is hereby established, extending ten kilometres into Iraq and five kilometres into Kuwait from the boundary referred to in the "Agreed Minutes Between the State of Kuwait and the Republic of Iraq Regarding the Restoration of Friendly Relations, Recognition and Related Matters" of 4 October 1963; to deter violations of the boundary through its presence in and surveillance of the demilitarized zone; to observe any hostile or potentially hostile action mounted from the territory of one State to the other; and for the Secretary-General to report regularly to the Security Council on the operations of the unit, and immediately if there are serious violations of the zone or potential threats to peace;
6. Notes that as soon as the Secretary-General notifies the Security Council of the completion of the deployment of the United Nations observer unit, the conditions will be established for the Member States cooperating with Kuwait in accordance with resolution 678 (1990) to bring their military presence in Iraq to an end consistent with resolution 686 (1991);

C

7. Invites Iraq to reaffirm unconditionally its obligations under the Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, and to ratify the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, of 10 April 1972;
8. Decides that Iraq shall unconditionally accept the destruction, removal, or rendering harmless, under international supervision, of:
 - (a) All chemical and biological weapons and all stocks of agents and all related subsystems and components and all research, development, support and manufacturing facilities;
 - (b) All ballistic missiles with a range greater than 150 kilometres and related major parts, and repair and production facilities;
9. Decides, for the implementation of paragraph 8 above, the following:
 - (a) Iraq shall submit to the Secretary-General, within fifteen days of the adoption of the present resolution, a declaration of the locations, amounts and types of all items specified in paragraph 8 and agree to urgent, on-site inspection as specified below;
 - (b) The Secretary-General, in consultation with the appropriate Governments and, where appropriate, with the Director-General of the World Health Organization, within forty-five days of the passage of the present resolution, shall develop, and submit to the Council for approval, a plan calling for the completion of the following acts within forty-five days of such approval:

- (i) The forming of a Special Commission, which shall carry out immediate on-site inspection of Iraq's biological, chemical and missile capabilities, based on Iraq's declarations and the designation of any additional locations by the Special Commission itself;
- (ii) The yielding by Iraq of possession to the Special Commission for destruction, removal or rendering harmless, taking into account the requirements of public safety, of all items specified under paragraph 8 (a) above, including items at the additional locations designated by the Special Commission under paragraph 9 (b) (i) above and the destruction by Iraq, under the supervision of the Special Commission, of all its missile capabilities, including launchers, as specified under paragraph 8 (b) above;
- (iii) The provision by the Special Commission of the assistance and cooperation to the Director-General of the International Atomic Energy Agency required in paragraphs 12 and 13 below;

10. Decides that Iraq shall unconditionally undertake not to use, develop, construct or acquire any of the items specified in paragraphs 8 and 9 above and requests the Secretary-General, in consultation with the Special Commission, to develop a plan for the future ongoing monitoring and verification of Iraq's compliance with this paragraph, to be submitted to the Security Council for approval within one hundred and twenty days of the passage of this resolution;

11. Invites Iraq to reaffirm unconditionally its obligations under the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968;

12. Decides that Iraq shall unconditionally agree not to acquire or develop nuclear weapons or nuclear-weapons-usable material or any subsystems or components or any research, development, support or manufacturing facilities related to the above; to submit to the Secretary-General and the Director-General of the International Atomic Energy Agency within fifteen days of the adoption of the present resolution a declaration of the locations, amounts, and types of all items specified above; to place all of its nuclear-weapons-usable materials under the exclusive control, for custody and removal, of the International Atomic Energy Agency, with the assistance and cooperation of the Special Commission as provided for in the plan of the Secretary-General discussed in paragraph 9 (b) above; to accept, in accordance with the arrangements provided for in paragraph 13 below, urgent on-site inspection and the destruction, removal or rendering harmless as appropriate of all items specified above; and to accept the plan discussed in paragraph 13 below for the future ongoing monitoring and verification of its compliance with these undertakings;

13. Requests the Director-General of the International Atomic Energy Agency, through the Secretary-General, with the assistance and cooperation of the Special Commission as provided for in the plan of the Secretary-General in paragraph 9 (b) above, to carry out immediate on-site inspection of Iraq's nuclear capabilities based on Iraq's declarations and the designation of any additional locations by the Special Commission; to develop a plan for submission to the Security Council within forty-five days calling for the destruction, removal, or rendering harmless as appropriate of all items listed in paragraph 12 above; to carry out the plan within forty-five days following approval by the Security Council; and to develop a plan, taking into account the rights and obligations of Iraq under the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968, for the future ongoing monitoring and verification of Iraq's compliance with paragraph 12 above, including an inventory of all nuclear material in Iraq subject to the Agency's verification and inspections to confirm that Agency safeguards cover all relevant nuclear activities in Iraq, to be submitted to the Security Council for approval within one hundred and twenty days of the passage of the present resolution;

14. Takes note that the actions to be taken by Iraq in paragraphs 8, 9, 10, 11, 12 and 13 of the present resolution represent steps towards the goal of establishing in the Middle East a zone free from weapons of mass destruction and all missiles for their delivery and the objective of a global ban on chemical weapons;

D

15. Requests the Secretary-General to report to the Security Council on the steps taken to facilitate the return of all Kuwaiti property seized by Iraq, including a list of any property that Kuwait claims has not been returned or which has not been returned intact;

E

16. Reaffirms that Iraq, without prejudice to the debts and obligations of Iraq arising prior to 2 August 1990, which will be addressed through the normal mechanisms, is liable under international law for any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals and corporations, as a result of Iraq's unlawful invasion and occupation of Kuwait;
17. Decides that all Iraqi statements made since 2 August 1990 repudiating its foreign debt are null and void, and demands that Iraq adhere scrupulously to all of its obligations concerning servicing and repayment of its foreign debt;
18. Decides also to create a fund to pay compensation for claims that fall within paragraph 16 above and to establish a Commission that will administer the fund;
19. Directs the Secretary-General to develop and present to the Security Council for decision, no later than thirty days following the adoption of the present resolution, recommendations for the fund to meet the requirement for the payment of claims established in accordance with paragraph 18 above and for a programme to implement the decisions in paragraphs 16, 17 and 18 above, including: administration of the fund; mechanisms for determining the appropriate level of Iraq's contribution to the fund based on a percentage of the value of the exports of petroleum and petroleum products from Iraq not to exceed a figure to be suggested to the Council by the Secretary-General, taking into account the requirements of the people of Iraq, Iraq's payment capacity as assessed in conjunction with the international financial institutions taking into consideration external debt service, and the needs of the Iraqi economy; arrangements for ensuring that payments are made to the fund; the process by which funds will be allocated and claims paid; appropriate procedures for evaluating losses, listing claims and verifying their validity and resolving disputed claims in respect of Iraq's liability as specified in paragraph 16 above; and the composition of the Commission designated above;

E

20. Decides, effective immediately, that the prohibitions against the sale or supply to Iraq of commodities or products, other than medicine and health supplies, and prohibitions against financial transactions related thereto contained in resolution 661 (1990) shall not apply to foodstuffs notified to the Security Council Committee established by resolution 661 (1990) concerning the situation between Iraq and Kuwait or, with the approval of that Committee, under the simplified and accelerated "no-objection" procedure, to materials and supplies for essential civilian needs as identified in the report of the Secretary-General dated 20 March 1991, and in any further findings of humanitarian need by the Committee;
21. Decides that the Security Council shall review the provisions of paragraph 20 above every sixty days in the light of the policies and practices of the Government of Iraq, including the implementation of all relevant resolutions of the Security Council, for the purpose of determining whether to reduce or lift the prohibitions referred to therein;
22. Decides that upon the approval by the Security Council of the programme called for in paragraph 19 above and upon Council agreement that Iraq has completed all actions contemplated in paragraphs 8, 9, 10, 11, 12 and 13 above, the prohibitions against the import of commodities and products originating in Iraq and the prohibitions against financial transactions related thereto contained in resolution 661 (1990) shall have no further force or effect;
23. Decides that, pending action by the Security Council under paragraph 22 above, the Security Council Committee established by resolution 661 (1990) shall be empowered to approve, when required to assure adequate financial resources on the part of Iraq to carry out the activities under paragraph 20 above, exceptions to the prohibition against the import of commodities and products originating in Iraq;
24. Decides that, in accordance with resolution 661 (1990) and subsequent related resolutions and until a further decision is taken by the Security Council, all States shall continue to prevent the sale or supply, or the promotion or facilitation of such sale or supply, to Iraq by their nationals, or from their territories or using their flag vessels or aircraft, of:
 - (a) Arms and related material of all types, specifically including the sale or transfer through other means of all forms of conventional military equipment, including for paramilitary forces, and spare parts and components

and their means of production, for such equipment;

- (b) Items specified and defined in paragraphs 8 and 12 above not otherwise covered above;
- (c) Technology under licensing or other transfer arrangements used in the production, utilization or stockpiling of items specified in subparagraphs (a) and (b) above;
- (d) Personnel or materials for training or technical support services relating to the design, development, manufacture, use, maintenance or support of items specified in subparagraphs (a) and (b) above;

25. Calls upon all States and international organizations to act strictly in accordance with paragraph 24 above, notwithstanding the existence of any contracts, agreements, licences or any other arrangements;

26. Requests the Secretary-General, in consultation with appropriate Governments, to develop within sixty days, for the approval of the Security Council, guidelines to facilitate full international implementation of paragraphs 24 and 25 above and paragraph 27 below, and to make them available to all States and to establish a procedure for updating these guidelines periodically;

27. Calls upon all States to maintain such national controls and procedures and to take such other actions consistent with the guidelines to be established by the Security Council under paragraph 26 above as may be necessary to ensure compliance with the terms of paragraph 24 above, and calls upon international organizations to take all appropriate steps to assist in ensuring such full compliance;

28. Agrees to review its decisions in paragraphs 22, 23, 24 and 25 above, except for the items specified and defined in paragraphs 8 and 12 above, on a regular basis and in any case one hundred and twenty days following passage of the present resolution, taking into account Iraq's compliance with the resolution and general progress towards the control of armaments in the region;

29. Decides that all States, including Iraq, shall take the necessary measures to ensure that no claim shall lie at the instance of the Government of Iraq, or of any person or body in Iraq, or of any person claiming through or for the benefit of any such person or body, in connection with any contract or other transaction where its performance was affected by reason of the measures taken by the Security Council in resolution 661 (1990) and related resolutions;

G

30. Decides that, in furtherance of its commitment to facilitate the repatriation of all Kuwaiti and third country nationals, Iraq shall extend all necessary cooperation to the International Committee of the Red Cross, providing lists of such persons, facilitating the access of the International Committee of the Red Cross to all such persons wherever located or detained and facilitating the search by the International Committee of the Red Cross for those Kuwaiti and third country nationals still unaccounted for;

31. Invites the International Committee of the Red Cross to keep the Secretary-General apprised as appropriate of all activities undertaken in connection with facilitating the repatriation or return of all Kuwaiti and third country nationals or their remains present in Iraq on or after 2 August 1990;

H

32. Requires Iraq to inform the Security Council that it will not commit or support any act of international terrorism or allow any organization directed towards commission of such acts to operate within its territory and to condemn unequivocally and renounce all acts, methods and practices of terrorism;

33. Declares that, upon official notification by Iraq to the Secretary-General and to the Security Council of its acceptance of the provisions above, a formal ceasefire is effective between Iraq and Kuwait and the Member States cooperating with Kuwait in accordance with resolution 678 (1990);

34. Decides to remain seized of the matter and to take such further steps as may be required for the implementation of the present resolution and to secure peace and security in the area.

ANNEX 5

UNITED NATIONS SECURITY COUNCIL

RESOLUTION 692, 20 MAY 1991

UNITED
NATIONS



SECURITY COUNCIL

Distr.
General

S/RES/692 (1991)
20 May 1991

Adopted by the Security Council at its 2987th meeting on
20 May 1991

The Security Council,

Recalling its resolutions 694 (1990) of 29 October 1990, 686 (1991) of 2 March 1991 and 687 (1991) of 3 April 1991, concerning the liability of Iraq, without prejudice to its debts and obligations arising prior to 2 August 1990, for any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals and corporations, as a result of Iraq's unlawful invasion and occupation of Kuwait,

Taking note of the Secretary-General's report of 2 May 1991 (S/22559), submitted in accordance with paragraph 19 of resolution 687 (1991),

Acting under Chapter VII of the Charter of the United Nations,

1. Expresses its appreciation to the Secretary-General for his report of 2 May 1991;
2. Welcomes the fact that the Secretary-General will now undertake the appropriate consultations requested by paragraph 19 of resolution 687 (1991) so that he will be in a position to recommend to the Security Council for decision as soon as possible the figure which the level of Iraq's contribution to the Fund will not exceed;
3. Decides to establish the Fund and Commission referred to in paragraph 18 of resolution 687 (1991) in accordance with Part I of the Secretary-General's report, and that the Governing Council will be located at the Offices of the United Nations at Geneva and that the Governing Council may decide whether some of the activities of the Commission should be carried out elsewhere;
4. Requests the Secretary-General to take the actions necessary to implement paragraphs 2 and 3 above in consultation with the members of the Governing Council;
5. Directs the Governing Council to proceed in an expeditious manner to implement the provisions of Section E of resolution 687 (1991), taking into account the recommendations in section II of the Secretary-General's report;

6. Decides that the requirement for Iraqi contributions shall apply in the manner to be prescribed by the Governing Council with respect to all Iraqi petroleum and petroleum products exported from Iraq after 3 April 1991 as well as such petroleum and petroleum products exported earlier but not delivered or not paid for as a specific result of the prohibitions contained in resolution 661 (1990);
7. Requests the Governing Council to report as soon as possible on the actions it has taken with regard to the mechanisms for determining the appropriate level of Iraq's contribution to the Fund and the arrangements for ensuring that payments are made to the Fund, so that the Security Council can give its approval in accordance with paragraph 22 of resolution 687 (1991);
8. Requests that all States and international organizations cooperate with the decisions of the Governing Council taken pursuant to paragraph 5 of the present resolution, and also requests that the Governing Council keep the Security Council informed on this matter;
9. Decides that, if the Governing Council notifies the Security Council that Iraq has failed to carry out decisions of the Governing Council taken pursuant to paragraph 5 of this resolution, the Security Council intends to retain or to take action to reimpose the prohibition against the import of petroleum and petroleum products originating in Iraq and financial transactions related thereto;
10. Decides also to remain seized of this matter and that the Governing Council will submit periodic reports to the Secretary-General and the Security Council.

ANNEX 6

UNITED NATIONS SECURITY COUNCIL

RESOLUTION 705, 15 AUGUST 1991

UNITED
NATIONS



SECURITY COUNCIL

Distr.
General

S/RES/692 (1991)
20 May 1991

Adopted by the Security Council at its 3004th meeting
on 15 August 1991

The Security Council,

Having considered the note of 30 May 1991 of the Secretary-General pursuant to paragraph 13 of his report of 2 May 1991 (S/22559) which was annexed to the Secretary-General's letter of 30 May 1991 to the President of the Security Council (S/22661),

Acting under Chapter VII of the Charter,

1. Expresses its appreciation to the Secretary-General for his note of 30 May 1991 which was annexed to his letter to the President of the Security Council of the same date (S/22661);
2. Decides that in accordance with the suggestion made by the Secretary-General in paragraph 7 of his note of 30 May 1991, compensation to be paid by Iraq (as arising from section E of resolution 687) shall not exceed 30 per cent of the annual value of the exports of petroleum and petroleum products from Iraq (as arising from section E of resolution 687) shall not exceed 30 per cent of the annual value of the exports of petroleum and petroleum products from Iraq;
3. Decides further, in accordance with paragraph 8 of the Secretary-General's note of 30 May 1991, to review the figure established in paragraph 2 above from time to time in light of data and assumptions contained in the letter of the Secretary-General (S/22661) and other relevant developments.

*[U.N. Security Council Resolution 705 (1991) was adopted unanimously on August 15, 1991.]

ANNEX 7

UNITED NATIONS SECURITY COUNCIL

RESOLUTION 706, 15 AUGUST 1991

UNITED
NATIONS



SECURITY COUNCIL

Distr.
General

S/RES/706 (1991)
15 August 1991

Adopted by the Security Council at its 3004th meeting,
on 15 August 1991

The Security Council,

Recalling its previous relevant resolutions and in particular resolutions 661 (1990), 686 (1991), 687 (1991), 688 (1991), 692 (1991), 699 (1991) and 705 (1991),

Taking note of the report (S/22799) dated 15 July 1991 of the inter-agency mission headed by the Executive Delegate of the Secretary-General for the United Nations inter-agency humanitarian programme for Iraq, Kuwait and the Iraq/Turkey and Iraq/Iran border areas,

Concerned by the serious nutritional and health situation of the Iraqi civilian population as described in this report, and by the risk of a further deterioration of this situation,

Concerned also that the repatriation or return of all Kuwaitis and third country nationals or their remains present in Iraq on or after 2 August 1990, pursuant to paragraph 2 (c) of resolution 686 (1991), and paragraphs 30 and 31 of resolution 687 (1991) has not yet been fully carried out,

Taking note of the conclusions of the above-mentioned report, and in particular of the proposal for oil sales by Iraq to finance the purchase of foodstuffs, medicines and materials and supplies for essential civilian needs for the purpose of providing humanitarian relief,

Taking note also of the letters dated 14 April 1991, 31 May 1991, 6 June 1991, 9 July 1991 and 22 July 1991 from the Minister of Foreign Affairs of Iraq and the Permanent Representative of Iraq to the Chairman of the Committee established by resolution 661 (1990) concerning the export from Iraq of petroleum and petroleum products,

Convinced of the need for equitable distribution of humanitarian relief to all segments of the Iraqi civilian population through effective monitoring and transparency.

Recalling and reaffirming in this regard its resolution 688 (1991) and in particular the importance which the Council attaches to Iraq allowing unhindered access by international humanitarian organizations to all those in need of assistance in all parts of Iraq and making available all necessary facilities for their operation, and in this connection stressing the important and continuing role played by the Memorandum of Understanding between the United Nations and Government of Iraq of 18 April 1991 (S/22663),

Recalling that, pursuant to resolutions 687 (1991), 692 (1991) and 699 (1991), Iraq is required to pay the full costs of the Special Commission and the IAEA in carrying out the tasks authorized by section C of resolution 687 (1991), and that the Secretary-General in his report to the Security Council of 15 July 1991 (S/22792), submitted pursuant to paragraph 4 of resolution 699 (1991), expressed the view that the most obvious way of obtaining financial resources from Iraq to meet the costs of the Special Commission and the IAEA would be to authorize the sale of some Iraqi petroleum and petroleum products; recalling further that Iraq is required to pay its contributions to the Compensation Fund and half the costs of the Iraq-Kuwait Boundary Demarcation Commission, and recalling further that in its resolutions 686 (1991) and 687 (1991) the Security Council demanded that Iraq return in the shortest possible time all Kuwaiti property seized by it and requested the Secretary-General to take steps to facilitate this,

Acting under Chapter VII of the Charter,

1. Authorizes all States, subject to the decision to be taken by the Security Council pursuant to paragraph 5 below and notwithstanding the provisions of paragraphs 3 (a), 3 (b) and 4 of resolution 661 (1990), to permit the import, during a period of 6 months from the date of passage of the resolution pursuant to paragraph 5 below, of petroleum and petroleum products originating in Iraq sufficient to produce a sum to be determined by the Council following receipt of the report of the Secretary-General requested in paragraph 5 of this resolution but not to exceed 1.6 billion United States dollars for the purposes set out in this resolution and subject to the following conditions:

- (a) Approval of each purchase of Iraqi petroleum and petroleum products by the Security Council Committee established by resolution 661 (1990) following notification to the Committee by the State concerned,
- (b) Payment of the full amount of each purchase of Iraqi petroleum and petroleum products directly by the purchaser in the State concerned into an escrow account to be established by the United Nations and to be administered by the Secretary-General, exclusively to meet the purposes of this resolution.
- (c) Approval by the Council, following the report of the Secretary-General requested in paragraph 5 of this resolution, of a scheme for the purchase of foodstuffs, medicines and materials and supplies for essential civilian needs as referred to in paragraph 20 of resolution 687 (1991), in particular health related materials, all of which to be labelled to the extent possible as being supplied under this scheme, and for all feasible and appropriate United Nations monitoring and supervision for the purpose of assuring their equitable distribution to meet humanitarian needs in all regions of Iraq and to all categories of the Iraqi civilian population as well as all feasible and appropriate management relevant to this purpose, such a United Nations role to be available if desired for humanitarian assistance from other sources,
- (d) The sum authorized in this paragraph to be released by successive decisions of the Committee established by resolution 661 (1990) in three equal portions after the Council has taken the decision provided for in paragraph 5 below on the implementation of this resolution, and notwithstanding any other provision of this paragraph, the sum to be subject to review concurrently by the Council on the basis of its ongoing assessment of the needs and requirements,

2. Decides that a part of the sum in the account to be established by the Secretary-General shall be made available by him to finance the purchase of foodstuffs, medicines and materials and supplies for essential civilian needs, as referred to in paragraph 20 of resolution 687, and the cost to the United Nations of its roles under this resolution and of other necessary humanitarian activities in Iraq,

3. Decides further that a part of the sum in the account to be established by the Secretary-General shall be used by him for appropriate payments to the United Nations Compensation Fund, the full costs of carrying out the tasks authorized by Section C of resolution 687 (1991), the full costs incurred by the United Nations in facilitating the return of all Kuwaiti property seized by Iraq, and half the costs of the Boundary Commission,

4. Decides that the percentage of the value of exports of petroleum and petroleum products from Iraq, authorized under this resolution to be paid to the United Nations Compensation Fund, as called for in paragraph 19 of resolution 687 (1991), and as defined in paragraph 6 of resolution 692 (1991), shall be the same as the percentage decided by the Security Council in paragraph 2 of resolution 705 (1991) for payments to the Compensation Fund, until such time as the Governing Council of the Fund decides otherwise,
5. Requests the Secretary-General to submit within 20 days of the date of adoption of this resolution a report to the Security Council for decision on measures to be taken in order to implement paragraphs 1 (a), (b), (c), estimates of the humanitarian requirements of Iraq set out in paragraph 2 above and of the amount of Iraq's financial obligations set out in paragraph 3 above up to the end of the period of the authorization in paragraph 1 above, as well as the method for taking the necessary legal measures to ensure that the purposes of this resolution are carried out and the method for taking account of the costs of transportation of such Iraqi petroleum and petroleum products,
6. Further requests the Secretary-General in consultation with the International Committee of the Red Cross to submit within 20 days of the date of adoption of this resolution a report to the Security Council on activities undertaken in accordance with paragraph 31 of resolution 687 (1991) in connection with facilitating the repatriation or return of all Kuwaiti and third country nationals or their remains present in Iraq on or after 2 August 1990,
7. Requires the Government of Iraq to provide to the Secretary-General and appropriate international organizations on the first day of the month immediately following the adoption of the present resolution and on the first day of each month thereafter until further notice, a statement of the gold and foreign currency reserves it holds whether in Iraq or elsewhere,
8. Calls upon all States to cooperate fully in the implementation of this resolution,
9. Decides to remain seized of the matter.

ANNEX 8

UNITED NATIONS SECURITY COUNCIL

RESOLUTION 712, 19 SEPTEMBER 1991

UNITED
NATIONS



SECURITY COUNCIL

Distr.
General

S/RES/712 (1991)
19 September 1991

Adopted by the Security Council at its 3008th meeting,
on 19 September 1991

The Security Council,

Recalling its previous relevant resolutions and in particular resolutions

661 (1990), 686 (1991), 687 (1991), 688 (1991), 692 (1991), 699 (1991), 705
(1991) and 706 (1991),

Expressing its appreciation for the report (S/23006) dated 4 September 1991 submitted by the Secretary-General pursuant to paragraph 5 of resolution 706 (1991),

Reaffirming its concern about the nutritional and health situation of the Iraqi civilian population, and the risk of a further deterioration of this situation, and underlining the need in this context for fully up-to-date assessments of the situation in all parts of Iraq as a basis for the equitable distribution of humanitarian relief to all segments of the Iraqi civilian population,

Recalling that the activities to be carried out by or on behalf of the Secretary-General to meet the purposes referred to in resolution 706 (1991) and the present resolution enjoy the privileges and immunities of the United Nations,

Acting under Chapter VII of the Charter of the United Nations,

1. Confirms the figure mentioned in paragraph 1 of resolution 706 (1991) as the sum authorized for the purpose of that paragraph, and reaffirms its intention to review this sum on the basis of its ongoing assessment of the needs and requirements, in accordance with paragraph 1 (d) of resolution 706 (1991);
2. Invites the Committee established by resolution 661 (1990) to authorize immediately, pursuant to paragraph 1 (d) of resolution 706 (1991), the release by the Secretary-General from the escrow account of the first one-third portion of the sum referred to in paragraph 1 above, such release to take place as required subject to the

availability of funds in the account and, in the case of payments to finance the purchase of foodstuffs, medicines and materials and supplies for essential civilian needs which have been notified or approved in accordance with existing procedures, subject to compliance with the procedures laid down in the report of the Secretary-General as approved in paragraph 3 below;

3. Approves the recommendations in the Secretary-General's report as contained in its paragraphs 57 (d) and 58;

4. Encourages the Secretary-General and the Committee established by resolution 661 (1990) to cooperate, in close consultation with the Government of Iraq, on a continuing basis to ensure the most effective implementation of the scheme approved in this resolution;

5. Decides that petroleum and petroleum products subject to resolution 706 (1991) shall while under Iraqi title be immune from legal proceedings and not be subject to any form of attachment, garnishment or execution, and that all States shall take any steps that may be necessary under their respective domestic legal systems to assure this protection, and to ensure that the proceeds of sale are not diverted from the purposes laid down in resolution 706 (1991);

6. Reaffirms that the escrow account to be established by the United Nations and administered by the Secretary-General to meet the purposes of resolution 706 (1991) and the present resolution, like the Compensation Fund established by resolution 692 (1991), enjoys the privileges and immunities of the United Nations;

7. Reaffirms that the inspectors and other experts on mission for the

United Nations, appointed for the purpose of this resolution, enjoy privileges and immunities in accordance with the Convention on the Privileges and Immunities of the United Nations, and demands that Iraq shall them full freedom of movement and all necessary facilities;

8. Confirms that funds contributed from other sources may if desired, in accordance with paragraph 1 (c) of resolution 706 (1991), be deposited into the escrow account as a sub-account and be immediately available to meet Iraq's humanitarian needs as referred to in paragraph 20 of resolution 687 (1991) without any of the obligatory deductions and administrative costs specified in paragraphs 2 and 3 of resolution 706 (1991);

9. Urges that any provision to Iraq of foodstuffs, medicines or other items of a humanitarian character, in addition to those purchased with the funds referred to in paragraph 1 of this resolution, be undertaken through arrangements which assure their equitable distribution to meet humanitarian needs;

10. Requests the Secretary-General to take the actions necessary to implement the above decisions, and authorizes him to enter into any arrangements or agreements necessary to accomplish this;

11. Calls upon States to cooperate fully in the implementation of resolution 706 (1991) and the present resolution in particular with respect to any measures regarding the import of petroleum and petroleum products and the export of foodstuffs, medicines and materials and supplies for essential civilian needs as referred to in paragraph 20 of resolution 687 (1991), and also with respect to the privileges and immunities of the United Nations and its personnel implementing this resolution; and to ensure that there are no diversions from the purposes laid down in these resolutions;

12. Decides to remain seized of the matter.

ANNEX 9

UNITED NATIONS SECURITY COUNCIL

RESOLUTION 778, 2 OCTOBER 1992

UNITED
NATIONS



SECURITY COUNCIL

Distr.
General

S/RES/778 (1992)
2 October 1992

Adopted by the Security Council at its 3117th meeting,
on 2 October 1992

The Security Council,

Recalling its previous relevant resolutions and in particular resolutions 706 (1991) and 712 (1991),

Taking note of the letter of 15 July 1992 from the Secretary-General to the President of the Security Council on Iraq's compliance with the obligations placed on it by resolution 687 (1991) and subsequent resolutions,

Condemning Iraq's continued failure to comply with its obligations under relevant resolutions,

Reaffirming its concern about the nutritional and health situation of the Iraqi civilian population, and the risk of a further deterioration of this situation, and recalling in this regard its resolution 706 (1991) and 712 (1991), which provide a mechanism for providing humanitarian relief to the Iraqi population, and resolution 688 (1991), which provides a basis for humanitarian relief efforts in Iraq,

Having regard to the fact that the period of six months referred to in resolutions 706 (1991) and 712 (1991) expired on 18 March 1992,

Deploring Iraq's refusal to cooperate in the implementation of resolutions 706 (1991) and 712 (1991), which puts its civilian population at risk, and which results in the failure by Iraq to meet its obligations under relevant Security Council resolutions,

Recalling that the escrow account provided for in resolutions 706 (1991) and 712 (1991) will consist of Iraqi funds administered by the Secretary-General which will be used to pay contributions to the Compensation Fund, the full costs of carrying out the tasks authorized by section C of resolution 687 (1991), the full costs incurred by the United Nations in facilitating the return of all Kuwaiti property seized by Iraq, half the costs of the Boundary Commission, and the cost to the United Nations of implementing resolution 706 (1991) and of other necessary humanitarian activities in Iraq,

Recalling that Iraq, as stated in paragraph 16 of resolution 687 (1991), is liable for all direct damages resulting from its invasion and occupation of Kuwait, without prejudice to its debts and obligations arising prior to 2 August 1990, which will be addressed through the normal mechanisms,

Recalling its decision in resolution 692 (1991) that the requirement for Iraqi contributions to the Compensation Fund applies to certain Iraqi petroleum and petroleum products exported from Iraq after 2 April 1991,

Acting under Chapter VII of the Charter of the United Nations,

1. Decides that all States in which there are funds of the Government of Iraq, or its State bodies, corporations, or agencies, that represent the proceeds of sale of Iraqi petroleum or petroleum products, paid for by or on behalf of the purchaser on or after 6 August 1990, shall cause the transfer of those funds (or equivalent amounts) as soon as possible to the escrow account provided for in resolutions 706 (1991) and 712 (1991); provided that this paragraph shall not require any State to cause the transfer of such funds in excess of 200 million dollars or to cause the transfer of more than fifty per cent of the total funds transferred or contributed pursuant to paragraphs 1, 2 and 3 of this resolution; and further provided that States may exclude from the operation of this paragraph any funds which have already been released to a claimant or supplier prior to the adoption of this resolution, or any other funds subject to or required to satisfy the rights of third parties, at the time of the adoption of this resolution;
2. Decides that all States in which there are petroleum or petroleum products owned by the Government of Iraq, or its State bodies, corporations, or agencies, shall take all feasible steps to purchase or arrange for the sale of such petroleum or petroleum products at fair market value, and thereupon to transfer the proceeds as soon as possible to the escrow account provided for in resolution 706 (1991) and 712 (1991);
3. Urges all States to contribute funds from other sources to the escrow account as soon as possible;
4. Decides that all States shall provide the Secretary-General with any information needed for the effective implementation of this resolution and that they shall take the necessary measures to ensure that banks and other bodies and persons provide all relevant information necessary to identify the funds referred to in paragraphs 1 and 2 above and details of any transactions relating thereto, or the said petroleum or petroleum products, with a view to such information being utilized by all States and by the Secretary-General in the effective implementation of this resolution;
5. Requests the Secretary-General:
 - (a) To ascertain the whereabouts and amounts of the said petroleum products and the proceeds of sale referred to in paragraphs 1 and 2 of this resolution, drawing on the work already done under the auspices of the Compensation Commission, and report the results of the Security Council as soon as possible;
 - (b) To ascertain the costs of United Nations activities concerning the elimination of weapons of mass destruction, the provision of humanitarian relief in Iraq, and the other United Nations operations specified in paragraphs 2 and 3 of resolution 706 (1991); and
 - (c) to take the following actions:
 - (i) transfer to the Compensation Fund, from the funds referred to in paragraphs 1 and 2 of this resolution, the percentage referred to in paragraph 10 of this resolution; and
 - (ii) use of the remainder of funds referred to in paragraphs 1, 2 and 3 of this resolution for the costs of United Nations activities concerning the elimination of weapons of mass destruction, the provision of humanitarian relief in Iraq, and the other United Nations operations specified in paragraphs 2 and 3 of resolution 706 (1991), taking into account any preference expressed by States transferring or contributing funds as to the allocation of such funds among these purposes;
6. Decides that for so long as oil exports take place pursuant to the system provided in resolutions 706 (1991) and 712 (1991) or to the eventual lifting of sanctions pursuant to paragraph 22 of resolution 687 (1991),

implementation of paragraphs 1 to 5 of this resolution shall be suspended and all proceeds of those oil exports shall immediately be transferred by the Secretary-General in the currency in which the transfer to the escrow account had been made, to the accounts or States from which funds had been provided under paragraphs 1, 2 and 3 of this resolution, to the extent required to replace in full the amounts so provided (together with applicable interest); and that, if necessary for this purpose, any other funds remaining in the escrow account shall similarly be transferred to those accounts or States; provided, however, that the Secretary-General may retain and use any funds urgently needed for the purposes specified in paragraph 5 (c) (ii) of this resolution;

7. Decides that the operation of this resolution shall have no effect on rights, debts and claims existing with respect to funds prior to their transfer to the escrow account; and the accounts from which such funds were transferred shall be kept open for retransfer of the funds in question;

8. Reaffirms that the escrow account referred to in this resolution, like the Compensation Fund, enjoys the privileges and immunities of the United Nations, including immunity from legal proceedings, or any forms of attachment, garnishment or execution; and that no claim shall lie at the instance of any person or body in connection with any action taken in compliance with or implementation of this resolution;

9. Requests the Secretary-General to repay, from any available funds in the escrow account, any sum transferred under this resolution to the account or State from which it was transferred, if the transfer is found at any time by him not to have been of funds subject to this resolution; a request for such a finding could be made by the State from which the funds were transferred;

10. Confirms that the percentage of the value of exports of petroleum and petroleum products from Iraq for payment to the Compensation Fund shall, for the purpose of this resolution and exports of petroleum or petroleum products subject to paragraph 6 of resolution 692 (1991), be the same as the percentage decided by the Security Council in paragraph 2 of resolution 705 (1991) until such time as the Governing Council of the Compensation Fund may decide otherwise;

11. Decides that no further Iraqi assets shall be released for purposes set forth in paragraph 20 of resolution 687 (1991) except to the sub-account of the escrow account, established pursuant to paragraph 3 of resolution 712 (1991), or directly to the United Nations for humanitarian activities in Iraq;

12. Decides that, for the purposes of this resolution and other relevant resolutions, the term "petroleum products" does not include petrochemical derivatives;

13. Calls upon all States to cooperate fully in the implementation of this resolution;

14. Decides to remain seized of this matter.

ANNEX 10

REPORT OF THE SECRETARY-GENERAL PURSUANT TO PARAGRAPH 19 OF THE SECURITY COUNCIL RESOLUTION 687 (1991), 2 MAY 1991

UNITED
NATIONS



SECURITY COUNCIL

Distr.
General

S/22559
2 May 1992

Original: ENGLISH

INTRODUCTION

1. The present report is submitted pursuant to paragraph 19 of Security Council resolution 687 (1991) of 3 April 1991. In paragraph 16 of that resolution, the Council reaffirmed that Iraq "is liable, under international law, for any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals and corporations, as a result of Iraq's unlawful invasion and occupation of Kuwait." In paragraph 17 of the resolution, the Council decided that all bad statements made since 2 August 1990 repudiating its foreign debt are null and void", and demanded that Iraq adhere scrupulously to all of its obligations concerning servicing and repayment of its foreign debt". The Council also decided, in paragraph 18 of the resolution, to create a fund to a' compensation for claims that fall within the scope of paragraph 16 ... and to establish a Commission that will administer the fund".

2. In paragraph 19 of the resolution, the Security Council directed the Secretary-General to develop and present to the Security Council for decision, no later than 30 days following the adoption of the present resolution, recommendations for the fund to meet the requirement for the payment of claims established in accordance with paragraph 18 ..., and for a programme to implement the decisions in paragraphs 16, 17 and 18 ... including: administration of the fund; mechanisms for determining the appropriate level of Iraq's contribution to the fund based on a percentage of the value of the exports of petroleum and petroleum products from Iraq not to exceed a figure to be suggested to the Council by the Secretary-General, taking account payment into the requirements of the people of Iraq, Iraq's capacity as assessed in conjunction with the international financial institutions taking into consideration external debt service, and the needs of the Iraqi economy; arrangements for ensuring that payments are made to the fund; the process by which funds will be allocated and claims paid; appropriate procedures for evaluating losses, listing claims and verifying their validity and resolving disputed claims in respect of Iraq's liability as specified in paragraph 16 ...; and the composition of the Commission designated (in paragraph 18)". In making the following recommendations, I have borne in mind the need for maximum transparency, efficiency,

flexibility and economy in the institutional framework that will be required for the implementation of the decisions contained in paragraphs 16, 17 and 18 of the resolution.

I. INSTITUTIONAL FRAMEWORK

A. The Fund

3. The Fund created by paragraph 18 of Security Council resolution 687 (1901) will be established by the Secretary-General as a special account of the United Nations. The Fund will be known as the United Nations Compensation Fund (hereinafter referred to as "the Fund"). The Fund will be operated in accordance with the United Nations Financial Regulations and Rules. As a special account of the United Nations, the Fund, therefore, will enjoy, in accordance with Article 105 of the Charter and the Convention on the Privileges and immunities of the United Nations of 13 February 1946, 1/ the status, facilities, privileges and immunities accorded to the United Nations. The Fund will be used to pay compensation for "any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals and corporations, as a result of Iraq's unlawful invasion and occupation of Kuwait" as provided for in paragraph 16 of resolution 687 (1901).

B. The Commission

4. The Fund is to be administered by the Commission established by the Security Council in paragraph 18 of resolution 687 (1991). The Commission, which is to be known as the United Nations Compensation Commission (hereinafter referred to as "the Commission"), will function under the authority of the Security Council and be a subsidiary organ thereof. In accordance with the terms of paragraph 19 of resolution 687 (1991), in carrying out its functions, the Commission will be required to address a variety of complex administrative, financial, legal and policy issues, including the mechanism for determining the level of contribution to the Fund; the allocation of funds and payments of claims; the procedures for evaluating losses, listing claims and verifying their validity; and resolving disputed claims. In the light of the multifarious nature of the tasks to be performed by the Commission, it will, in my view, be necessary to distinguish between questions of policy and the functional aspects of the Commission's work. The Commission should, therefore, operate at a policy-making level and a functional level. A secretariat will be necessary for servicing the work of the Commission at both the policy-making and the functional levels.

C. Structure and composition of the Commission

5. The principal organ of the Commission will be a 15-member Governing Council composed of the representatives of the current members of the Security Council at any given time. The Governing Council will be assisted by a number of commissioners who will perform the tasks assigned to them by the Governing Council. The precise number of commissioners will be determined by the Governing Council in the light of the tasks to be performed. The commissioners will be experts in fields such as finance, law, accountancy, insurance and environmental damage assessment, who will act in their personal capacity. They will be nominated by the Secretary-General and appointed by the Governing Council for specific tasks and terms. In nominating the commissioners, the Secretary-General will pay due regard to the need for geographical representation, professional qualifications, experience and integrity. The Secretary-General will establish a register of experts which might be drawn upon when commissioners are to be appointed.

6. A secretariat, composed of an Executive Secretary and the necessary staff, will be established to service the Commission. The Executive Secretary's primary responsibility will be the technical administration of the Fund and the servicing of the Commission. He will be appointed by the Secretary-General after consultation with the Governing Council. The staff of the secretariat will be appointed by the Secretary-General. The Executive Secretary and staff will serve under the United Nations Staff Regulations and Rules.

D. Status privileges and immunities of the Commission

The Convention on the Privileges and Immunities of the United Nations of 13 February 1946 1/ will apply to the Commission and its secretariat. The members of the Governing Council will have the status of representatives of States, the commissioners will have the status of experts on missions within the meaning of article VI of the Convention and the Executive Secretary and the staff of the secretariat will have the status of officials within the meaning of articles V and VII of the Convention.

E. Expenses of the Commission

8. The expenses of the Commission will be borne by the Fund. More detailed recommendations regarding the budgetary administration of the Commission are set out in paragraph 29 below.

F. Headquarters of the Commission

9. For reasons of economy and practicality, particularly in the secretariat servicing of the Governing Council and the commissioners, the headquarters of the Commission should be in New York. Alternatively, it might be located at the site of one of the two Offices of the United Nations in Europe, i.e. Geneva or Vienna. The Governing Council may decide whether some of the activities of the Commission should be carried out elsewhere.

G. Functions of the Commission

I. The Governing Council

10. As the policy-making organ of the Commission, the Governing Council will have the responsibility for establishing guidelines on all policy matters, in particular, those relating to the administration and financing of the Fund, the organization of the work of the Commission and the procedures to be applied to the processing of claims and to the settlement of disputed claims, as well as to the payments to be made from the Fund. In addition to its policy-making role, the Governing Council will perform important functional tasks with respect to claims presented to the Commission. Except with regard

to the method of ensuring that payments are made to the Fund, which should be decided upon by consensus, the decisions of the Governing Council should be taken by a majority of at least nine of its members. No veto will apply in the Governing Council. If consensus is not achieved on any matter for which it is required, the question will be referred to the Security Council on the request of any member of the Governing Council. The Governing Council may invite States that it considers to have particular interest in its work to participate without a vote in its discussions. It may also invite members of the United Nations Secretariat or other persons to supply it with information or to give other assistance in examining matters within its competence. The Governing Council will, on behalf of the Commission, report periodically to the Security Council.

2. The commissioners

11. The commissioners will, under the guidelines established by the Governing Council, carry out such tasks and responsibilities as may be assigned to them by the Governing Council.

3. The secretariat

12. Under the direction of the Executive Secretary, the secretariat will carry out such tasks as may be assigned to it by the Governing Council and the commissioners, in particular the technical administration of the Fund, and the provision of secretariat services to the Governing Council and the commissioners.

II. THE IMPLEMENTATION OF THE DECISIONS CONTAINED IN PARAGRAPHS 16, 17 AND 18 OF RESOLUTION 687 (1991)

A. Mechanisms for determining the appropriate level of Iraq's contribution to the Fund

13. In accordance with the institutional framework outlined in section I above, it would be for the Governing Council to establish the mechanisms for determining the appropriate level of Iraq's contribution to the Fund in accordance with the criteria laid down in paragraph 19 of Security Council resolution 687 (1991). In carrying out this task, the Governing Council should consider the probable levels of future oil export revenues of Iraq, the amounts of military spending and arms imports in the past, the service of Iraq's foreign debt and the needs for reconstruction and development in the country. The objective should be to settle compensation claims within a reasonable period of time. The Governing Council will, of course, be free to draw upon expert advice as it sees fit. It might wish to be assisted by one or more commissioners who, under the guidance of and within the terms of reference provided

by the Governing Council, might give advice with regard to the appropriate level of Iraq's contribution to the Fund as well as to the periodic monitoring of that level of contribution. Simultaneously with the establishment of the Governing Council, I will undertake the appropriate consultations as required by paragraph 19 of resolution 687 (1991) 50 that, as soon as possible, I will be in a position to suggest the figure not to be exceeded by the Iraqi contribution.

B. Arrangements for ensuring that payments are made to the Fund

14. The arrangements for ensuring payments to the Fund are among the most technical and difficult of the tasks that have been entrusted to the Commission. The decisions taken in this regard will determine, *inter alia*, the financial viability of the Fund and its capacity to meet the compensation claims decided upon by the Commission as well as the size and organization of the secretariat.

15. In addressing the question of the possible arrangements for ensuring payments to the Fund, there is an obvious necessity for securing constant and reliable financing of the Fund, without which the essential purpose of the Fund will be defeated. It is also desirable to seek modalities for the financing of the Fund that avoid the necessity of legal and other proceedings in a multiplicity of third countries and jurisdictions.

16. The legal basis for the payments by Iraq to the Fund is to be found in paragraph 19 of resolution 687 (1991). Iraq has officially notified the United Nations of its acceptance of the provisions of the resolution, including paragraph 19, in accordance with paragraph 33 of the resolution. It follows from paragraph 19 of resolution 687 (1991) that the method envisaged by the Security Council for the financing of the Fund is a contribution by Iraq based on a percentage of the value of its exports determined in accordance with the mechanism referred to in paragraph 13 above. It also follows from the resolution that the Security Council did not envisage using "frozen assets" of Iraq held in third countries for the financing of the Fund.

17. Under these circumstances, there are several options for ensuring that Iraq makes payments to the Fund. These options include the following:

- (a) Iraq would pay to the Fund the established percentage of the market value of its exports of petroleum and petroleum products; the market value to be calculated on the day of the export. The payment would be effected in United States dollars and made within 30 days of the export from Iraq;
- (b) An escrow account would be opened into which Iraq would deposit advance payments of lump sums equivalent to the estimated quarterly or semi-annual contribution required of it. These lump-sum payments would be re-evaluated periodically;
- (c) A physical share of the exports would be taken and sold on the market on behalf of the Fund;
- (d) The Fund would be designated as either the sole or co-beneficiary on the bill of lading or other title document and any letter of credit issued. The Fund, in turn, would retain its share and remit the remainder to Iraq;
- (e) An escrow account provided with the appropriate privileges and communities, (e.g. at a central bank or an appropriate international institution) would be designated as beneficiary on the bill of lading or other title document and any letter of credit issued. The escrow agent would remit to the Fund the sum designated to be used to satisfy claims and the remainder to Iraq.

It would be for the Governing Council to decide among these various options.

18. All of these methods presuppose cooperation by Iraq and strict supervision of the exports of petroleum and petroleum products from Iraq. To this end, the Commission should arrange for appropriate monitoring. Whatever approach is adopted, should Iraq fail to meet its payment obligation, the Governing Council would report the matter to the Security Council.

19. It must be recognized that, in all probability, it may be some time before Iraq is able to resume oil exports. In the short term, the Fund is therefore unlikely to receive revenues, and some consideration will have to be given to the financing of the work of the Commission, a problem which is addressed in paragraph 29 below, but more

particularly to the financing of the Fund in the near term from assets other than resumed oil exports by Iraq.

C. Claims procedure

20. The process by which funds will be allocated and claims paid, the appropriate procedures for evaluating losses, the listing of claims and the verification of their validity and the resolution of disputed claims as set out in paragraph 19 of resolution 687 (1991) - the claims procedure - is the central purpose and object of paragraphs 16 to 19 of resolution 687 (1991). It is in this area of the Commission's work that the distinction between policy-making and function is most important. The Commission is not a court or an arbitral tribunal before which the parties appear; it is a political organ that performs an essentially fact-finding function of examining claims, verifying their validity, evaluating losses, assessing payments and resolving disputed claims. It is only in this last respect that a quasi-judicial function may be involved. Given the nature of the Commission, it is all the more important that some element of due process be built into the procedure. It will be the function of the commissioners to provide this element. As the policy-making organ of the Commission, it will fall to the Governing Council to establish the guidelines regarding the claims procedure. The commissioners will implement the guidelines in respect of claims that are presented and resolving disputed claims. They will make the appropriate recommendations to the Governing Council, which in turn will make the final determination. The recommendations that follow have been divided for the sake of convenience under three main headings: the filing of claims; the processing of claims; and the payments of claims.

1. Filing of claims

21. With regard to the filing of claims, the Governing Council must first decide in what manner the claims of foreign Governments, nationals and corporations are to be filed with the Commission. It is recommended that the Commission should entertain, as a general rule, only consolidated claims filed by individual Governments on their own behalf or on behalf of their nationals and corporations. The filing of individual claims would entail tens of thousands of claims to be processed by the Commission a task which could take a decade or more and could lead to inequalities in the filing of claims disadvantaging small claimants. It will be for each individual Government to decide on the procedures to be followed internally in respect of the consolidation of the claim having regard to its own legal system, practice and procedures. The Governing Council may, in addition, consider whether, in exceptional circumstances involving very large and complex claims, a somewhat different procedure could apply. The question might be considered whether such claims, the character of which, of course, would have to be defined by the Governing Council, could be filed individually with the Commission by Governments, nationals or corporations and whether the individual Government, national or corporation could be authorized to present these claims.

22. In this context, there is another matter that requires consideration by the Commission and regarding which the Governing Council should establish guidelines - namely the question of the exclusivity or non-exclusivity of the claims procedure foreseen in paragraph 19 of the resolution. It is clear from paragraph 16 of the resolution that the debts and obligations of Iraq arising prior to 2 August 1990 are an entirely separate issue and will be addressed "through the normal mechanisms". It is also clear from paragraph 16 that the resolution and the procedure foreseen in paragraph 19 relate to liability under international law. Resolution 687 (1991) could not, and does not, establish the Commission as an organ with exclusive competence to consider claims arising from Iraq's unlawful invasion and occupation of Kuwait. In other words, it is entirely possible, indeed probable, that individual claimants will proceed with claims against Iraq in their domestic legal systems. The likelihood of parallel actions taking place on the international level in the Commission and on the domestic level in national courts cannot be ignored. It is therefore, recommended that the Governing Council establish guidelines regarding the non-exclusivity of claims and the appropriate mechanisms for coordination of actions at the international and domestic levels in order to ensure that the aggregate of compensation awarded by the Commission and a national court or commission does not exceed the amount of the loss. A particular problem might arise in this regard concerning default judgements obtained in national courts.

23. In addition to deciding on the consolidation of claims, the Governing Council may also wish to establish a categorization of claims according to both type and size. The categorization of claims according to type might, for example distinguish between claims for loss of life or personal injury and property damage, environmental damage or damage due to the depletion of natural resources. The categorization of claims by size might for example, differentiate between small-, medium- and large-sized claims. A further categorization might be to distinguish between losses incurred by Governments, on the one hand, and losses incurred by nationals and corporations on the other hand.

24. Governments could be requested by the Governing Council to use these categorizations when filing their consolidated claims. The Governing Council should also establish guidelines regarding the formal requirements for the presentation of claims such as the type of documentation to be presented in support of the claim and the time-delays for the filing of claims. The time-delays should be of sufficient length to permit Governments to establish and implement an internal procedure for the assembling and consolidation of claims. It is recommended that a fixed time period be established for the filing of all claims. A period of two years from the adoption of the filing guidelines would appear to be adequate. Alternatively, the Governing Council could set different filing periods for different types of claims in order to ensure that priority is given to certain claims, for example loss of life or personal injury. In this respect, I am of the opinion that there would be some merit in providing for a priority consideration of small claims relating to losses by individuals so that these are disposed of before the consideration of claims relating to losses by foreign Governments and by corporations.

2. Processing of claims

25. The processing of claims will entail the verification of claims and evaluation of losses and the resolution of any disputed claims. The major part of this task is not of a judicial nature; the resolution of disputed claims would, however, be quasi-judicial. It is envisaged that the processing of claims would be carried out principally by the commissioners. Before proceeding to the verification of claims and evaluation of losses, however, a determination will have to be made as to whether the losses for which claims are presented fall within the meaning of paragraph 16 of resolution 687 (1991), that is to say, whether the loss, damage or injury is direct and as a result of Iraq's unlawful invasion and occupation of Kuwait. It is recommended that the Governing Council establish detailed guidelines regarding what constitutes such direct loss for the guidance of all claimants as well as the commissioners.

26. Claims will be addressed to the Commission. The Commission will make a preliminary assessment of the claims, which will be carried out by the Secretariat, to determine whether they meet the formal requirements established by the Governing Council. The claims would then be submitted to verification and evaluation by panels normally comprised of three commissioners for this purpose. In carrying out these tasks, it is recommended that the commissioners be given the necessary powers to request additional evidence, to hold hearings in which individual Governments, nationals and corporations can present their views and to hear expert testimony. The Governing Council might wish to address the question of Possible assistance to ensure the adequacy of the representation of countries of limited financial means. Iraq will be informed of all claims and will have the right to present its comments to the commissioners within time-delays to be fixed by the Governing Council or the Panel dealing with the individual claim. Recommendations of the commissioners regarding the verification and evaluation of claims will be final and subject Only to the approval of the Governing Council, which shall make the final determination. Governing Council should have the power to return claims to the commissioners further revision if it so decides.

27. Where a dispute arises out of the allegation made by a claimant that the Panel of Commissioners, in dealing with its claims, has made an error, whether on a point of law and procedure or on a point of fact, such disputes will be dealt with by a board of commissioners who for this purpose Should be guided by such guidelines as have been established by the Governing Council and the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL). The UNCITRAL Arbitration Rules will be modified as necessary. The final decision will be made by the Governing Council.

3. Payment of claims

28. It is to be anticipated that the value of claims approved by the Commission will at any given time far exceed the resources of the Fund. It will, therefore, be incumbent upon the Commission to decide on an allocation of funds and a procedure for the payment of claims. It is recommended that the Governing Council establish criteria for the allocation of funds, taking into account the size of claims, the scope of the losses sustained by the country concerned and any other relevant factors. In this connection, it might be necessary to distinguish between Kuwait, on the one hand, and other countries on the other hand. As far as the payment of claims is concerned, it follows from the consolidation of the claims and their filing by individual Governments that payments will be made exclusively to Governments. Individual Governments will be responsible for the appropriate distribution to individual claimants. The Governing Council should establish further guidelines regarding the payment of claims, for example, whether claims should be paid in full or whether percentages should be paid. In the latter case, the unsatisfied portions of the claims will remain as outstanding obligations.

D. Expenses of the Commission

29. The expenses of the Commission including those of the Governing Council, the commissioners and the secretariat, should in principle be paid from the Fund. However, as some time will elapse before the Fund is adequately financed, consideration must be given to the financial implications of the programme outlined. It is recommended that urgent consideration be given to the means by which the initial costs of the Commission will be met.

Notes

1/ General Assembly resolution 22 A (I).

ANNEX II

DECISION 7 OF THE GOVERNING COUNCIL OF THE UNITED NATIONS COMPENSATION COMMISSION 2 MAY 1991

S/AC.26/1991/7/Rev.1
17 March 1992

Original: ENGLISH

UNITED NATIONS COMPENSATION COMMISSION GOVERNING COUNCIL Fifth Session Geneva, 16-20 March 1992

Decision taken by the Governing Council of the United Nations Compensation Commission during its third session, at the 18th meeting, held on 28 November 1991, as revised at the 24th meeting held on 16 March 1992

Criteria for additional Categories of Claims

1 Criteria for processing of claims of individuals not otherwise covered

1. The following criteria will govern the submission of all claims of individuals not filed under the criteria adopted by the Governing Council on 2 August 1991, pursuant to resolution 687 (1991).
2. The following criteria are not intended to resolve every issue that may arise with respect to these claims. Rather, they are intended to provide sufficient guidance to enable Governments to prepare consolidated claims submissions.
3. The Commission will process the claims as expeditiously as possible. While decisions on the precise method of processing these claims will be made at a later stage the following steps are contemplated. The Secretariat will make a preliminary assessment of the claims to determine whether they meet the formal requirements established by the Governing Council. The claims would then be submitted to a panel or panels of Commissioners for review within a set time-limit. The Commissioners would be instructed to utilize different procedures appropriate to the character, amount and subject-matter of particular types of claims. In so far as possible, claims with significant common legal or factual issues should be processed together. The Commissioners would be asked to report to the Council on the claims received and the amount recommended for the claims submitted by each Government. The Council would then decide on the total amount to be allocated to each Government. The Council may decide to refer unusually large or complex claims to panels of Commissioners for detailed review, possibly involving additional written submissions and oral proceedings. In such a case, the individual would be allowed to present his or her case directly to the panel.
4. As contributions are made to the Fund, the Council will allocate those funds among the various categories of claims. If resources of the Fund are insufficient with respect to all claims processed to date, *pro rata* payments would be made to Governments periodically as funds become available. The Council will decide on the priority for payment of various categories of claims.

5. Claims may be submitted under this category for the loss of earnings or profits; the Commission will consider at a later time the circumstances in which such claims may be admitted, the amounts to be awarded, and the limits to be imposed thereon.

Claims covered

6. These payments are available with respect to any direct loss, damage, or injury (including death) to individuals as a result of Iraq's unlawful invasion and occupation of Kuwait. This will include any loss suffered as a result of:

- (a) Military operations or threat of military action by either side during the period 2 August 1990 to 2 March 1991;
- (b) Departure from or inability to leave Iraq or Kuwait (or a decision not to return) during that period;
- (c) Actions by officials, employees or agents of the Government of Iraq or its controlled entities during that period in connection with the invasion or occupation;
- (d) The breakdown of civil order in Kuwait or Iraq during that period; or
- (e) Hostage-taking or other illegal detention.

7. These payments are available with respect to individuals who claim losses in excess of those compensable under claim forms B or C. These payments are also available with respect to individuals who have chosen not to file under claim form A, B, or C because their losses exceed \$100,000. In addition, these payments are available to reimburse payments made or relief provided by individuals to others - for example, to employees or to others pursuant to contractual obligations - for losses covered by any of the criteria adopted by the Council.

8. Since these claims may be for substantial amounts, they must be supported by documentary and other appropriate evidence sufficient to demonstrate the

9. Direct losses as a result of Iraq's unlawful invasion and occupation of Kuwait are eligible for compensation. Compensation will not be provided for losses suffered as a result of the trade embargo and related measures. Further guidance will be provided on the interpretation and application of this paragraph.

10. Any compensation, whether in funds or in kind, already received from any source will be deducted from the total amount of losses suffered.

Submission of claims

11. Claims will not be considered on behalf of Iraqi nationals who do not have bona fide nationality of any other State.

12. Claims will be submitted by Governments. Each Government may submit claims on behalf of its nationals, and may in its discretion also submit the claims of other persons resident in its territory. In addition, the Council may request an appropriate person, authority, or body to submit claims on behalf of persons who are not in a position to have their claims submitted by a Government.

13. Each consolidated claim must include:

- (a) For each separate claim, a signed statement by each individual covered containing:
 - (i) his or her name and address, and any passport number or other identifying national number;
 - (ii) a description of and documents evidencing the amount, type, and reason for each element of the loss;
 - (iii) identification of any compensation, whether in funds or in kind, already received from any source for the claim asserted;

- (iv) his or her affirmation that the foregoing information is correct, and that no other claim for the same loss has been submitted to the Commission;
- (v) a copy of any previously submitted individual claim; and
- (b) The affirmation of the Government submitting the claim that, to the best of the information available to it, the individuals in question are its nationals or residents, and the affirmation of the Government or of the person, authority, or body as referred to in paragraph 12 that it has no reason to believe that the information stated is incorrect.

14. The Executive Secretary (or a Commissioner) will prepare and the Executive Secretary will distribute a standard form for submission of these claims, incorporating the above elements in a clear and concise manner. Except as may otherwise be agreed between the Executive Secretary and the Government in question, claims will be submitted to the Executive Secretary by Governments or by persons, authorities, or bodies as referred to in paragraph 12 on the standard form and must include the information in an official language of the United Nations. Each Government may adopt such procedures as it finds appropriate in preparing its claims. The Executive Secretary (or a Commissioner) will be available to answer questions or provide assistance to any Governments which may request it.

15. Governments must submit all claims on behalf of individuals within one year of the date on which the Executive Secretary circulates these claims forms. The Council encourages the submission of such claims within six months from the date on which the Executive Secretary circulates to Governments the claims forms; and the Commission will thereupon give consideration to such claims as provided herein.

II. Criteria for processing claims of corporations and other entities

16. The following criteria will govern the submission of claims of corporations, other private legal entities and public-sector enterprises (hereinafter referred to as "corporations and other entities") pursuant to resolution 687 (1991).

17. The following criteria are not intended to resolve every issue that may arise with respect to these claims. Rather, they are intended to provide sufficient guidance to enable Governments to prepare consolidated claims submissions.

18. The Commission will process the claims as expeditiously as possible. While decisions on the precise method of processing these claims will be made at a later stage the following steps are contemplated. The Secretariat will make a preliminary assessment of the claims to determine whether they meet the formal requirements established by the Governing Council. The claims would then be submitted to a panel or panels of Commissioners for review within a set time-limit. The Commissioners would be instructed to utilize different procedures appropriate to the character, amount and subject-matter of particular types of claims. In so far as possible, claims with significant common legal or factual issues should be processed together. The Commissioners would be asked to report to the Council on the claims received and the amount recommended for the claims submitted by each Government. The Council would then decide on the total amount to be allocated to each Government. The Council may decide to refer unusually large or complex claims to panels of Commissioners for detailed review, possibly involving additional written submissions and oral proceedings. In such a case, the entity would be allowed to present its case directly to the panel.

19. As contributions are made to the Fund, the Council will allocate those funds among the various categories of claims. If resources of the Fund are insufficient with respect to all claims processed to date, *pro rata* payments would be made to Governments periodically as funds become available. The Council will decide on the priority for payment of various categories of claims.

20. Claims may be submitted under this category for the loss of earnings or profits; the Commission will consider at a later time the circumstances under which such claims may be admitted, the amounts to be awarded, and the limits to be imposed thereon.

Claims covered

21. These payments are available with respect to any direct loss, damage, or injury to corporations and other entities as a result of Iraq's unlawful invasion and occupation of Kuwait. This will include any loss suffered as a result of:

- (a) Military operations or threat of military action by either side during the period 2 August 1990 to 2 March 1991;
- (b) Departure of persons from or their inability to leave Iraq or Kuwait (or a decision not to return) during that period;
- (c) Actions by officials, employees or agents of the Government of Iraq or its controlled entities during that period in connection with the invasion or occupation;
- (d) The breakdown of civil order in Kuwait or Iraq during that period; or
- (e) Hostage-taking or other illegal detention.

22. These payments are available to reimburse payments made or relief provided by corporations or other entities to others - for example, to employees, or to others pursuant to contractual obligations - for losses covered by any of the criteria adopted by the Council.

23. Since these claims may be for substantial amounts, they must be supported by documentary and other appropriate evidence sufficient to demonstrate the circumstances and the amount of the claimed loss.

24. Direct losses as a result of Iraq's unlawful invasion and occupation of Kuwait are eligible for compensation. Compensation will not be provided for losses suffered as a result of the trade embargo and related measures. Further guidance will be provided on the interpretation and application of this paragraph.

25. Any compensation, whether in funds or in kind, already received from any source will be deducted from the total amount of losses suffered.

Submission of claims

26. Each Government may submit claims on behalf of corporations or other entities that, on the date on which the claim arose, were incorporated or organized under its law. Claims may be submitted on behalf of a corporation or other entity by only one Government. A corporation or other entity would be required to request the State of its incorporation or organization to submit its claim to the Commission. In the case of a corporation or other private legal entity whose State of incorporation or organization fails to submit, within the deadline established in paragraph 29, such claims falling within the applicable criteria, the corporation or other private legal entity may itself make a claim to the Commission within three months thereafter. It must submit at the same time an explanation as to why its claim is not being submitted by a Government, together with the relevant information specified in paragraph 27. In such a case, any award of the Commission will be paid directly to the corporation or other private legal entity.

27. Each consolidated claim must include:

- (a) For each separate claim, a signed statement by an authorized official of each corporation or other entity covered containing:
 - (i) documents evidencing the name, address and place of incorporation or organization of the entity;
 - (ii) a general description of the legal structure of the entity;
 - (iii) a description of and documents evidencing the amount, type, and reason for each element of the loss;

- (iv) identification of any compensation, whether in funds or in kind, already received from any source for the claim asserted;
 - (v) his or her name and address and affirmation that the foregoing information is correct, and that no other claim for the same loss has been submitted to the Commission;
- (b) The affirmation of the Government submitting the claim that, to the best of the information available to it, the entities in question are incorporated or organized under its law and the affirmation of the Government that it has no reason to believe that the information stated is incorrect.

28. The Executive Secretary (or a Commissioner) will prepare and the Executive Secretary will distribute a standard form for submission of these claims, incorporating the above elements in a clear and concise manner. Except as may otherwise be agreed between the Executive Secretary and the Government in question, claims will be submitted to the Executive Secretary by Governments on the standard form and must include the information in an official language of the United Nations. Each Government may adopt such procedures as it finds appropriate in preparing its claims. The Executive Secretary (or a Commissioner) will be available to answer questions or provide assistance to any Governments which may request it.

29. Governments must submit all claims on behalf of corporations or other entities within one year of the date the Executive Secretary circulates the claims forms. The Council encourages the submission of such claims within six months from the date on which the Executive Secretary circulates to Governments the claims forms; and the Commission will thereupon give consideration to such claims as provided herein.

III. Criteria for processing claims of governments and international organizations

30. The following criteria will govern the submission of claims of Governments and international organizations pursuant to resolution 687 (1991). Each Government will submit claims of its own and those of its political subdivisions, or any agency, ministry, instrumentality, or entity controlled by it.

31. The following criteria are not intended to resolve every issue that may arise with respect to these claims. Rather, they are intended to provide sufficient guidance to enable Governments and international organizations to prepare consolidated claims submissions.

32. The Commission will process the claims as expeditiously as possible. While decisions on the precise method of processing these claims will be made at a later stage the following steps are contemplated. The Secretariat will make a preliminary assessment of the claims to determine whether they meet the formal requirements established by the Governing Council. The claims would then be submitted to a panel or panels of Commissioners for review within a set time-limit. The Commissioners would be instructed to utilize different procedures appropriate to the character, amount and subject-matter of particular types of claims. In so far as possible, claims with significant common legal or factual issues should be processed together. The Commissioners would be asked to report to the Council on the claims received and the amount recommended for the claims submitted by each Government. The Council would then decide on the total amount to be allocated to each Government. The Council may decide to refer unusually large or complex claims to panels of Commissioners for detailed review, possibly involving additional written submissions and oral proceedings. In such a case, when an international organization is involved, it would be allowed to present its case directly to the panel.

33. As contributions are made to the Fund, the Council will allocate those funds among the various categories of claims. If resources of the Fund are insufficient with respect to all claims processed to date, *pro rata* payments would be made to Governments periodically as funds become available. The Council will decide on the priority for payment of various categories of claims.

Claims covered

34. These payments are available with respect to any direct loss, damage, or injury to Governments or international organizations as a result of Iraq's unlawful invasion and occupation of Kuwait. This will include any loss suffered as a result of:

- (a) Military operations or threat of military action by either side during the period 2 August 1990 to 2 March 1991;
- (b) Departure of persons from or their inability to leave Iraq or Kuwait (or a decision not to return) during that period;
- (c) Actions by officials, employees or agents of the Government of Iraq or its controlled entities during that period in connection with the invasion or occupation;
- (d) The breakdown of civil order in Kuwait or Iraq during that period; or
- (e) Hostage-taking or other illegal detention.

35. These payments are available with respect to direct environmental damage and the depletion of natural resources as a result of Iraq's unlawful invasion and occupation of Kuwait. This will include losses or expenses resulting from:

- (a) Abatement and prevention of environmental damage, including expenses directly relating to fighting oil fires and stemming the flow of oil in coastal and international waters;
- (b) Reasonable measures already taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment;
- (c) Reasonable monitoring and assessment of the environmental damage for the purposes of evaluating and abating the harm and restoring the environment;
- (d) Reasonable monitoring of public health and performing medical screenings for the purposes of investigation and combating increased health risks as a result of the environmental damage; and
- (e) Depletion of or damage to natural resources.

36. These payments will include loss of or damage to property of a Government, as well as losses and costs incurred by a Government in evacuating its nationals from Iraq or Kuwait. These payments are also available to reimburse payments made or relief provided by Governments or international organizations to others - for example to nationals, residents or employees or to others pursuant to contractual obligations - for losses covered by any of the criteria adopted by the Council.

37. Since these claims will be for substantial amounts, they must be supported by documentary and other appropriate evidence sufficient to demonstrate the circumstances and the amount of the claimed loss.

38. Direct losses as a result of Iraq's unlawful invasion and occupation of Kuwait are eligible for compensation. Compensation will not be provided for losses suffered as a result of the trade embargo and related measures. Further guidance will be provided on the interpretation and application of this paragraph.

39. Any compensation, whether in funds or in kind, already received from any source will be deducted from the total amount of losses suffered.

Submission of claims

40. Each consolidated claim must include:

- (a) For each separate claim, a signed statement by an authorized official of the Government or international organization containing:
 - (i) his or her name and address, and government agency instrumentality, or ministry or controlled entity, or the international organization, with which associated;

- (ii) a description of and documents evidencing the amount, type, and reason for each element of the loss;
 - (iii) identification of any compensation, whether in funds or in kind, already received from any source for the claim asserted;
 - (iv) his or her affirmation that the foregoing information is correct, and that no other claim for the same loss has been submitted to the Commission;
- (b) The affirmation of the Government or international organization submitting the consolidated claim that to the best of the information available to it, it has no reason to believe that the information stated is incorrect.

41. The Executive Secretary (or a Commissioner) will prepare and the Executive Secretary will distribute a standard form for submission of claims, incorporating the above elements in a clear and concise manner. Except as may otherwise be agreed between the Executive Secretary and the Government or international organization in question, claims will be submitted to the Executive Secretary on the standard form and must include the information in an official language of the United Nations. The Executive Secretary (or a Commissioner) will be available to answer questions or provide assistance to any Governments or international organizations which may request it.

42. Governments and international organizations must submit all claims within one year of the date on which the Executive Secretary circulates the standard form. The Council encourages the submission of such claims within six months from the date on which the Executive Secretary circulates to Governments and international organizations the claims forms; and the Commission will thereupon give consideration to such claims as provided herein.

ANNEX 12

DECISION 10 OF THE GOVERNING COUNCIL OF THE UNITED NATIONS COMPENSATION COMMISSION, 26 JUNE 1992

UNITED
NATIONS



SECURITY COUNCIL

Distr.
General

S/AC.26/1992/10
26 June 1992

Original: ENGLISH

UNITED NATIONS
COMPENSATION COMMISSION
GOVERNING COUNCIL
Sixth session
Geneva, 22-26 June 1992

Decision taken by the Governing Council of the
United Nations Compensation Commission
at the 27th meeting, Sixth session
held on 26 June 1992

The Governing Council decides:

To approve the Provisional Rules for Claims Procedure the text of which is annexed to the present decision.

GE.92-71276

ANNEX

PROVISIONAL RULES FOR CLAIMS PROCEDURE

I) GENERAL PROVISIONS

Article 1. Use of Terms

The following definitions apply for the purpose of these Rules

- 1) "Commission" means the United Nations Compensation Commission.
- 2) "Compensation Fund" or "Fund" means the United Nations Compensation Fund created by paragraph 18 of Security Council resolution 687 (1991) and established by paragraph 3 of Security Council resolution 692 (1991) in accordance with section I of the Secretary-General's Report (S/22559) dated May 1991.
- 3) "Secretary-General" means the Secretary-General of the United Nations.
- 4) "Governing Council" or "Council" means the Governing Council of the Commission.
- 5) "Commissioners" means experts appointed by Governing Council for the verification and evaluation of claims.
- 6) "Executive Secretary" means the Executive Secretary of the Commission and includes any Deputy of, or other person, authorized by the Executive Secretary.
- 7) "Secretariat" means the Secretariat of the Commission.
- 8) "Standard Forms" means claim forms prepared and distributed to Governments by the Executive Secretary for claims under claims criteria adopted by the Governing Council.

Article 2. Scope of the Rules

These Rules apply to processing of claims submitted to the Commission under the criteria adopted by the Governing Council.

Article 3. Calculation of Periods of Time

For the purposes of calculating a period of time under these Rules, such period shall begin to run on the day following the day when the document is received or a notification is made. If the last day of such period is an official holiday or a non-business day at the headquarters of the Commission, the period is extended until the first business day that follows. Official holidays and non-business days occurring during the running of the period of time are included in calculating the period. The Executive Secretary will issue a list of such days.

II) SUBMISSION AND FILING OF CLAIMS

Article 4. Submission of Claims

- 1) Claim forms and documents are to be submitted to the Commission at the Secretariat's headquarters (Palais des Nations, Villa La Pelouse, Geneva, Switzerland).

- 2) Claim forms shall be deemed to have been submitted when they are physically delivered to and received by the Secretariat.

Article 5. Who May Submit Claims

- 1) Governments and international organizations are entitled to submit claims to the Commission.
- 2) Due to the fact that the Commission's computerized software and database system, which is technically required for the processing of a large number of claims, has been designed in English, the working language of the claims procedure before the Commission will be English.
- 3) Claims forms can be submitted in any of the official languages of the United Nations. However, since English is the working language of the claims procedure and of the Commission's computerized database, in cases where claim forms are not submitted in English, and English translation of the form must be provided. The translation as submitted, will serve as the bases for the evaluation of the claim.
- 4) With respect to claims in categories A, B and C, the documents supporting the claims are not required to be translated into English at the stage of the submission of the claims. The Secretariat, on the basis of methods adopted for processing and evaluation of claims, will notify each Government as to the extent of the translation required and the time-limit for providing it.
- 5) With respect to claims in categories D, E and F, all documents supporting the claims must also be submitted in English or be accompanied by an English translation.

Article 7. Format of Claims

- 1) Claim forms in category A must be submitted only in the computer format distributed by the Secretariat. Governments will maintain custody of the original paper copies of Form A and supporting documents and will make them available to the Commission upon request.
- 2) Claim forms and documents in all other categories must be submitted on paper. In addition to filing claims in these categories on paper, Governments may also submit them in a computer format.

Article 10. The Registry

A registry will be set up within the Secretariat. A member of the Secretariat will be designated by the Executive Secretary as Registry Officer. The Registry Officer will receive the claims and register them.

Article 11. Receipt of Claims

- 1) Upon the submission of a claim, the Registry Officer will issue a delivery receipt identifying the parcel received and confirming the date it was received and the person who presented it.
- 2) The Registry Officer will in due course verify:
 - a) That the claim has been submitted by a person or body who, in accordance with the decisions of the Governing Council, has a right to file claims with the Commission;
 - b) That the claim has been submitted within the relevant time-limit established by the Governing Council;
 - c) That, in the case of a corporation or other private legal entity making a claim directly to the Commission in accordance with Article 5, paragraph 3, above:

- i) evidence is attached indicating that a request was made by the entity concerned to the State of its incorporation or organization to submit its claim to the Commission;
- ii) explanation is provided as to why the claim was not submitted by a Government.

Article 12. Unauthorized or Late Submissions

- 1) In the case of claims submitted by an unauthorized person or entity, including claims presented by a corporation or other private legal entity without showing that a previous request has been made to the State of its incorporation or organization, the Executive Secretary will return the documents received, and inform the person or entity concerned of the reasons why the claim cannot be registered.
- d) That all required affirmations have been given by each claimant.
- 2) In the case of claims of corporations and other legal entities the Secretariat will also verify that each separate claim contains:
 - a) Documents evidencing the name, address and place of incorporation or organization of the entity;
 - b) Evidence that the corporation or the legal entity was, on the date on which the claim arose, incorporated or organized under the law of the State the Government of which has submitted the claim;
 - c) A general description of the legal structure of the entity;
 - d) An affirmation by the authorized official for each corporation or other entity that the information contained in the claim is correct.

Article 15. Claims Not Meeting the Formal Requirements

If it is found that the claim does not meet the formal requirements established by the Governing Council, the Secretariat will notify the person or body that submitted the claim about that circumstance and will give it 60 days from the date of that notification to remedy the defect. If the formal requirements are not met within this period, the claim shall not be considered as filed.

Article 16. Reports and Views on Claims

- 1) The Executive Secretary will make periodic reports to the Governing Council concerning claims received. These reports shall be made as frequently as required to inform the Council of the Commission's case load but not less than quarterly. The reports shall indicate:
 - a) Governments, international organizations or other eligible parties that have submitted claims;

III) COMMISSIONERS

Article 18. Appointment

- 1) Commissioners shall be appointed for specific tasks and terms by the Governing Council upon nomination by the Secretary-General on the basis of recommendations of the Executive Secretary.
- 2) The Secretary-General has established a Register of Experts which, as stated in his 12 June 1991 invitation

for the submission of names of experts, while not limiting his selection, might be drawn upon when Commissioners are nominated for appointment. The Executive Secretary will keep and up-date the register.

Article 19. Qualifications

- 1) In nominating and appointing the Commissioners, due regard shall be paid to the need for geographic representation, professional qualifications, experience and integrity.
- 2) Commissioners will be experts in fields such as finance, law, accounting, insurance, environmental damage assessment, oil, trade and engineering.
- 3) Nominations and appointments of Commissioners shall be made paying due regard to the nature of the claims and categories of claims to be assigned to them.
- 2) Commissioners shall not represent or advise any party or claimant concerning the preparation or presentation of their claims to the Commission during their service as Commissioner or for two years thereafter.

Article 22. Disclosure

- 1) All prospective Commissioners shall file a statement that shall disclose to the Executive Secretary any prior or actual relationship with governments, corporations or individuals, or any other circumstances, that are likely to give rise to justifiable doubts as to his impartiality or independence with respect to his prospective tasks. This information will be provided to the Governing Council at the time the nomination of the prospective Commissioner is transmitted.
- 2) A Commissioner, once appointed, shall disclose to the Executive Secretary any new circumstance likely to give rise to justifiable doubts as to his impartiality or independence.
- 3) When any Commissioner obtains knowledge that any particular claim before his panel involves circumstance likely to give rise to justifiable doubts as to his impartiality or independence with respect to that claim or group of claims, he shall disclose such circumstances to the Executive Secretary and, if appropriate, shall disqualify himself as to that case.
- 4) If any Government, international organization, individual claimant, or Commissioner becomes aware of circumstances that give rise to justifiable doubts as to a Commissioner's impartiality or independence, such circumstances must be communicated to the Executive Secretary not later than fifteen days after they become known.
- 5) The Executive Secretary will inform the Governing Council about the circumstances brought to his attention or of which he learns that are likely to give rise to justifiable doubts as to the impartiality or independence of a Commissioner, transmitting a statement of the Commissioner concerned.
- 6) In any case in which such circumstances are disclosed to the Governing Council, it may determine whether the Commissioner should cease to act, either generally or with respect to a particular or claims. Pending such a determination by the Governing Council, the Commissioner concerned will continue to perform his tasks.

Article 27. Declaration

Every Commissioner shall, before taking up his duties, make the following declaration:

"I solemnly declare that I will perform my duties and exercise my position as Commissioner honourably, faithfully, independently, impartially and conscientiously."

This declaration shall be signed and delivered to the Executive Secretary, and attached to the documents pertaining to the Commissioner's appointment.

IV) PROCEDURES GOVERNING THE WORK OF THE PANELS

Article 28. Constitution of Panels

- 1) Unless otherwise decided by the Governing Council, Commissioners will work in panels of three members. Each of the members of a panel shall be of different nationality.
- 2) Priority is to be given to the establishment of panels of Commissioners to deal with claims in categories A, B and C.

Article 29. Organization of Work

Chairmen of the panels will organize the work of their respective panels so as to ensure the expeditious processing of the claims and the consistent application of the relevant criteria and these rules.

Article 30. Confidentiality

- 1) Unless otherwise provided in these procedures or decided by the Governing Council, all records received or developed by the Commission will be confidential, but the Secretariat may provide status reports to Governments, international organizations or corporations making claims directly to the Commission in accordance with Article 5, paragraph 3, regarding claims that they have submitted.

Article 33. Work of the Panels

- 1) After receiving claims from the Executive Secretary, Commissioners will examine them and meet to deliberate and prepare their recommendations to the Governing Council.
- 2) Panels of Commissioners will normally meet at the headquarters of the Secretariat. Meetings will be held to the extent deemed necessary by the Chairman of each panel. Commissioners will continue their work on the claims while away from the headquarters of the Secretariat, conducting the necessary communications among themselves and with the Secretariat.
- 3) Any recommendation or other decision of the panel shall be made by a majority of the Commissioners.

Article 34. Assistance by the Executive Secretary

- 1) The Executive Secretary and the staff of the Secretariat will provide administrative, technical and legal support to the Commissioners, including the development and maintenance of a computerized database for claims and assistance in obtaining additional information.
- 2) In considering the claims, the Commissioners will take into account the results of the preliminary assessment of claims made by the Secretariat in accordance with Article 14, as well as other information and views that the Executive Secretary may provide in accordance with Article 32.
- 3) A member of the Secretariat may attend sessions of the panel and may, if required, provide information to the Commissioners.

Article 35. Evidence

1) Each claimant is responsible for submitting documents and other evidence which demonstrate satisfactorily that a particular claim or group of claims is eligible for compensation pursuant to Security Council resolution 687 (1991). Each panel will determine the admissibility, relevance, materiality and weight of any documents and other evidence submitted.

b) request additional information from any other source, including expert advice, as necessary.

Article 37. Review by Commissioners of Urgent Claims

With respect to claims received under the Criteria for Expedited Processing of Urgent claims (S/AC.26/1991/1), the following expedited procedures may be used.

a) The Secretariat will proceed to check individual claims by matching them, insofar as possible, against the information in its computerized database. The results of the database analysis may be cross checked by the panel.

b) With respect to claims that cannot be completely verified through the computerized database, if the volume of claims is large, the panel may check individual claims on the basis of a sampling with further verification only as circumstances warrant.

c) Each panel will make its recommendations on the basis of the documents submitted, taking into account the preliminary assessment conducted in accordance with Article 14, any other information and views submitted in accordance with Article 32 and any information submitted in accordance with Article 34. Each panel will normally make its recommendations without holding an oral proceeding. The panel may determine that special circumstances warrant holding an oral proceedings concerning a particular claim or claims.

d) Each panel will complete its review of the claims assigned to it and issue its report as soon as possible but no later than 120 days from the date the claims in question are submitted to the panel.

e) Each panel will report in writing through the Executive Secretary to the Governing Council on the claims received and the amount recommended to be allocated to each Government or other entity for each consolidated claim. Each report will briefly explain the reasons for the recommendations and, to the extent practicable within the time-limit, contain a breakdown of the recommendations in respect of individual claims within each consolidated claim.

Article 39. Additional Time

If a panel considering a claim or group of claims cannot complete its work within the allotted time, the panel will notify the Governing Council through the Executive Secretary of the estimated additional time required. The Governing Council will decide whether the panel should continue its work on the claims or group of claims, with a time-limit to be decided by the Council, or should be discharged of the claim or group of claims, which would be given to another panel.

Article 40. Decisions

1) The amounts recommended by the panels of Commissioners will be subject to approval by the Governing Council. The Governing Council may review the amounts recommended and, where it determines circumstances require, increase or reduce them.

- 2) The Governing Council may, in its discretion, return a particular claim or group of claims for further review by the Commissioners.
- 3) The Governing Council will make its decisions on amounts to be awarded at each session with respect to claims covered in any reports of Commissioners circulated to members of the Governing Council at least 30 days in advance of the session.
- 4) Decisions of the Governing Council will be final and are not subject to appeal or review on procedural, substantive or other grounds.
- 5) Decisions of the Governing Council and, after the relevant decision is made the associated report of the panel of Commissioners, will be made public, except the Executive Secretary will delete from the reports of panels of Commissioners the identities of individual claimants and other information determined by the panels to be confidential or privileged.

ANNEX 13

DECISION 12 OF THE GOVERNING COUNCIL OF THE UNITED NATIONS COMPENSATION COMMISSION, 24 SEPTEMBER 1992

UNITED
NATIONS



SECURITY COUNCIL

Distr.
General

S/AC.26/1992/12
26 September 1992

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UNITED NATIONS COMPENSATION GOVERNING COUNCIL
Seventh Session
Geneva, 21-25 September 1992

Claims for which Established Filing
Deadlines are Extended

1. The established filing deadlines are extended for the following claims:

- a) Claims of individuals under the criteria for expedited processing of urgent claims (S/AC.26/1991/12), and the criteria for processing claims of individuals not otherwise covered (S/AC.26/1991/7/Rev.1) for losses and personal injuries resulting from public health and safety risks that occur after or within one year prior to the expiration of the established filing deadlines: These claims should be submitted to the Commission within one year of the date of such loss or injury, but not later than the time limit to be established pursuant to paragraph 2 of this decision.
- b) Claims of individuals under the criteria for expedited processing of urgent claims (S/AC.26/1991/1), and the criteria for processing of claims of individuals not otherwise covered (S/AC.26/1991/7/Rev.1) who have been detained in Iraq until after or within one year prior to the expiration of the established filing deadlines: These claims, including claims for losses and personal injuries resulting from detention in Iraq, should be submitted to the Commission within one year of the detainee's release or of the death of the detainee, as legally determined by the detainee's Government, but not later than the time limit to be established pursuant to paragraph 2 of this decision.
- c) Claims under the criteria for processing claims of Governments and international organizations (S/AC.26/1991/7/Rev.1) for losses resulting from environmental damage: These claims should be submitted to the Commission no later than 1 February 1997.

2. When the Executive Secretary determines that the processing of all remaining claims before the panels of Commissioners is likely to take no more than one year to complete, he should notify the Governing Council. The Governing Council should thereupon establish the final time limit for the submission of claims covered by paragraphs 1(a) and 1(b) of this decision. The Governing Council should establish the final time limit at its next meeting after receiving such notification and should allow at least three additional months from the date of its decision for the filing of the claims.

3. In submitting claims pursuant to this decision, Governments must include in their affirmation pursuant to paragraph 14(1)(c) of the Provisional Rules for Claims Procedure (S/AC.26/1992/10) that such claims are ones for which an extended deadline has been granted. In addition, individual claimants filing claims in these categories must include with their claim forms statements explaining the circumstances as to why they were unable to file their claims within the previously established deadlines.
4. Claims covered by this decision should be submitted at the earliest possible time within the time limits established by the Governing Council. The Commission should thereupon give consideration to such claims as provided for in the application criteria.
5. The Governing Council may consider the extension of established filing deadlines for other categories of claims if, in the future, additional situations are identified.

ANNEX 14

INTERNATIONAL LAW COMMISSION — ELEVENTH REPORT ON INTERNATIONAL LIABILITY FOR INJURIOUS CONSEQUENCES ARISING OUT OF ACTS NOT PROHIBITED BY INTERNATIONAL LAW

Forty-seventh session
Geneva, 2 May-21 July 1995

by

Mr. Julio BARBOZA, Special Rapporteur

General Assembly

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INTRODUCTION

1. The Commission provisionally adopted three paragraphs of article 2 on the use of terms in the draft, designating them (a), (b) and (c). The first paragraph refers to the risk of causing significant transboundary harm, the second defines "transboundary harm" and the third gives a definition of "State of origin". The designation of the various paragraphs of article 2 should be changed. Paragraph (a) would become paragraph 1, paragraph (b) would become paragraph 2, and paragraph 3 would contain a definition of "harm" and would be subdivided into three subparagraphs on: (a) harm to persons; (b) harm to property; and (c) harm to the environment. This would be followed by a paragraph 4, defining environment, and a paragraph 5 on entitlement to remedial action for harm to the environment.

2. In his eighth report,¹ the Special Rapporteur made some progress in considering the issue of harm, as a contribution to article 2. He refers to what was said in that report as an introduction to the issue of harm, which he proposes to develop here. He has nothing to add to the comments made in that report on the subject of harm to persons or things, except for some drafting changes to the proposed article. Of these, the most important is the inclusion of the concept of loss of earnings, since this would make the text clearer. It should also be made clear, although it is perhaps implicit, that subparagraphs (a) and (b) also apply to harm to persons or things caused by environmental degradation, in order to make a clearer distinction between harm caused individually to persons and things, even if caused by environmental degradation, and harm to the environment *per se*. In the first case, the person entitled to remedial action is the person harmed, either directly or through environmental degradation. In the second case, harm to the environment *per se* is harm caused to the community when environmental values are harmed and as a result the community is deprived of use and non-use services, as we shall see below.

1. HARM TO THE ENVIRONMENT

3. On the other hand, some comments - and even a new text - should be added concerning harm to the environment, a concept which is vital to the issue under discussion. In this connection, the 14 May 1993 Communication from the Commission of the European Communities to the Council and Parliament and the Economic and Social Committee: Green Paper on Remedying Environmental Damage says:

"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."²

4. Harm to the environment has been included in some international conventions, drafts and judgements, such as article 2(7)(d) of the 1993 Lugano Convention (Council of Europe Convention on Civil Liability for damage resulting from activities dangerous to the environment), confirmed by article 1(c) of the United Nations Economic Commission for Europe (ECE) Convention on the transboundary effects of industrial accidents, article 1(2) of the 1992 ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes, and the 1985 EEC Directive;³ article 8(2)(a), (b) and (d) of the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA); and article 9(c) and (d) of the Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD), to which must be added the directives proposed by the EC Task Force on Responsibility and Liability regarding Transboundary Water Pollution and the draft protocol on liability to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal being prepared by a working group appointed by the parties to that Convention.⁴ Security Council resolution 687 (1991) is of particular interest: "Iraq ... is liable under international law for any direct loss, damage - including environmental damage and the depletion of natural resources - or injury to foreign Governments, nationals and corporations as a result of its unlawful invasion and occupation of Kuwait". The issue has also been the subject of studies and has been included in some documents drafted by study groups and working groups,

¹ A/CN.4/443, paras. 41 to 51.

² Communication from the EC Commission to the EC Council and European Parliament on Environmental Liability, COM(93) 47, p. 10.

³ OJ L175, 5 July 1985, p. 40.

⁴ Ad Hoc Working Group of Legal and Technical Experts to Consider and Develop a Draft Protocol on Liability and Compensation for Damage resulting from Transboundary Movements of Hazardous Wastes and their Disposal. See article 2(a)(iii), (iv) and (v) (document UN/CHW.2/3, p. 10).

for instance, in article 47 of the draft Convention on Environment and Development of the International Union for the Conservation of Nature (IUCN) and in the research project conducted by the Universities of Sienna and Parma and sponsored by the Italian Council for Scientific Research.⁵ Furthermore, harm to the environment has become punishable under the domestic laws of a number of countries, such as Norway, Finland, Sweden, Germany, Brazil and the United States.

1. Definition of environment

5. After further reflection, based on some of the work mentioned in the preceding paragraph, the Special Rapporteur considered the possibility of incorporating a definition of environment into the draft articles, since there is at present no universally accepted concept of environment: elements considered to be part of the environment in some conventions are not in others. The definition of environment will thus determine the extent of the harm to the environment; and the broader the definition, the greater will be the protection afforded to the object thus defined, and vice versa.

6. Such a definition does not necessarily have to be scientific and, until now, the definitions that have been tried have simply enunciated the various elements they consider to be part of the environment. According to the green paper of the Commission of the European Communities:

"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."⁶

A restricted concept of environment limits harm to the environment exclusively to natural resources, such as air, soil, water, fauna and flora, and their interactions. A broader concept covers landscape and what are usually called "environmental values" of usefulness or pleasure produced by the environment. Thus, one speaks of "service values" and "non-service values"; for instance, the former would include a fish stock that would permit a service such as commercial or recreational fishing, while the latter would include the aesthetic aspects of the landscape, to which populations attach value and the loss of which can cause them displeasure, annoyance or distress. It is difficult to put a value on these if they are harmed. Lastly, the broadest definition also embraces property forming part of the cultural heritage.

(a) The restricted concept of environment

7. CRAMRA defines the Antarctic environment when it attempts to describe harm to the environment:

"Damage to the Antarctic environment or dependent or associated ecosystems' means any impact on the living or non-living components of that environment or those ecosystems, including harm to atmospheric, marine or terrestrial life, beyond that which is negligible or which has been assessed and judged to be acceptable pursuant to this Convention."

This text indirectly defines environment through harm to the environment and has two distinct elements: one relating to the Antarctic environment and "its dependent or associated ecosystems", which the text limits to "living or non-living components of that environment or those ecosystems", including atmospheric, marine and terrestrial life; and the other relating to the threshold: the text refers to damage "beyond that which is negligible" or which has been "assessed and judged to be acceptable pursuant to this Convention". In the first instance, the concept of protected environment appears to be restricted to ecosystems and natural resources such as air, soil and water, including the living components of sea, land or air. To clarify the aforesaid concept, let us say that for the Convention on Biological Diversity (article 2, "Use of Terms") "ecosystem means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit".

8. A number of other international instruments mix elements characteristic of the environment with others that are not clearly defined or do not belong in a general concept of environment. Article 1(a) of the so-called LRTAP Convention (Geneva, 1979) on Long-Range Transboundary Air Pollution, in defining such pollution, refers to

⁵ A Group of Experts was established to cooperate in the project, focusing on liability for environmental damage caused by military activities.

⁶ COM(93) 47, p. 10.

"deleterious effects" on living resources and ecosystems, human health and material property, as well as interference with amenities and other legitimate uses of the environment. Obviously, living resources and ecosystems and also amenities and other legitimate uses are either components of the environment or else environmental values that may or may not be turned into amenities. "Material property" and "human health", on the other hand, do not seem to form part of the same concept. As we shall see, material property without any additional quality such as that of belonging to "cultural heritage", for instance, could not be considered to be related to the environment; nor, logically, could human health.

9. The United Nations Framework Convention on Climate Change, in defining the "adverse effects of climate change", explains that they are "changes in the physical environment or biota resulting from climate change which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystems or on the operation of socio-economic systems or on human health and welfare". The 1985 Vienna Convention for the Protection of the Ozone Layer uses similar language, except that it does not mention socio-economic systems or human welfare. Here, too, the former Convention includes elements of a strict concept of environment mixed with other, extraneous ones, namely, socio-economic systems and human health.

10. As far as international practice is concerned, the proposal by the Commission of the European Communities for a Community directive on damage caused by wastes defines harm to the environment as significant and persistent interference with the environment caused by a change in the physical, chemical or biological conditions of water, soil and/or air where this is not considered damage within the scope of paragraph (2)(c) (which refers to damage to property).⁷

(b) Broader concepts

11. Article 2(10) of the 1993 Lugano Convention contains a non-exhaustive list of components of the environment which 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". Article 1(c) of the ECE Convention on the Transboundary Effects of Industrial Accidents refers to the adverse consequences of industrial accidents on "(i) human beings, flora and fauna; (ii) soil, water, air and landscape; (iii) the interaction between the factors in (i) and (ii); material assets and cultural heritage, including historical monuments". Article 1(2) of the ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes says that "effects on the environment include effects on human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; they also include effects on the cultural heritage or socio-economic conditions resulting from alterations to those factors".

12. Decision 7 of the United Nations Compensation Commission established by the Security Council in its resolution 687 (1991) in connection with Iraq's liability for damage caused in the Gulf War considers certain elements subject to compensation when, in its paragraph 35, it says that payments will be available with respect to direct environmental damage and the depletion of natural resources [which] will include losses or expenses resulting from:

- (a) Abatement and prevention of environmental damage, including expenses directly relating to fighting oil fires and stemming the flow of oil in coastal and international waters;
- (b) Reasonable measures already taken to clean and restore the environment or future measures which can be documented as reasonably necessary to clean and restore the environment;
- (c) Reasonable monitoring and assessment of the environmental damage for the purposes of evaluating and abating the harm and restoring the environment;
- (d) Reasonable monitoring of public health and performing medical screenings for the purposes of investigation and combating increased health risks as a result of the environmental damage; and
- (e) Depletion of or damage to natural resources.

⁷ COM(89) 282.

It is noteworthy that subparagraphs (c) and (d) refer to costs which are not negligible and which normally are not included in definitions of harm, although they may of course be granted by a court as part of the damage caused by the degradation of the environment.

(c) Factors to be excluded

13. All the above could benefit from being set out more methodically. To begin with, the definition of "environment" should exclude those factors that are already included in the traditional definitions of harm, such as anything that causes physical harm to persons or to their health, whether directly or as a result of environmental damage, since these are protected by the traditional concept of harm and do not require additional protection. This was the idea suggested by article 24 of the sixth report, which separated harm to the environment from resulting harm to persons or property in the affected State.⁸ It is the same sense as can be found in the 1993 Lugano Convention, article 2 (7) of which excludes from the definition of environmental damage set forth in subparagraph (c) loss of life or personal injury and loss of or damage to property, which are dealt with, respectively, in subparagraphs (a) and (b).

14. Some doubt exists as to whether to include certain other factors or elements in the concept of "environment". One of these is the reference to a kind of "cultural environment", which covers monuments and other structures of value as expressions of the cultural heritage of a group of people. The Special Rapporteur does not mean to detract from this value by suggesting that such structures should not be included in the concept of "environment" for the purposes of compensation. It should be excluded, first of all, because of the risk of broadening the concept of environment indefinitely by introducing disparate concepts; although there is no need for a rigorously scientific definition of the human environment - which may not even exist - an effort should be made to find a definition which contains a unitary criterion, such as the natural environment. Secondly, there is a perhaps more convincing argument that such property is already protected through the application of traditional concepts of damage, obviating the need to include them in the definition of environment. None the less, a court faced with the difficult task of evaluating the amount of compensation to award for damage to a monument of great cultural value is unlikely to find any criterion to help it in the concept of environmental damage. Damage to a monument may or may not be the result of the degradation of the natural environment, but it should be compensated in any case, as soon as the cause has been duly determined.

15. The "characteristic aspects of the landscape" appear to be "values" rather than components of the natural environment and therefore should not be included in its definition. While it is true that these physical characteristics are not created by human beings, such characteristic aspects are in some sense "culturized" objects, since they are worth something in so far as they embody the aesthetic "baggage" of a given population. Rather than a component of the environment, such as water or soil, they appear to be a treasured value or aspect of the environment which would otherwise be deprived of international protection. Their destruction, therefore, would give rise to uncompensated damage.

16. As for human health, the Special Rapporteur feels that it should in no way be included as part of the environment, nor should damage to health, either directly or through harm to the environment, be considered environmental damage. Of course, a specific feature of a certain environment, such as a health spa or a sulphurous mud bath, might be its healthful effect on human beings. It is this "service value" which should be compensated if it is lost.

2. Harm to the environment

17. Having tentatively but not exhaustively defined the elements of the environment, the Special Rapporteur turned to what was meant by harm to the environment. He drew attention to two questions in that regard: first, who is the party injured by environmental damage and, secondly, what does this harm consist of?

18. On the question of the injured party, it is clear that damage is harm caused to someone. Thus it is always damage to someone, to a person or to a human group; it cannot occur in a vacuum. For jurists, the difficulty arises when the subject of harm to the environment *per se* is discussed, as if the adverse effect on the environment were sufficient to constitute a juridical injury, whether or not natural or juridical persons exist who might be harmed

⁸ A/CN.4/428, annex, p. 49.

by it. Confusion also arises if account is taken of the extremist position of some environmentalists, who consider environmental protection as an end in itself, and who believe that species and natural resources should be respected for their "intrinsic" value, i.e., independently of their valuation by human beings.

19. A closer look should be taken of the notion of the "intrinsic" value of the environment, which has been gaining some ground. Article 3 of the 1991 Protocol on Environmental Protection to the Antarctic Treaty recognizes and attempts to protect "the intrinsic value of Antarctica, including its wilderness and aesthetic values".⁹ A similar mention is also made in the Convention on Biological Diversity, in the first paragraph of the preamble, which reads as follows: "Conscious of the intrinsic value of biological diversity ...". According to the Diccionario de la Real Academia Española, intrinsic means "essential", and the Concise Oxford Dictionary defines intrinsic as "belonging naturally; inherent, essential, esp. intrinsic value". Roget's International Thesaurus, under the entry for "intrinsic", includes the word "characteristic". This latter definition is the real meaning of "intrinsic" as used in these legal instruments, and in any case the words "essential" and "inherent" do not mean that the adverse effects on the environment per se constitute a form of harm which is independent of human beings. It is difficult to understand who could be harmed by the loss of the ecological or aesthetic values of Antarctica if there were no human beings on the planet to appreciate them.

20. The effects of a causal chain normally do not come under the aegis of law until they are felt by a person in the legal system in question, in this case by a State or another international subject. In such cases, the law usually protects the injured person and prescribes reparation. It is at this point that the adverse effect becomes a juridical injury. Looked at closely, harm to the environment is not differentiated in any way from harm to the person or property of a juridical person, in whose favour there arises a right to reparation: the person is compensated because the change in the environment produced by a certain conduct harms him, since he loses one or more of the values provided to him by this environment. In brief, what is called harm to the environment *per se* is a change in the environment which causes people loss, inconvenience or distress, and it is this injury to people which the law protects against in the form of compensation. In any case, as mentioned above, harm to the environment *per se* would injure a collective subject, such as a community, which in any case would be represented by the State.

21. The values in question, whose loss gives rise to a juridical injury, produce, as mentioned above, environmental services which may or may not be used. These are called "use services" and "non-use services". As noted above, the former include the commercial or recreational use of the environment, such as the use of a watercourse for fishing, the recreational use of water for swimming, sailing, water-skiing or racing, or the use of snow in the mountains for similar sports. Non-use services might include the characteristic features of a landscape or even so-called "existence values", which are certain features of the environment for which the community would be prepared to pay simply in order to preserve them for themselves or for future generations. Obviously, some losses of service can be easily quantified; for example, commercial fishing would suffer a loss if an incident of river or lake pollution appreciably reduced the fish population. In other cases, it is more difficult to perceive the damage and even more so to evaluate it, such as when the loss of a recreational area causes moral inconvenience or frustration. However, the principle that harm which does not entail economic loss should be compensated is not a new absolute in law, as can be seen in the universal acceptance, in domestic and international law, of compensation for moral injury, which is as difficult to evaluate in monetary terms as ecological harm.

22. The second matter is to determine who is injured by ecological harm, since the environment does not belong to anyone in particular but to the world in general, or to the community. Under United States law (CERCLA,¹⁰ CWA,¹¹ and OPA,¹²), "Congress empowered government agencies with management jurisdiction over natural resources to act as trustees to assess and recover damages ... [t]he public trust is defined broadly to encompass 'natural resources' ... belonging to, managed by, held in trust by, appertaining to or otherwise controlled by' Federal, state or local governments or Indian tribes".¹³ Under international law, a State whose environment is damaged is also the party most likely to have the right to take legal action to obtain compensation, and this right may also be granted to non-governmental welfare organizations.

⁹ *Tratados y documentos internacionales*, edited by José I. García Ghereñi (Buenos Aires, 1992).

¹⁰ The Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C.A., sections 9601 et seq.

¹¹ Clean Water Act of 1977, 33 U.S.C.A., section 1321.

¹² Oil Pollution Act of 1990, 33 U.S.C.A., sections 2701 et seq.

¹³ Excerpts from Richard B. Stewart, Natural Resources Damages (forthcoming, 1995), annex to Background Paper (Philippe Sand, Ruth Mackenzie and Ruth Kalastchi), pp. 1-2.

3. Reparation

23. By way of introduction to the topic of reparation for environmental harm, the Special Rapporteur notes that in the field of wrongful acts, the meaning of reparation in international law is expressed in the Chorzów rule, i.e., reparation must wipe out all the consequences of the wrongful act and re-establish the situation which would, in all probability, have existed if that act had not been committed. This reparation is obtained by the methods which international law has regarded as suitable, namely, restitution in kind, equivalent compensation, satisfaction and assurances of non-repetition, combined so that all aspects of the harm are covered.¹⁴ In brief, reparation is an obligation imposed by secondary rules as a consequence of the violation of a primary rule, and its content, forms and degrees have been shaped by international custom, as expressed by the Court in the Chorzów Factory case; the Commission is currently attempting to codify this practice under the leadership of Professor Arangio Ruiz.

24. In the case of liability *sine delicto*, on the other hand, the damage is produced by an act which is not prohibited by law. Therefore, the compensation is ascribed to the operation of the primary rule: it is not a reparation imposed by the secondary rule as a consequence of the violation of a primary obligation, but rather a payment imposed by the primary rule itself. As a result, it does not necessarily have to meet all the criteria of the *restitutio in integrum* imposed by international custom for responsibility for a wrongful act. There does not appear to be a clear international custom with respect to the content, form and degrees of payment corresponding to the damage in responsibility *sine delicto*, but there are some indications that it is not necessarily following the same lines as the Chorzów rule. *Restitutio in integrum* is not being as rigorously respected in this field as in that of wrongful acts, as illustrated by the existence of thresholds below which the harmful effects do not meet the criterion of reparable damage, as well as the imposition, in legislative and international practice, of ceilings on compensation. Both the upper and lower limitations, which were imposed for practical reasons, create a category of non-recoverable harmful effects.

25. The Chorzów rule, however, obviously serves as a guideline, although not a strict benchmark, in the field of responsibility *sine delicto* as well, because of the reasonableness and justice it embodies. It is true that there are differences between the circumstances of the damage produced by wrongful conduct and harm produced by legal conduct, and that these might well be treated differently from a legal standpoint; however, this distinction is drawn mainly for practical reasons, such as in order to fix an upper limit on the amounts insured, in the case of the ceiling, or to acknowledge the fact that all human beings today are both polluters and victims of pollution in the case of the lower threshold. It is evident, however, that the law must seek reparation, as far as possible, for all damages. Thus, in the conventions on nuclear material and oil pollution, an attempt was made to go beyond the ceiling by establishing funds to help approach full restitution in circumstances where compensation might reach extremely high amounts.

26. Conventions on civil liability seem to have ignored certain forms of reparation such as *naturalis restitutio* in order to focus exclusively on the allocation of a sum of money as a primary payment. In environmental damage, however, the most common form of payment seems to be almost the same thing as *naturalis restitutio*, as represented by the restoration of the damaged elements of the environment, such as reintroducing into an ecosystem members of an endangered or destroyed species which can be restored because enough members of the species exist elsewhere. Equivalent compensation, on the other hand, would primarily be directed, in the case of total destruction of a certain component, to the introduction of an equivalent component, and only if that were not possible to an eventual monetary compensation. As interpreted in the cases covered by CERCLA, CWA and OPA in the United States, monetary compensation would also be appropriate when the restoration of a certain component occurs naturally, from the time during which this resource was dying out until its full restoration.¹⁵

27. The method generally selected to meet this goal is restoration, or re-establishment of the damaged or destroyed resources. This is a reasonable approach, since what is most important here is to return to the *status quo ante*; in principle, ecological values prevail over economic values to such an extent that, unlike what happens in other fields, some domestic laws specify that the compensation which may be granted to the injured parties

¹⁴ Cessation is not included because, in liability *sine delicto*, it does not seem to be appropriate, since its essential feature is precisely that the activity which produces the damage is lawful and continues through the payment of the appropriate compensation. Moreover, for the Commission, and erroneously in the Special Rapporteur's view, cessation does not constitute part of the concept of reparation.

¹⁵ "Second, even when restoration activities are undertaken, trustees may determine and seek recovery for interim losses in resource value ..." (Background Paper and annex, *op. cit.*, p. 11).

in certain cases should be used for ecological purposes as well.¹⁶ The cost of restoration or replacement of elements of the environment gives a good measure of the value of the loss. This usually varies when the costs, especially of restoration, are unreasonable in relation to the usefulness of the damaged resources, which confirms the idea that the predominance of ecological purposes is overruled only by the unreasonableness of costs. It is usually easier, however, to replace a resource, for example, to reintroduce into one ecosystem from another ecosystem a species of fish or other animal which was destroyed or suffered a loss in population because of an incident.

28. Restoration or replacement is thus the best form of reparation. Identical restoration may be impossible, however, in which case most modern trends allow for the introduction of equivalent elements. The Green Paper on Remedying Environmental Damage of the Commission of the European Communities states that "An identical reconstruction may not be possible, of course. An extinct species cannot be replaced. Pollutants emitted into the air or water are difficult to retrieve. From an environmental point of view, however, there should be a goal to clean up and restore the environment to the state which, if not identical to that which existed before the damage occurred, at least maintains its necessary permanent functions [...] Even if restoration or clean-up is physically possible, it may not be economically feasible. It is unreasonable to expect the restoration to a virgin state if humans have interacted with that environment for generations. Moreover, restoring an environment to the state it was in before the damage occurred could involve expenditure disproportionate to the desired results. In such case it might be argued that restoration should only be carried out to the point where it is still 'cost effective'. Such determinations involve difficult balancing as well as of economic and environmental values".¹⁷ Article 2, paragraph 8, of the Lugano Convention defines "measures of reinstatement" as "any reasonable measures aiming to reinstate or restore damaged or destroyed components of the environment, or to introduce, where reasonable, the equivalent of these components into the environment. Internal law may indicate who will be entitled to take such measures". One possibility is that the measures in question might be taken by anyone, and, provided that they are reasonable, should be compensated.

29. The conventions generally stop there, i.e., with compensation for measures of restoration or replacement which have actually been taken or will be taken; in the latter case, compensation is used to pay for them. What happens in the cases where restoration is impossible or when the costs of restoration are unreasonably high? In the eighth report on the topic, Professor Rest was quoted, in reference to the *Exxon Valdez* case, as follows: "As in this case it was impossible to clean up the oil-polluted seabed of the Gulf of Alaska ..., the Exxon Corporation [...] saved the clean-up costs. This seems to be unjust. According to the Guidelines [of the ECE Task Force on Responsibility and Liability regarding Transboundary Water Pollution], the polluter could be obliged to grant equivalent compensation, for instance, by replacing fish or by establishing a nature park".¹⁸ The Commission's draft article 24 had covered this situation, providing that "if it is impossible to restore these conditions in full [i.e., the *status quo ante*], agreement may be reached on compensation, monetary or otherwise, by the State of origin for the deterioration suffered".

30. CRAMRA adopts a similar solution in article 8 (2) (a), providing that an operator shall be strictly liable for "damage to the Antarctic environment or dependent or associated ecosystems arising from its Antarctic mineral resource activities, including payment in the event there has been no restoration to the *status quo ante*". What is important in terms of compensation is that the court determines that these payments must be used for ecological purposes.

31. The Fund provided for in the 1969 International Convention on Civil Liability for Oil Pollution Damage has taken a restrictive position, however. The Fund pays compensation for pollution damage caused outside the ship. The first claim, which arose from the sinking of the *Antonio Gramsci* near Ventspils, in the former Soviet Union, on 27 February 1979, raised the question of whether this definition includes environmental harm or damage to natural resources, as advocated by the Soviet Union and others. The response from the Fund's Assembly (resolution 3 of 1980) determined that the evaluation of the compensation payable by the Fund of the Convention could not

¹⁶ See R. Stewart, *op. cit.*, p. 4: "CERCLA requires trustees to spend all damages, apart from their assessment cost, recoupment, on 'restor[ing], replac[ing] or acquir[ing] the equivalent' of 'the natural resources damaged or destroyed'; CWA allows recovery for 'costs or expenses incurred ... in the restoration or replacement of natural resources damaged or destroyed'. OPA also requires that recoveries be spent for 'restoration, rehabilitation, replacement or acquisition of the equivalent' of 'the damaged natural resources'."

¹⁷ COM(93) 47, p. 32, para. 5.2.

¹⁸ Alfred Rest, "New Tendencies in Environmental Responsibility/Liability Law: the Work of the UN/ECE Task Force on Responsibility and Liability regarding Transboundary Water Pollution", Environmental Policy and Law 21 (3-4): 135 (1991), p. 137.

be made on the basis of abstract quantifications of the damage calculated in accordance with theoretical models.¹⁹ In the more recent case of the *Patmos*, a Greek tanker damaged off the Calabria coast in 1985, the Fund originally rejected the Italian Government's claim on the grounds of lack of documentation on the nature of the damage or the bases on which the amount of the claim had been calculated. The Italian Government took the case to the Italian courts; it was rejected in the first instance but accepted on appeal. In 1989 the Messina Appeals Court interpreted the environmental damage referred to in the Convention as "everything which alters, causes deterioration in or destroys the environment in whole or in part". The Court held that:

"The environment must be considered as a unitary asset, separate from those of which the environment is composed (territory, territorial waters, beaches, fish, etc.). The right to the environment belongs to the State, in its capacity as representative of the collectivities. The damage to the environment prejudices immaterial values [and] consists of the reduced possibility of using the environment. The damage can be compensated on an equitable basis, which must be established by the Court on the grounds of an opinion of experts ...The definition of 'pollution damage' as laid down in article 1 (6) is wide enough to include damage to the environment of the kind described above".²⁰

32. All the liability conventions also include in the definition of harm the costs of preventive measures, and any damage or loss caused by these measures. They refer to preventive measures taken after an incident to minimize or prevent its effects; these measures are defined in all the conventions as "reasonable measures taken by any person following the occurrence of an incident to prevent or minimize the damage". If the Commission prefers to use another expression rather than "preventive" for such *ex post* measures, perhaps "response measures" could be used, as suggested in the tenth report on the topic. In principle, the Special Rapporteur tends to favour calling them, as in all the conventions, "preventive", making the appropriate clarification either in the text or in the commentary.

33. The 1992 amendment to the International Convention on Civil Liability for Oil Pollution Damage apparently includes *ex ante* prevention measures, i.e., those taken before any oil spill has taken place, among the measures whose cost is recoverable, provided that there has existed a clear and present danger of pollution damage. It would appear, however, that this compensation refers to cases where, for example, the affected State or a number of persons in the affected State are forced to take certain defensive measures owing precisely to the operator's failure to take *ex ante* preventive measures or his total absence.

4. Assessment of harm to the environment

34. Assessment of harm to the environment raises very serious problems. Following the trend to attempt to ensure reparation for all types of damage, which is certainly reasonable, some national laws have gone quite far in their methods of evaluation, as will be seen below. Restoration does not seem to present problems of assessment, except when costs widely exceed reasonable costs in relation to the usefulness of this form of restitution in kind. The court will have to determine when this restoration exceeds a reasonable amount, and accordingly evaluate the services temporarily or permanently lost as a result of the environmental damage. It may also happen that restoration is impossible, or only partially feasible, as seen earlier, in which case the problem also arises of assessing the services of which the public - as represented by the State - is deprived, to the extent that the restoration falls short of full restoration. This assessment is usually extremely difficult.

35. The difficulty lies in knowing whether the competent court should lean towards compensation of the directly quantifiable damages, such as restoration costs, or use abstract theoretical models to quantify the loss caused by environmental damage. "In the United States, restoration of damaged environment has been described as a 'fledgling activity shot through with uncertainty and controversy'".²¹

36. Alternative methods of assessment include: the market price of the environmental resource; the economic value attributed to the environmental resource (such as landscape costing methods or hedonic pricing, as discussed below); or contingent assessment methods to measure the willingness of individuals to pay for environmental assets

¹⁹ Sands, MacKenzie and Kalatschi, *op. cit.*, p. 45. It should be noted that the Soviet Union had assessed the damage in accordance with an abstract model. See also the article by Clara Maffei, "The Compensation for Ecological Damage in the 'Patmos' Case" in Francesco Francioni and Tullio Scovazzi, *International Responsibility for Environmental Harm*, chap. XVI, pp. 381-394.

²⁰ *Idem.*, p. 46.

²¹ R. Stewart, *op. cit.*, p. 48. All suggestions on this point are taken from this paper.

such as clean air or water or the preservation of endangered species. These problems of assessment arise in the United States with respect to CERCLA (1980) and OPA (1990) in relation to the competence of certain public authorities to bring an action for damage to natural resources caused by the introduction of hazardous substances or the spilling of oil, respectively. As a market price may not exist, or may not reflect the real value of the resource, for example in the case of endangered species, some economists have tried to calculate the use value of certain public natural resources (i.e., the value based on the actual use of a resource, for example, for fishing) using the cost of travel or the hedonic price. Travel costing methods use the amounts spent by individuals to visit and enjoy resources as a basis for the calculation. Hedonic pricing methods take the market value added to the value of private ownership of certain amenities and seek to transpose these values to public resources with comparable values. For non-use values, such as the value an individual may place on the preservation of an endangered species, although the species may never actually be seen, a contingent valuation methodology (CVM) has been developed to measure the value by asking persons how much they would be willing to pay, for example through a tax increase, to protect a natural resource from harm. Critics of CVM suggest that a method which does not reflect a real economic behaviour and which gives inflated values cannot be relied on.²² It has also been said that the value of resources which are collectively significant for the society cannot be reduced to what a group of individuals is willing to pay.

37. It is easy to understand, in view of the difficulties of the alternative assessment methods discussed above, the aforementioned trend in international practice to limit reparation of environmental damage to the payment of costs of restoration, the replacement or damaged or destroyed resources or the introduction of equivalent resources where the court deems this to be reasonable. The quantification of costs provided by CVMs is too unreliable and perhaps inappropriate for a draft that aspires to become a global convention, with courts that are part of different cultures having such disparate attitudes towards the environment. However, if restoration or replacement of resources cannot be partially or fully accomplished, and real harm to the environment has occurred, it does not seem reasonable for the damage to be totally uncompensated. The court should perhaps have some leeway to make an equitable assessment of the damage in terms of a sum of money, which would be used for ecological purposes in the damaged region, perhaps in consultation with the State of origin or with public welfare bodies, without having to resort to such complicated alternative methods. Finally, it should be noted that the courts grant compensation for moral damage, which is as difficult to assess as environmental harm. How can anguish or suffering be measured?

II. PROPOSED TEXTS AND COMMENTARIES

38. The following texts are suggested:

"Harm" means:

- (a) Loss of life, personal injury or impairment of the health or physical integrity of persons;
- (b) Damage to property or loss of profit;
- (c) Harm to the environment, including:
 - (i) The cost of reasonable measures taken or to be taken to restore or replace destroyed or damaged natural resources or, where reasonable, to introduce the equivalent of these resources into the environment;
 - (ii) The cost of preventive measures and of any further damage caused by such measures;
 - (iii) The compensation that may be granted by a judge in accordance with the principles of equity and justice if the measures indicated in subparagraph (i)

were impossible, unreasonable or insufficient to achieve a situation acceptably close to the *status quo ante*. Such compensation should be used to improve the environment of the affected region.

²² Ibid., p. 2.

²³ Sands, Mackenzie and Kalatschi, *op. cit.* p. 56.

- The environment includes ecosystems and natural, biotic and abiotic resources, such as air, water, soil, fauna and flora and the interaction among these factors.
- The affected State or the bodies which it designates under its domestic law shall have the right of action for reparation of environmental damage.

39. In the commentary on harm to the environment, a distinction must be drawn between harm to the environment *per se*, which is an injury inflicted on the community where the right of action belongs to the State or to the bodies which it designates under its domestic law, and harm to individual natural or moral persons through environmental deterioration, as for example where someone is made ill by water pollution and must be hospitalized, or the typical case of a hotel owner who loses customers because of the deterioration of the region where the hotel is located (industrial smoke, unpleasant odours, polluted water, etc.). The comment should note that this last-mentioned type of harm is covered in paragraph 3 (a) and (b).

40. In addition, in the commentary on subparagraph (c) (i), it should be pointed out that one of the meanings of "reasonable" applied to restoration and replacement measures, or measures introducing an equivalent, is that the costs of these measures should not be excessively disproportionate to the usefulness resulting from the measure. See the *Commonwealth of Puerto Rico v. Zoe Colocotroni* case, decided by the United States Court of Appeals, First Circuit (628 F.2d 652 (1980)), which refers to the oil spill off the coast of Puerto Rico in 1973.

"The national legislation in question provided that the Federal Government and states were authorized to recover costs or expenses incurred ... in the restoration of natural resources damaged or destroyed as a result of a discharge of oil or a hazardous substance. At first instance, the District Court awarded damages based, *inter alia*, on the cost of replacing, through biological supply laboratories, the millions of tiny aquatic organisms destroyed by the spill. The Court of Appeals vacated the District Court's decision in this respect and held that the appropriate primary standard for determining damages in such a case was the cost reasonably to be incurred by the sovereign or its designated agency to restore or rehabilitate the environment in the affected area to its pre-existing condition, or as close thereto as is feasible without grossly disproportionate expenditures.

"Factors to be taken into account would include technical feasibility, harmful side effects, compatibility with or duplication of such regeneration as is naturally to be expected, and the extent to which efforts beyond a certain point would become either redundant or disproportionately expensive. The Court of Appeals also recognised that there may be circumstances where direct restoration of the affected area would be either physically impossible or so disproportionately expensive that it would not be reasonable to undertake such a remedy".²³

ANNEX 15

LIST OF SELECTED DOCUMENTS OF THE UNITED NATIONS AND OTHER INTERNATIONAL ORGANISATIONS

I United Nations General Assembly

UNGA Resolution 2997 on Institutional and Financial Arrangements for International Environmental Co-operation; UN Doc. A/8730

UNGA Resolution 45/58 on General and Complete Disarmament; UN Doc. A/RES/45/58 (21 December 1990).

UNGA Resolution 47/591 on the Protection of the Environment in Times of Armed Conflict; UN Doc. A/47/591 (29 October 1992).

II. UN Security Council Resolutions

Security Council Resolution 660 condemning Iraq's invasion of Kuwait, demanding the immediate and unconditional withdrawal of all Iraqi forces and calling for negotiations for a peaceful resolution of their differences; UN Doc.S/RES/660 (1990), 2 August 1990.

Security Council Resolution 661 imposing mandatory economic sanctions against Iraq and establishing a committee (the "sanctions committee") to monitor those sanctions; UN Doc.S/RES/661 (1990), 6 August 1990.

Security Council Resolution 674 demanding that Iraq release third-state nationals being held in Iraq or Kuwait; UN Doc.S/RES/674 (1990), 29 October 1990.

Security Council Resolution 678 authorizing Member States co-operating with the Government of Kuwait to use "all necessary means to uphold and implement" the Council's Resolutions on the situation unless Iraq fully complies with those Resolutions on or before 15 Jan 1991; UN Doc.S/RES/678 (1990), 29 November 1990.

Security Council Resolution 687 establishing detailed measures for a ceasefire, including deployment of a United Nations observer; UN Doc.S/RES/687 (1991), 3 April 1991.

Security Council Resolution 692 establishing the United Nations Compensation Fund and the United Nations Compensation Commission; UN Doc.S/RES/692 (1991), 20 May 1991.

Security Council Resolution 705 endorsing the Secretary-General's suggestion that Compensation to be paid by Iraq should not exceed 30 per cent of the annual value of its exports; UN Doc.S/RES/705 (1991), 15 August 1991.

Security Council Resolution 706 authorizing the import of oil products originating from Iraq for a six-month period in order to finance United Nations operations mandated by Security Council Resolution 687 (1991); UN Doc.S/RES/706 (1991), 15 August 1991.

Security Council Resolution 712 confirming the \$ 1.6 Billion ceiling for Iraqi oil sales and authorizing the release of funds to meet Iraq's essential civilian needs; UN Doc.S/RES/712 (1991), 19 September 1991.

Security Council Resolution 778 concerning Iraq's assets frozen outside Iraq; UN Doc.S/RES/778 (1992), 2 October 1992

III. United Nations Compensation Commission

United Nations Compensation Commission Governing Council Decision 7 taken during its third session, at the 18th meeting, held on 28 November 1991, as revised at the 24th meeting held on 16 March 1992; UN Doc. S/AC.26/1991/7/Rev.1.

United Nations Compensation Commission Governing Council Decision 10 taken during its sixth session, at the 27th meeting, held on 26 June 1992; UN Doc. S/AC.26/1992/10.

United Nations Compensation Commission Governing Council Decision 12 taken during its seventh session, at its 29th meeting, held on 24 September 1992; UN Doc. S/AC/1992/12.

IV. United Nations Environment Programme

Updated Scientific Report on the Environmental effects of the conflict between Iraq and Kuwait; UNEP Doc. GC.17/Inf.9 (8 March 1993).

Follow-up to the VIII Ministerial Meeting on the Environment in Latin America and the Caribbean; UNEP Doc. GC.17/25 (19 April 1993).

Fourth Session of the Ad Hoc Working Group on the draft Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal, Geneva 24-28 June 1996; UN Doc. UNEP/CHW.I/WG.1/4/2 (1996).

V. International Atomic Energy Agency

IAEA General Conference Resolution 407 on the Protection of Nuclear Installations Devoted to Peaceful Purposes against Armed Attacks; IAEA Doc. GC(XXVII)/RES/407 (9 November 1983).

IAEA General Conference Resolution 425 on the Consequences of the Israeli military attack on the Iraqi Nuclear Research Reactor and the standing threat to repeat this attack for:

- a) the development of nuclear energy for peaceful purposes; and
- b) the role and activities of the International Atomic Energy Agency; IAEA Doc. GC(XXVIII)/RES/425 (October 1984).

IAEA General Conference Resolution 475 on the Protection of Nuclear Installations against Armed Attacks; IAEA Doc. GC(XXXI)/RES/475 (25 September 1987).

IAEA General Conference Resolution 533 on Measures to Strengthen International Co-operation in matters relating to Nuclear Safety and Radiological Protection, and the Prohibition of all Armed Attacks against Nuclear Installations devoted to peaceful purposes whether under construction or in operation; IAEA Doc. GC(XXXIV)/RES/533 (October 1990).

VI. Miscellaneous

Report to the Secretary-General by a United Nations mission assessing the scope and nature of damage inflicted on Kuwait's infrastructure during the Iraqi occupation of the country from 2 August 1990 to 27 February 1991; UN Doc. S/22535 (29 April 1991).

Report on the United Nations Inter-Agency Plan of Action for the ROPME Region, phase I: Initial Survey and Preliminary Assessment, (12 October 1991).

United Nations Development Programme Gulf Task Force: Proposals for the Socio-economic and Environmental recovery of countries affected by the Gulf crisis of 1990-1991: Overview; UNDP Doc. DP/1992/4 (15 November 1991).

Working paper submitted by the United States on the criteria for claims for environmental damage and the depletion of natural resources; UN Doc. S/AC.26/1991/wp.20. (20 November 1991).

Abridged and Updated Report on the United Nations Inter-Agency Plan of Action for the ROPME Region, (11 June 1992).

LIST OF SELECTED INTERNATIONAL AGREEMENTS AND CONVENTIONS RELATED TO LIABILITY AND COMPENSATION FOR ENVIRONMENTAL DAMAGE

I. International Agreements Specifically Dealing with Liability and Compensation for Environmental Damage

1. OECD Convention on Third Party Liability in the Field of Nuclear Energy (Paris), 29 July 1960, in force 1 April 1968, 956 *U.N.T.S.* 251, Art. 9 (1960 Paris Convention).
2. Convention on Civil Liability for Nuclear Damage (Vienna), 29 May 1963, in force 12 November 1977, 1063 *U.N.T.S.* 265, Art. IV(3)(a) (1963 Vienna Convention).
3. Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution, 7 January 1969, in force 6 October 1969, 8 *ILM* (1969) 497 (TOVALOP).
4. International Convention on Liability for Oil Pollution Damage (Brussels), 29 November 1969, in force 19 June 1975, 973 *U.N.T.S.* 3, Art. III(2)(a) (1969 CLC).
5. Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution, 14 January 1971, 10 *ILM* (1971) 137 (CRISTAL).
6. International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Brussels), 18 December 1971, in force 16 October 1978, 11 *ILM* (1972) 284, Art. 4(2)(a) (1971 Oil Pollution Fund Convention).
7. The Convention on International Liability for Damage Caused by Space Objects (1972), 29 March 1972, in force 1 September 1972, 961 *U.N.T.S.* 187 (Space Liability Convention).
8. Geneva Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels, 10 October 1989, not in force; *ECE/TRANS/79*.
9. Protocol of 1992 to Amend the International Convention on Civil Liability for Oil Pollution Damage 1969, (London), 27 November 1992, not in force, *BNA* 21:1551, Art. 2(3).
10. Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, (Lugano), 21 June 1993, not in force, 32 *ILM* (1993) 1228.
11. International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 2 May 1996, IMO Doc. LEG/CONF. 10/DC. 4 (1996 HNS Convention).

II. Other Related International Conventions and Agreements

1. Convention Concerning the Laws and Customs of War on Land (Hague IV), (The Hague), 18 October 1907, in force 26 January 1910, 3 *Martens* (3rd) 461, Preamble (1907 Hague Convention IV).
2. Convention Relative to the Laying of Automatic Submarine Contact Mines, (The Hague), 18 October 1907, in force 26 January 1910, 3 *Martens* (3rd) 580 (1907 Hague Convention VIII).

3. Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare, (Geneva), 17 June 1925, in force 8 February 1928, 94 *U.N.T.S.* 65.
4. 1935 Convention for Settlement of Difficulties Arising from Operation of Smelter at Trail, 3 *UNRIAA* 1905, Art. IV.
5. Charter of the United Nations (San Francisco), 26 June 1945, 1 *U.N.T.S.* xvo (UN Charter).
6. Hague Regulations, Art. 23(g) and 55; Convention IV for the Protection of War Victims, Concerning the Protection of Civilian Persons in Time of War, (Geneva), 12 August 1949, in force 21 October 1950, 75 *U.N.T.S.* 287, Art. 53 (1949 Geneva Convention IV).
7. International Convention for the High Seas Fisheries of the North Pacific Ocean (Tokyo), 9 May 1952, in force 1953, 205 *U.N.T.S.* 65 (1952 North Pacific Fisheries Convention).
8. International Convention for the Prevention of Pollution of the Sea by Oil (London), 12 May 1954, in force 26 July 1958, 327 *U.N.T.S.* 3, Art. XIX(1) (1954 Oil Pollution Convention).
9. Convention for the Protection of Cultural Property in the Event of Armed Conflict, (The Hague), 14 May 1954, in force 7 August 1956, 249 *U.N.T.S.* 215 (1954 Hague Convention).
10. Antarctic Treaty (Washington), 1 December 1959, in force 23 June 1961, 402 *U.N.T.S.* 71 Art. I(1) (1959 Antarctic Treaty).
11. 1969 Vienna Convention on the Law of Treaties, in force 27 January 1980, 8 *ILM* (1969) 679.
12. Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxic Weapons and on their Destruction, (London, Washington, Moscow), 10 April 1972, in force 28 March 1975, 1015 *U.N.T.S.* 163 (1972 Biological and Toxic Weapons Convention).
13. Stockholm Declaration of the United Nations Conference on the Human Environment, 11 *ILM* 1416 (1972), UN Doc. A/CONF.48/14
14. Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, (London, Mexico City, Moscow, Washington DC), 29 December 1972, in force 30 August 1975, 1046 *U.N.T.S.* 120 (1972 London Convention).
15. Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft, (Barcelona), 16 February 1976, in force 12 February 1978, 15 *ILM* (1976) 290, (1976 Barcelona Dumping Protocol).
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