

“Marine environment from the conclusion of the United Nations Convention on the Law of the Sea to the World Summit on Sustainable Development”



Source: www.oceansatlas.org

Part 1

by Valentina Germani/DOALOS

Facts and figures:

- ◇ Environmental, economic and social value of oceans and seas;
- ◇ Major threats to the marine environment and its resources.

Historical perspective:

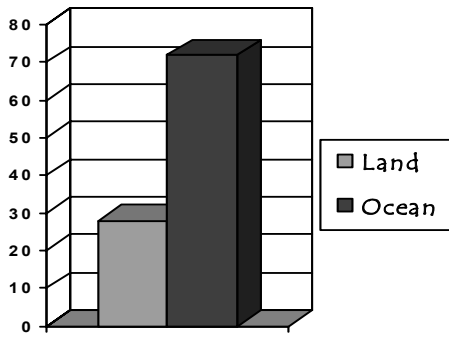
- ◇ Development of the international regime for the protection and preservation of the marine environment.

The United Nations Convention on the Law of the Sea

- ◇ Key provisions of the Convention relating to the protection and preservation of the marine environment.

This presentation starts by providing some facts and figures on the environmental, economic and social value of oceans and seas, and on the major threats to the marine environment and its resources. It then continues with an overview of the development of the international regime for the protection and preservation of the marine environment. To conclude it presents the key provisions of the United Nations Convention on the Law of the Sea relating to the protection and preservation of the marine environment.

Facts and figures – General



◊The oceans cover 72 per cent of the Earth's surface and extend to depths of more than 10,000 meters. They comprise nine-tenths of the planet's water resources and are home to over 97 per cent of all life on earth.

◊They affect the health and survival of all life, they power our climate and are an essential part of the biosphere.

The oceans cover 72 per cent of the Earth's surface and extend to depths of more than 10,000 meters. They comprise nine-tenths of the planet water resources and are home to over 97 per cent of all life on earth – at the same time our knowledge of marine biodiversity is far less advanced compared to that of terrestrial biodiversity.

The oceans have an essential role in the functioning of our planet and in fact they affect the health and survival of all life, they power our climate and are an essential part of the biosphere.

Facts and figures – General continued...



Source: www.oceansatlas.org

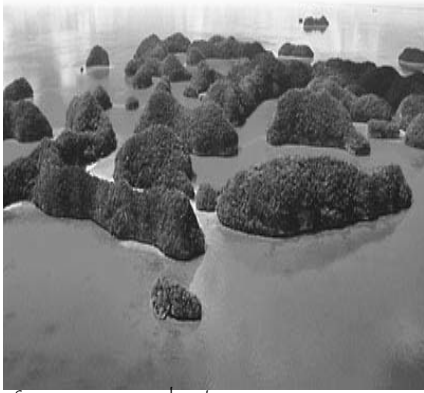
◇ Coastal areas comprise 20 per cent of the Earth's surface.

◇ More than half of the world's population lives in coastal areas.

Coastal areas comprise 20 per cent of the Earth's surface. But at the same time they host a significant portion of the entire human population.

More than half of the world's population lives in coastal areas. More than 70 per cent of the world's megacities are located in coastal areas.

Facts and figures – General continued...

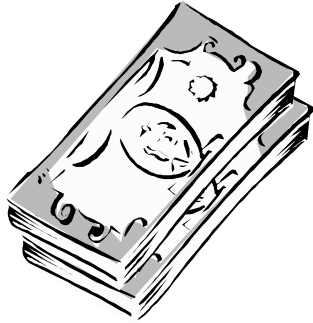


Source: www.ourplanet.com

- ◊ There are forty-four small islands developing States (SIDS);
- ◊ They play a critical role in the development of vast ocean areas (for example their Exclusive Economic Zones);
- ◊ They face special issues due to their small size, ecological vulnerability, limited resources, geographic dispersion and isolation from markets.

The forty-four small islands developing States (SIDS), play a critical role in the development of vast ocean areas (for example their Exclusive Economic Zones). At the same time they face special issues due to their small size, ecological vulnerability, limited resources, geographic dispersion and isolation from markets.

Facts and figures – Economic and social value



◊The combined value of ocean resources and uses is estimated to be about \$7 trillion per year.

Examples:

◊Fish – Every year, almost 90 million tons of fish are captured globally, at a value of approximately \$50 billion

◊Marine minerals –have been estimated to generate nearly \$1 trillion every year.

In terms of economic and social values, the combined value of ocean resources and uses is estimated to be about \$7 trillion per year.

To give you some specific examples:

Every year, almost 90 million tons of fish are captured globally, at a value of approximately \$50 billion. The fishing and aquaculture industries alone provide work to 36 million people.

Marine minerals, including offshore oil and gas, gold, tin, diamonds, sand and gravel, have been estimated to generate nearly \$1 trillion every year.

Facts and figures – Economic and social value continued..



◊ Offshore oil production accounts for about 30 per cent of total world oil production.

◊ Offshore gas production accounts for about half of the world gas production.

Offshore oil production accounts for about 30 per cent of total world oil production, and offshore gas production accounts for about half of world gas production.

Facts and figures – Economic and social value continued...



Source: www.oceanatlas.org



Source: www.unesco.org

◊ Approximately 90% of international trade is transported by sea.

◊ Seaside tourism and the cruise industry are a major source of revenue for many countries, in particular small island developing States.

◊ The ocean hosts a wealth of underwater cultural resources.

Here you can see examples of some other activities carried out at sea:

- The bulk of all international trade – approximately 90% – is transported by sea.
- Seaside tourism and the cruise industry are a major source of revenue for many countries, in particular small island developing States.
- The ocean hosts a wealth of underwater cultural resources, many of them still to be explored: over 3 million undiscovered shipwrecks are estimated to lie on the ocean floors.

Facts and figures – Economic and social value continued...



Increasingly, scientists are looking to the deep sea as the source of future scientific discoveries and resources:

- ◊ Mineral resources
- ◊ Genetic resources

Looking into the future, increasingly scientists are looking to the deep sea as the source of future scientific discoveries and resources.

The newly discovered mineral resources of the international seabed area (cobalt-rich ferromanganese crusts and polymetallic sulphides) are attracting attention for their economic potential .

The genetic resources of the deep seabed are also attracting growing attention for their scientific as well as commercial significance

Facts and figures – Environmental

The three greatest threats to the world's oceans are:

- ◇ Overexploitation of living marine resources
- ◇ Pollution from land-based sources
- ◇ Physical alteration or destruction of marine habitats

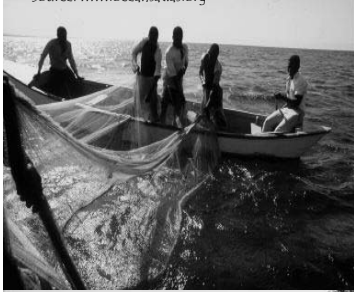


The multitude of activities supported in ocean and coastal areas, as just described, is placing increasing pressure on the integrity of the coastal and marine ecosystems.

In fact, the three greatest threats to the world's oceans, as identified by the Global Environment Facility, are overexploitation of living marine resources, pollution from land-based sources, and physical alteration or destruction of marine habitats.

Facts and figures – Environmental continued...

Source: www.oceansatlas.org



Overexploitation of living marine resources

- ◇ About 50 per cent per cent of fish stocks are fully utilized and another 25 per cent are overfished, leaving only 25 per cent with some potential for increased fish harvests.

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As a result the food security of societies heavily dependent on fishing is threatened. This has also an effect on the marine ecosystems.

Facts and figures – Environmental continued...



Source: <http://oceanlink.island.net>

Land-based sources of pollution

- ◇ Land-based sources of pollution are responsible for about 80 per cent of the pollution of the oceans.
- ◇ Example: pollution from sewage

Land-based sources of pollution – they are responsible for about 80 per cent of the pollution of the oceans and affect the most productive areas of the marine environment.

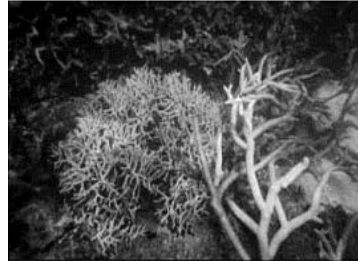
In particular, pollution from sewage has a massive effect on health worldwide. This type of pollution is estimated to cause some 250 million cases of gastroenteritis and upper respiratory disease every year, costing societies worldwide about \$1.6 billion a year. This was the conclusion of a recent study sponsored by the United Nations Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) and the World Health Organization (WHO).

Facts and figures – Environmental continued...

Physical alteration or destruction of marine habitats

Examples:

- ◇ Coral reefs
- ◇ Mangrove forests



Source: www.aims.gov.au

In terms of physical alteration or destruction of marine habitats it is worth mentioning that - approximately 27% of coral reefs are seriously threatened while it is predicted that a further 50 to 60 per cent of the world's reefs may be destroyed within the next 30 years unless urgent measures are taken.

It is estimated that overall 50 per cent of the world's mangrove forests have been lost.

Facts and figures – Environmental continued...

- ◇ *Dumping* of wastes and other matter accounts for about 10 per cent of pollutants in the oceans.
- ◇ The greatest threat to the marine environment from *shipping activities* arises from the introduction of harmful alien species into new environments through ships' ballast water.
- ◇ The Intergovernmental Panel on Climate Change (IPCC) has indicated that continued use of fossil fuels will exacerbate global *climate changes* with severe consequences for ocean and coastal ecosystems, in particular in SIDS.

Other threats to the marine environment include:

- Dumping of wastes and other matter accounts for 10 per cent of pollutants in the oceans.
- The introduction of harmful alien species into new environments through ships' ballast water constitutes the greatest threat to the marine environment from shipping activities.
- The effects of global climate changes will have severe consequences for ocean and coastal ecosystems, and in particular in SIDS.

Development of a regime for the protection and preservation of the marine environment

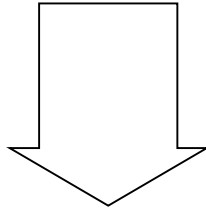


Source: www.oceansatlas.org

From the Stockholm Declaration to the
United Nations Convention on the Law
of the Sea

In this part of the presentation I would like to highlight the salient moments of the development of the regime for the protection and the preservation of the marine environment. In particular I will address the transition from the Stockholm Declaration to the United Nations Convention on the Law of the Sea

*The United Nations Conference on the
Human Environment (Stockholm 1972)*



*1972 Stockholm Declaration on the Human
Environment*

In 1972 The UN Conference on the Human Environment met in Stockholm. The outcome of the Conference was the Stockholm Declaration on the Human Environment.

The Declaration represents the first attempt by the international community to deal, *inter alia*, with the problem of protecting the marine environment in a comprehensive manner.

Stockholm principles and recommendations of particular relevance to the marine environment



- ◇ *Principle 7*
- ◇ *Principle 21*
- ◇ *Principle 22*
- ◇ *Recommendations 87 to 94*

The Declaration contains twenty-six principles, three of which (principles 7, 21 and 22) are of particular relevance to the marine environment. Principle 7 deals with the prevention of pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea. Principle 21 underlines the responsibility of States not to cause transboundary environmental damage (both to other States or to areas beyond the limits of national jurisdiction). Principle 22 invites States to develop international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities both within and beyond the jurisdiction or control of States.

In addition the 1972 Stockholm Conference adopted 109 recommendations for action at the international level for the protection of human environment, nine of which concern marine pollution. These recommendations called on States to accept and implement existing instruments on the control of marine pollution, to ensure the effectiveness of controls on vessel-source pollution and dumping at sea and to participate in new efforts to bring all sources of marine pollution, including land-based sources, under appropriate controls. The need for special measures to protect closed and semi-enclosed seas and to promote research and monitoring by national and international agencies was also underlined.

The United Nations Convention on the Law of the Sea



◊ On 10 December 1982, the United Nations Convention on the Law of the Sea was opened for signature at Montego Bay, Jamaica.

◊ A comprehensive regime "dealing with all matters relating to the law of the sea, . . . bearing in mind that the problems of ocean space are closely interrelated and need to be considered as a whole" was established.

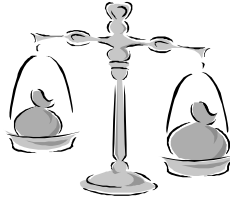
The comprehensive approach adopted in Stockholm was also adopted as a basis for the work of the Committee of the Third United Nations Conference on the Law of the Sea responsible for preparing draft articles on the protection and preservation of the marine environment

The 1982 United Nations Convention on the Law of the Sea contains in fact a comprehensive set of international rules for the protection and preservation of the marine environment. This constitutes an framework for further development to be carried out by competent international organizations. A characteristic of the Convention is that it embodies an integrated approach, which brings together the political, economic, social, scientific and technological aspects of marine affairs.

The United Nations Convention on the Law of the Sea continued...

The Convention ensures:

◊ A balance between the need to protect and preserve the marine environment and the rights of nations to use the oceans and their resources.



◊ A balance between global community needs (for example international navigation) and demands of national sovereignty and jurisdiction.

Another characteristic of the Convention is that it strikes a basic balance between the protection and preservation of the marine environment and the well-being of nations through the use of the oceans and their resources.

It also tries to reconcile global or community needs with the demands of national sovereignty and jurisdiction. For example, the Convention tries to accommodate both the need to protect the marine environment and the necessity to preserve the freedom of navigation and the right of passage of vessels.

UNCLOS – Part XII

General principles in the Convention

- ◊ General obligation to protect and preserve the marine environment (article 192)
- ◊ Duty to prevent transboundary effects of pollution and not to transfer damage or hazards from one area to another or transform one type of pollution into another (articles 194, paragraph 2 and 195).

Source: www.oceansatlas.org

Part XII deals with the “Protection and preservation of the marine environment”. It is important to note that although the environmental provisions of the Convention are contained mainly in this Part, there are environmental provisions in various other parts of the Convention.

Part XII opens with a series of general obligations.

First of all the general obligation for States to protect and preserve the marine environment is set out in article 192. This fundamental obligation embodies a radical change from the piece-meal approach adopted in previous instruments.

This general obligation is qualified by article 193, which provides that “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”. The attempt to balance sovereign rights over natural resources and the duty to protect the environment can be considered a precursor of the concept of sustainable development.

Articles 192-193 are generally regarded as statements of customary international law on the extent of the environmental responsibility of States towards the oceans.

Examples of how the Convention adopted a holistic approach to the protection and preservation of the marine environment are provided by the duty to prevent transboundary effects of pollution and the duty not to transfer damage or hazards from one area to another or transform one type of pollution into another

General principles in the Convention continued...

- ◇ Duty to take all measures necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities (article 194, paragraph 1).

On the other hand, a balance between the common responsibility to conserve, protect and restore the environment with the differences in economic strength and in the extent of capacity is achieved by the provision that States shall to take all measures necessary to prevent, reduce and control pollution of the marine environment from any source using “the best practicable means at their disposal and in accordance with their capabilities”.

Pollution

Definition of pollution – Pollution of the marine environment means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results 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 seas, impairment of quality for use of sea water and reduction of amenities (article 1, paragraph 4).

To assist States in fulfilling their duty under article 194 to take all measures necessary to prevent, reduce and control pollution of the marine environment, the Convention provides a definition of pollution as “the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results 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 seas, impairment of quality for use of sea water and reduction of amenities”.

Pollution continued...



Types of pollution :

- ◊Pollution from land-based sources;
- ◊Pollution from seabed activities;
- ◊Pollution from activities in the Area;
- ◊Pollution by dumping;
- ◊Pollution from vessels;
- ◊Pollution from or through the atmosphere;
- ◊Pollution of the marine environment resulting from the use of technologies or the intentional or accidental introduction of species, alien or new, to a particular part of the marine environment.

The types of pollution identified in the Convention include:

- a) Pollution from land-based sources;
- b) Pollution from seabed activities;
- c) Pollution from activities in the Area;
- d) Pollution by dumping;
- e) Pollution from vessels;
- f) Pollution from or through the atmosphere;
- g) Pollution of the marine environment resulting from the use of technologies or the intentional or accidental introduction of species, alien or new, to a particular part of the marine environment

Ecosystems

- ◊ Duty to take measures necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life (article 194, paragraph 5)

At the same time, article 194 paragraph 5 of the Convention establishes that the measures taken by States to prevent, reduce and control pollution of the marine environment from any source, shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.

Global and regional cooperation



- ◇ Cooperation at the global and regional basis , as appropriate, in the formulation of international rules, standards and recommended practices and procedures for the protection and preservation of the marine environment (article 197)
- ◇ Notification and contingency plans (articles 198 and 199)
- ◇ Scientific cooperation (articles 200 and 201)

Another area of focus of Part XII is that of global and regional cooperation. The duty to cooperate covers three different aspects:

Firstly, cooperation on a global and regional basis in formulating and elaborating international rules, standards and recommended practices and procedures, for the protection and preservation of the marine environment. In the undertaking of this duty States are requested to take into account characteristic regional features.

Secondly, cooperation in the form of a duty of notification of imminent or actual damage as well as a duty for States and competent international organizations to cooperate in eliminating the effects of pollution and preventing or minimizing damage. To this end States are under a duty to develop and promote contingency plans for responding to pollution incidents.

Thirdly, scientific cooperation. In this field States are under:

- A duty to cooperate for the purpose of promoting studies, undertaking programmes of scientific research and encouraging the exchange of information and data acquired about pollution of the marine environment.
- A duty to cooperate in establishing appropriate scientific criteria for the formulation and elaboration of rules, standards and recommended practices and procedures for the prevention, reduction and control of pollution of the marine environment.

Monitoring and environmental assessment

- ◇ *Monitoring* - Duty of States to observe, measure, evaluate and analyze, by recognized scientific methods, the risks or effects of pollution of the marine environment (article 204)
- ◇ *Assessment* - When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments (article 206)

As a tool for the achievement of the goal of protection and preservation of the marine environment, States are under a duty to observe, measure, evaluate and analyze, by recognized scientific methods, the risks or effects of pollution of the marine environment. In particular, States have to keep under surveillance the effects of any activities which they permit or in which they engage in order to determine whether these activities are likely to pollute the marine environment.

The importance of assessment is also underlined in the Convention, in particular through the requirement that when States have reasonable grounds for believing that planned activities under their jurisdiction may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments.

Such reports are to be communicated to the competent international organizations, which should make them available to all States.

Technical assistance

Scientific and technical assistance to developing States

- ◇ From other States (article 202)
- ◇ From International Organizations (article 203)

The Convention provides for scientific and technical assistance to developing States in two forms:

- Under article 202 States have a duty to:

- (a) Promote programmes of scientific, educational, technical and other assistance for the protection and preservation of the marine environment and the prevention, reduction and control of marine pollution.
- (b) Provide appropriate assistance for the minimization of the effects of major incidents which may cause serious pollution of the marine environment; and
- (c) Provide appropriate assistance, especially concerning the preparation of environmental assessments.

- Under article 203, for the purposes of prevention, reduction and control of pollution of the marine environment or minimization of its effects, international organizations are under a duty to grant preferential treatment to developing countries in:

- (a) The allocation of appropriate funds and technical assistance; and
- (b) The utilization of their specialized services.

Development of international rules and national legislation

Section 5 of Part XII

- ◇ International rules, standards and recommended practices and procedures
- ◇ National laws and regulations

The convention provides for the development of international rules as well as national legislation.

- In the case of International rules, standards States are required to establish, or endeavor to establish, especially through the competent international organizations or diplomatic conference, global and regional rules, standards, to prevent reduce and control pollution of the marine environment from all sources. Such rules and standards have to be re-examine from time to time .

In the case of national laws and regulations States are required to implement international rules and standards, in particular through the adoption of national laws and regulations to prevent reduce and control pollution of the marine environment from all such sources of pollution.

Enforcement

Section 6 of Part XII

States are under an obligation to enforce their laws and regulations and implement international rules and standards, adopted in accordance to the articles mentioned above, in relation to all sources of pollution

At the same time States are under an obligation to enforce their laws and regulations and implement international rules and standards, adopted in accordance to the articles mentioned above, in relation to all sources of pollution.

Safeguards

Section 7 of Part XII

- ◇ States are required to facilitate proceedings brought in pursuance of the above provisions (article 223)
- ◇ Enforcement measures taken against a vessel must not endanger the vessel or create hazards to navigation or expose the marine environment to an unreasonable risk (article 225)
- ◇ All possible efforts should be made to ensure that a ship is not unduly detained or delayed (article 226)

In addition to the right and duty of States to enforce their laws and regulations and implement international rules and standards in relation to all sources of pollution, the Convention establishes a series of safeguards, of which I gave some examples in this slide.

Responsibility and liability

Section 9 of Part XII

- ◇ States are responsible for the fulfillment of their international obligations concerning the protection and preservation of the marine environment and they shall be liable in accordance with international law (article 235, paragraph 1)
- ◇ States are under a duty to ensure that prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment by natural or juridical persons under their jurisdiction are available (article 235, paragraph 2)

The Convention has a provision on responsibility and liability, in fact Article 235 provides that States are responsible for the fulfillment of their international obligations concerning the protection and preservation of the marine environment and that they shall be liable in accordance with international law.

States are under a duty to ensure that prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment by natural or juridical persons under their jurisdiction are available.

Settlement of marine environmental disputes

- ◇ *Part XV Section 2* – compulsory procedures entailing binding decisions and the protection and preservation of the marine environment
- ◇ *Annex VIII* – special arbitration

In the area of settlement of marine environmental disputes it is important to note that under article 297 of the Convention disputes where it is alleged that a coastal State has acted in contravention of specified international rules and standards for the protection and preservation of the marine environment which are applicable to the coastal State and which have been established by this Convention or through a competent international organization or diplomatic conference in accordance with this Convention shall be subject to the compulsory procedures entailing binding decisions.

Under Annex VIII on special arbitration, any party to a dispute concerning the interpretation or application of the articles of this Convention relating to (1) fisheries, (2) protection and preservation of the marine environment, (3) marine scientific research, or (4) navigation, including pollution from vessels and by dumping, may submit the dispute to the special arbitral procedure provided for in this Annex.

Obligations under other Conventions

Section 11 of Part XII

- ◇ Part XII is without prejudice to the specific obligations assumed by States under special conventions and agreements concluded previously which relate to the protection and preservation of the marine environment and to agreements which may be concluded in furtherance of the general principles set forth in this Convention.

To conclude it is important to underline that the framework provisions that I have presented above, are intended to be the basis for a web of specific agreements developed by the relevant international organizations. Article 237 addresses the relationship between Part XII of the Convention and other specific obligations assumed by States under special conventions and agreements which were concluded either before or after and which relate to the protection and preservation of the marine environment.

In a more general way, article 311 also addresses the general relationship between UNCLOS and other conventions and international agreements.