DOALOS/UNITAR BRIEFING ON DEVELOPMENTS IN OCEAN AFFAIRS AND THE LAW OF THE SEA 20 YEARS AFTER THE CONCLUSION OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA

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

Part II of the presentation entitled "Legal instruments that support the implementation of the United Nations Convention on the Law of the Sea" by Gabriele Goettsche-Wanli

The United Nations Convention on the Law of the Sea as a framework or umbrella Convention

The United Nations Convention on the Law of the Sea (UNCLOS) is often referred to as a framework or an "umbrella" Convention, especially as regards its provisions dealing with the protection and preservation of the marine environment. Because many of those provisions set out general principles, which can only be effectively implemented following the adoption and implementation of other instruments. UNCLOS requires States to cooperate at the global, and as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures, while providing the principles on which action should be based.

Cooperation among States has over the past twenty years led to the adoption of a significant number of global and regional instruments.

Development of international rules and standards

UNCLOS calls on States to establish international rules and standards through:

"competent international organization" or "organizations" or

"general diplomatic conference",

and to re-examine these rules and standards from time to time as necessary.

Instrumental in the development of the international rules and standards are some of the following competent international organizations:

- International Maritime Organization (IMO): responsible for the development of rules relating to maritime safety, prevention of marine pollution from vessels and by dumping.
- United Nations Environment Programme (UNEP): responsible, inter alia, for the development of rules on the protection and preservation of the marine environment from land-based sources and for the development of regional rules and standards through its Regional Seas Programme.
- International Atomic Energy Agency (IAEA): responsible, inter alia, for the development of rules relating to nuclear safety and radioactive waste management.

With regard to pollution from seabed activities in the Area, it is the International Seabed Authority which is responsible for the development of the relevant international rules and standards

No global organization has been specifically mandated with the development of international rules and standards relating to the prevention, reduction and control of pollution of the marine environment from seabed activities within national jurisdiction.

International rules and national legislation

Once international rules and standards have been adopted, they must be implemented in national legislation for the prevention, reduction and control of marine pollution either as *minimum standards* or as *guiding principles* and be subsequently enforced.

States are required by UNCLOS to "take account of", "conform to", "give effect to" or "implement" the relevant international rules and standards, which depending on the context are referred to either as "applicable international rules and standards", "internationally agreed rules, standards and recommended practices and procedures", "global rules and standards", "generally accepted international regulations", "applicable international instruments", or "generally accepted international regulations, procedures and practices".

The authority that is to be accorded to these rules and standards vis-à-vis the enactment of national laws and standards varies in UNCLOS according to the type of activity being regulated.

In relation to pollution from vessels, by dumping, from seabed activities subject to national jurisdiction and from activities in the Area undertaken by vessels, installations and structures, States are obliged to adopt international rules and standards as minimum standards in national laws, whereas in relation to land-based and airborne sources of marine pollution, national law need only take into account internationally agreed rules and standards. At the same time, any State may enact standards more stringent than the global minimum, with the exception of those affecting international navigation, i.e., standards for vessel construction, design, manning and equipment. Moreover, States are required to seek the approval of IMO for the introduction of special protective measures affecting international navigation in straits used for international navigation, in archipelagic sea lanes and in the exclusive economic zone.

Main global minimum standards for the prevention, reduction and control of pollution of the marine environment from vessels

UNCLOS requires States to take measures to minimize to the fullest possible extent pollution from vessels, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, preventing intentional and unintentional discharges and regulating the design, construction, equipment, operation and manning of vessels. States are required to establish, through the competent international organization or general diplomatic conference, international rules and standards to prevent, reduce and control pollution of the marine environment from vessels and to re-examine these from time to time as necessary.

They must also promote the adoption, in the same manner, wherever appropriate of routeing systems designed to minimize the threat of accidents.

National laws and regulations for the prevention, reduction and control of pollution of the marine environment from vessels are to be *no less effective* than the generally accepted international rules and standards. Thus, for the flag State the global rules and standards constitute the minimum standard, which it must adopt for vessels flying its flag. In their territorial sea, coastal States may adopt stricter rules and standards than the generally accepted global standards, so long as such standards do not apply to the design, construction, manning or equipment of foreign ships, nor hamper innocent passage. In the exclusive economic zone, the generally accepted international rules and standards must be applied, except where the coastal State has adopted more stringent measures pursuant to article 211(6) of UNCLOS.

The extent to which Parties to UNCLOS are under the obligation to implement "generally accepted" and enforce "applicable" international rules and standards for the prevention, reduction and control of pollution from vessels depends on the degree of their international acceptance. Rules and standards adopted by IMO are usually considered to be "generally accepted", as most States are members of the Organization and all instruments are adopted by consensus.

Ship safety and safety of navigation

Routeing measures to prevent accidents are provided for in the International Convention for the Safety of Life at Sea (SOLAS), the International Regulations for Preventing Collisions at Sea and the IMO General Provisions on Ships' Routeing. In addition to these instruments there are also a number of other IMO safety-related conventions whose implementation is critical for ship safety and the safety of navigation, including the International Convention on Load Lines, 1966 and its Protocol and the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW). Both SOLAS and the STCW address the human element which is crucial for preventing accidents at sea, given that human error is the cause of most accidents.

Pollution prevention

The major IMO instrument regulating the discharge of pollutants from ships relating to the normal operation of ships is the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78). Regulations covering the various sources of ship-generated pollution are contained in six annexes: Annex I (oil), Annex II (noxious liquid substances), Annex III (harmful substances carried in packaged form), Annex IV (sewage), Annex V (garbage) and Annex VI (air pollution). The International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001 controls the use of toxic paint on ships' hulls.

Emergency response

Measures for dealing with emergencies have been developed at global and regional levels. *Global measures* for dealing with oil pollution incidents are set out in the International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties and its

1973 Protocol relating to Intervention on the High Seas in Cases of Pollution by Substances Other than Oil; the International Convention on Salvage, 1989 and in the International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990 (OPRC). Its 2000 Protocol extended the scope of the OPRC to cover hazardous and noxious substances (mainly chemicals).

Measures for dealing with a nuclear accident or radiological emergency are set out in the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, 1986 and in the Convention on Early Notification of a Nuclear Accident, 1986.

Regional instruments: Most of the regional seas conventions have adopted protocols on cooperation in combating oil pollution in cases of emergency.

Global minimum standards for the prevention, reduction and control of pollution of the marine environment by dumping

UNCLOS requires States to establish global and regional rules to prevent, reduce and control pollution by dumping and prescribes that national laws, regulations and measures must be no less effective in preventing, reducing and controlling such pollution than the global rules and standards

The minimum global rules and standards for the prevention, reduction and control of pollution of the marine environment by dumping which Parties to UNCLOS are required to implement at the national level are contained in the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (London Convention), which establishes conditions for the granting of permits for dumping in waters subject to national jurisdiction. Annex I includes a list of substances, i.e., "a black list", consisting of wastes that may not be dumped at sea, e.g., high-level radioactive wastes, persistent plastics and mercury. Annex II includes a list of substances, i.e., "a grey list", consisting of wastes that may be dumped subject to strict controls and a special permit. Annex III contains criteria for determining whether other substances may be dumped at sea, pursuant to a general permit.

Amendments to the annexes to the London Convention were adopted in 1993 with a view to:

- phasing out dumping of industrial waste by 1 January 1996;
- prohibiting the incineration at sea of industrial waste and sewage sludge; and
- prohibiting the dumping of radioactive waste and other radioactive matter.

The 1996 Protocol to the London Convention (not yet in force) is to replace the parent Convention. It is much more restrictive than the 1972 Convention. Instead of "black and grey lists", the Protocol prohibits the dumping of any wastes or other matter with the exception of the seven categories listed in its Annex 1 for which a permit is required: dredged material; sewage sludge; fish waste, or material resulting from industrial fish processing operations; vessels and platforms or other man-made structures at sea; inert, inorganic geological material; organic material of natural origin; and bulky items primarily comprising iron, steel, concrete and similarly unharmful materials generated at locations, such as small islands with isolated communities, having no practicable access to disposal options other than dumping. Annex 2 to the Protocol sets out a Waste Assessment Framework, which provides for an extremely stringent

environmental impact assessment on any material proposed for dumping. Incineration is prohibited by the Protocol, as is the export of wastes or other matter to other countries for dumping or incineration at sea.

At the regional level, specific instruments or special provisions relating to the prevention, reduction and control of pollution of the marine environment by dumping have been adopted for the Black Sea, the Mediterranean Sea, the North-East Atlantic, the South-east Pacific, the South Pacific and Antarctica.

Control of pollution of the marine environment by dumping is very much dependent on finding solutions to land-based sources of marine pollution and proper waste management in general. Two conventions which address the transboundary movement and environmentally sound disposal of wastes are the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1989 and the IAEA Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, 1997. The Basel Convention aims to reduce the transboundary movement of wastes to a minimum, including maritime carriage and requires environmentally sound disposal. The IAEA Convention contains requirements related to the transboundary movement of spent fuel and radioactive waste which are based on the 1990 IAEA Code of Practice on the International Transboundary Movement of Radioactive Waste. Its main objective is to ensure that during all stages of spent fuel and radioactive waste management there are effective defences against potential hazards. The maritime carriage of radioactive material is mainly regulated by the IMO International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-level Radioactive Wastes on Board Ships (INF Code).

Main international minimum standards for the prevention, reduction and control of pollution of the marine environment from seabed activities within national jurisdiction

UNCLOS requires States to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution from seabed activities within national jurisdiction and prescribes that national laws, regulations and measures shall be no less effective than the international rules, standards and recommended practices and procedures.

Global minimum standards governing pollution arising from the exploration and exploitation of non-living resources in the exclusive economic zone and on the continental shelf: No global rules and standards have been developed to address the release of harmful substances "directly" arising from the exploration, exploitation and associated offshore processing of non-living resources within areas under national jurisdiction. Accidental discharges of oil from offshore installations are covered to some extent by MARPOL 73/78 and the OPRC Convention.

Regional rules and standards which address pollution resulting from the exploration and exploitation of the continental shelf have been adopted for the Baltic Sea area, the Mediterranean, the North-east Atlantic and in the area covered by the Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution.

<u>International standards to be taken into account in addressing pollution from land-based sources and pollution from and through the atmosphere</u>

The Convention requires States to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution from land-based sources and prescribes that internationally agreed rules, standards and recommended practices and procedures shall be taken into account when adopting national laws and regulations.

There is no global convention dealing specifically with land-based sources of marine pollution, however, global rules and standards for the prevention, reduction and control of pollution from land-based activities are contained in the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) and the Washington Declaration, both adopted in 1995. The GPA addresses impacts of land-based activities on the marine and coastal environment including contaminants, physical alteration, point and non-point sources of pollution and such areas of concern as critical habitats, habitats of endangered species, ecosystem components, coastal watersheds, etc.

The GPA was reviewed in November 2001 and a specific plan of action for the control of sewage and for new sources of funding was adopted.

UNEP oversees the implementation of the GPA. Information on how partners implement the GPA is shared through the UNEP/GPA Coordination Office, established in The Hague, The Netherlands, which has set up a Clearing House mechanism. For more information, see the website of UNEP GPA at www.gpa.unep.org.

Also relevant for the protection of the marine environment from land-based sources of pollution is the Stockholm Convention on Persistent Organic Pollutants (POPs), 2001. POPS are chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of living organisms and are toxic to humans and wildlife. POPs contaminate the seas as they are transported by air and fall into the sea hundreds of miles away from their origin. The Convention provides for international cooperation in the reduction of POPs emissions and, if possible, in their elimination.

Regional rules: Five regional seas conventions have protocols that deal with land-based sources of pollution covering the Black Sea, Mediterranean, South-east Pacific, Wider Caribbean and the area covered by the Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution. The Economic Commission for Europe has adopted a regional instrument for the elimination of POPs.

Other instruments that support the implementation of UNCLOS

In addition to the international rules and standards specifically called for in UNCLOS to address specific sources of pollution, there are also several other Conventions and instruments that support the implementation of UNCLOS. Some give effect to the duty in the Convention to cooperate in the development of further measures, others simply complement the Convention. These instruments include the following.

United Nations Convention on Biological Diversity, 1992 and the Jakarta Mandate on Marine and Coastal Biological Diversity, 1995

The relationship between UNCLOS and the United Nations Convention on Biological Diversity (CBD) is specifically addressed in the CBD, which requires its Contracting Parties "to implement this Convention with respect to the marine environment consistently with the rights and obligations of States under the law of the sea".

The Jakarta Mandate on Marine and Coastal Biological Diversity, adopted by the Conference of Parties to the CBD in 1995, is the Programme of Action for implementing the CBD with respect to the conservation and sustainable use of marine and coastal biological diversity. The Jakarta Mandate covers five thematic areas: integrated coastal and marine areas management; marine and coastal protected areas; sustainable use of marine and coastal living resources; mariculture and alien species.

There are also several other decisions of the Conference of Parties to the CBD which are relevant for the protection and preservation of the marine environment.

Framework Convention on Climate Change, 1992 and its Kyoto Protocol

The Convention and Protocol relating to climate change are important for the protection of the marine environment from changes in temperature, ocean currents, ocean depth and patterns of severe weather phenomena across the globe.

Liability Conventions

Several liability conventions have been developed which give effect to the duty in article 235 of UNCLOS to cooperate in the development of international law relating to responsibility and liability.

Regional instruments

Several regional conventions and protocols have been adopted over the past 20 years. These will be discussed in another presentation.

United Nations Conference on Environment and Development, Agenda 21, in particular Chapter 17 "Protection of the Oceans, All Kinds of Seas, Including Enclosed and Semi-Enclosed Seas, and Coastal Areas for the Protection, Rational Use and Development of Their Living Resources"

Rio Declaration on Environment and Development

Complementary to the legal regime established by the Convention and related international instruments is the Programme of Action for the sustainable development of the oceans, the seas and coastal areas contained in Chapter 17 of Agenda 21 and the Rio Declaration on Environment and Development, which were both adopted by the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro, Brazil in 1992.

Although several chapters of Agenda 21 are also important for the sustainable development of oceans and seas, this presentation will focus on Chapter 17 of Agenda 21 dealing with oceans and all kinds of seas.

Main elements of Chapter 17 of Agenda 21

The *introduction* to Chapter 17 specifically confirms that UNCLOS sets forth the rights and obligations of States and provides the international basis upon which to pursue the protection and sustainable development of the marine and coastal environment and its resources.

Main programmatic areas:

- Integrated management and sustainable development of coastal and marine areas, including exclusive economic zones.
- Marine environmental protection from land-based and sea-based activities.
- Sustainable use and conservation of marine living resources of the high seas.
- Sustainable use and conservation of marine living resources under national jurisdiction.
- Addressing critical uncertainties for the management of the marine environment and climate change.
- Strengthening international, including regional cooperation and coordination.
- Sustainable development of small island developing States (SIDS).

Overview of main progress achieved in implementing Chapter 17 of Agenda 21

The Commission on Sustainable Development (CSD) was mandated by the General Assembly to monitor the implementation of Agenda 21. The CSD focused on Chapter 17 in 1994 and 1999. At its seventh session in 1999, the CSD adopted a number of important recommendations on oceans and seas. Two years earlier in 1997, a Special Session of the General Assembly (Rio+5) had reviewed progress in the implementation of Agenda 21 and had concluded that environmental degradation had increased since UNCED. States renewed their commitment to implementing the measures agreed to in Rio. Ten years after UNCED, the following progress has been made. It is not an exhaustive list.

- Integrated approach to coastal management has been promoted.
- A significant number of legal instruments have been adopted to prevent, reduce and control degradation of the marine environment from land-based and sea-based activities, e.g., GPA.
- Several measures have been taken to address the sustainable use and conservation of marine living resources, which include the adoption of the 1995 UN Fish Stocks Agreement, which entered into force on 11 December 2001, the adoption of several FAO instruments (Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas; Code of Conduct for Responsible Fisheries; and several International Plans of Action) and several UN General Assembly resolutions, as well as the establishment or restructuring of several regional fisheries management bodies.

- Adoption of initiatives such as the 1995 Jakarta Mandate on the Conservation and Sustainable Use of Marine and Coastal Biological Diversity of the Convention on Biological Diversity and the 1994 International Coral Reef Initiative.
- Increased understanding of the role of the oceans in global climate change and development of observational tools to forecast change. The adoption of the 1992 Framework Convention on Climate Change and its Kyoto Protocol.
- The establishment of the United Nations Open-ended Consultative Process in 1999 by the General Assembly.
- Increased efforts at improving regional cooperation both within and between regional bodies.
- Wide recognition of the special case both for environment and development of small island developing States. For example, the Barbados Programme of Action for the Sustainable Development of Small Island Developing States was adopted in 1994.
- Increased participation by non-governmental organizations.

However, in spite of all the progress made, efforts have not been sufficient.

Outcome of the World Summit on Sustainable Development

The World Summit on Sustainable Development (WSSD), held in Johannesburg, South Africa in September 2002, reviewed the implementation of Agenda 21, ten years after Rio. This review culminated in the negotiation and adoption of two main documents:

- the Johannesburg Declaration on Sustainable Development; and
- the Plan of Implementation

In addition, at the end of the Summit, several "Partnership initiatives" were announced to assist in the implementation of the agreements reached.

Plan of Implementation

The Plan of Implementation has eleven chapters: introduction; poverty eradication; consumption and production; natural resource base; globalization; health; small island developing States; Africa; other regional initiatives; means of implementation and institutional framework.

The Plan builds on the achievements since UNCED and is intended to expedite the realization of the remaining goals. To this end Governments committed themselves to undertaking concrete actions and measures at all levels. At Johannesburg, social and economic concerns were as much on the agenda as the protection of the environment, which was the predominant theme in Rio. Poverty is a running theme throughout the documents.

<u>Protecting and managing the natural resource base of economic and social development: Oceans and seas</u>

The text on oceans and seas forms part of Chapter IV (Natural resource base) of the Plan of Implementation. Most of the text was developed in advance. The outcome of the discussions on the protection and preservation of the marine environment at the third meeting of the Informal

Consultative Process in April 2002 informed and facilitated the negotiations. The Paris Conference on Oceans and Coasts at Rio+10 held in December 2001 was also very instrumental in that regard.

Outstanding issues before the WSSD were: a target for restoring depleted fish stocks, fishing rights of developing coastal States and a proposal to urge IMO to consider stronger measures to secure the implementation of IMO instruments by flag States.

The commitments agreed to at the WSSD reflect a shift in emphasis since Rio and Agenda 21 from the development of new international instruments to the implementation of those that exist.

At WSSD it was agreed to:

- Ensure effective coordination and cooperation at all levels.
- Achieve sustainable fisheries.
- Promote the conservation and management of oceans.
- Advance the implementation of the GPA and the Montreal Declaration on the Protection of the Marine Environment from Land-based Activities.
- Enhance maritime safety and protection of the marine environment from pollution.
- Improve scientific understanding and assessment of the state of the marine environment.

Key commitments to achieving effective cooperation and coordination agreed to at WSSD include:

- Invitation for States to become parties to and to implement UNCLOS.
- Promotion of the implementation of Chapter 17 of Agenda 21.
- Establishment of an effective, transparent and regular inter-agency coordination mechanism on oceans in the United Nations.
- The application by 2010 of the ecosystem approach is to be encouraged.
- Assistance to coastal States in developing ocean policies and mechanisms on integrated coastal management.
- Strengthening regional cooperation and coordination between regional organizations and programmes.
- Assistance to developing countries in coordinating policies and programmes at the regional and subregional levels aimed at the conservation and management of fishery resources.

The Plan of Implementation takes note of the work of the UN open-ended Informal Consultative Process.

Partnership initiatives which were announced at the Summit and which assist in the implementation of these and other key commitments include the following: An IAEA initiative on the application of the isotope techniques for sustainable water resources and coastal zone management and a University of Delaware initiative to provide an international network of practitioners and academics to support implementation of coastal and ocean management programmes.

There are also several initiatives of regional scope, applicable, inter alia, to the Adriatic Sea Region, Sub-Saharan Africa, Arafura-Timor Seas, Pacific Island Countries, Asia-Pacific and East Asia. Details are provided on the website of the Johannesburg Summit at http://www.johannesburgsummit.org/.

Key commitments to achieving sustainable fisheries agreed to at WSSD include:

- Restoration of depleted fish stocks to levels that can produce maximum sustainable yield on an urgent basis and where possible not later than 2015.
- Becoming parties to and implementing the relevant fisheries agreements and other instruments, in particular the UN Fish Stocks Agreement, the FAO Compliance Agreement and the Code of Conduct.
- Urgent development of national and, where appropriate, regional plans of action, to implement the FAO international plans of action, in particular the international plan of action for the management of fishing capacity by 2005 and the international plan of action to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing by 2004.
- Encouraging regional fisheries management organizations and arrangements to consider the rights, duties and interests of coastal States and the special requirements of developing States when addressing the allocation of fishery resources for straddling fish stocks and highly migratory fish stocks.
- Elimination of subsidies that contribute to IUU fishing and to over-capacity.
- Strengthening financial assistance to enable developing countries to develop their national, regional and subregional capacities for infrastructure and integrated management and the sustainable use of fisheries.
- Supporting the sustainable development of aquaculture.

Key commitments to promoting the conservation and management of oceans agreed to at WSSD include:

- Maintenance of the productivity and biodiversity of important and vulnerable marine and coastal areas within and beyond national jurisdiction.
- Implementation of the programme of work arising from the Jakarta Mandate.
- Establishment of a representative network of marine protected areas by 2012.
- Development of national, regional and international programmes for halting the loss of marine biodiversity, including in coral reefs and wetlands.
- Implementation of the RAMSAR Convention on Wetlands and the programme of action called for by the International Coral Reef Initiative.

Partnership initiatives which were announced at the Summit and which assist in the implementation of these and other key commitments include the following: A UNEP International Coral Reef Action Network (ICRAN) and Initiative (ICRAI) which is applicable globally and a regional initiative applicable to the Asian-Pacific region. Details are provided on the website of the Johannesburg Summit at http://www.johannesburgsummit.org/.

Key commitments to advancing the implementation of the GPA and the Montreal Declaration agreed to at WSSD include:

- Emphasis is to be placed in the period 2002-2006 on municipal wastewater, the physical alteration and destruction of habitats and nutrients.
- Partnerships and scientific research are to be facilitated, resources mobilized and human and institutional capacity-building are to be promoted, with particular attention to the needs of developing countries.
- The capacity of developing countries in the development of their national and regional programmes and mechanisms is to be strengthened.
- Regional programmes of action are to be elaborated and the links with strategic plans for the sustainable development of coastal and marine resources are to be strengthened.
- Every effort is to be made to achieve substantial progress by the next GPA conference in 2006.

Partnership initiatives which were announced at the Summit and which assist in the implementation of these and other key commitments include the following: A UNEP GPA initiative entitled "The H2O (Hilltops-2-Oceans) Partnership: Working Together to Protect Coastal and Marine Environments" which will apply globally and a regional initiative applicable to the Caribbean. Details are provided on the website of the Johannesburg Summit at http://www.johannesburgsummit.org/.

Key commitments to enhancing maritime safety and protection of the marine environment from pollution agreed to at WSSD include:

- Invitation to States to become parties to and to implement the relevant IMO conventions and other instruments.
- IMO is to be urged:
 - to consider stronger mechanisms to secure the implementation of IMO instruments by flag States; and
 - o to finalize the IMO Convention on the Control and Management of Ships' Ballast Water and Sediments.
- Efforts are to be made to examine and further improve measures and internationally agreed regulations regarding safety, while stressing the importance of having effective liability mechanisms in place, relevant to international maritime transportation and other transboundary movement of radioactive material, radioactive waste and spent fuel, including, inter alia, arrangements for prior notification and consultations done in accordance with relevant international instruments.

Partnership initiatives which were announced at the Summit and which assist in the implementation of these and other key commitments include the following: An IMO initiative of global application relating to ballast water management and a regional initiative applicable to the Malacca and Singapore Straits. Details are provided on the website of the Johannesburg Summit at http://www.johannesburgsummit.org/.

Key commitments to improving scientific understanding and assessment of the state of the marine environment agreed to at WSSD include:

- Expansion of ocean observing capabilities.
- Establishment by 2004 of a regular process under the UN for global reporting and assessment of the state of the marine environment.
- Promotion of the use of environmental impact assessments, environmental evaluation and reporting techniques.
- Strengthening of the ability of IOC and other organizations to build national and local capacity in marine science.

Partnership initiatives which were announced at the Summit and which assist in the implementation of these and other key commitments include the following: An initiative of global application relating to the assimilation of ocean data and another aimed at promoting the intelligent use and management of the oceans. Details are provided on the website of the Johannesburg Summit at http://www.johannesburgsummit.org/.

Key commitments to achieving the sustainable development of small island developing States

A separate chapter is devoted to SIDS. Measures agreed to at WSSD to assist them include:

- Acceleration of national and regional implementation of the Barbados Programme of Action for the Sustainable Development of SIDS with adequate financial resources, transfer of technologies and assistance for capacity-building from the international community.
- Improvement in financial returns from fisheries by supporting and strengthening relevant regional fisheries management organizations.
- Assistance to SIDS in delimiting and managing in a sustainable manner their coastal areas, exclusive economic zones and continental shelf areas, as well as relevant regional management initiatives within the context of UNCLOS and the UNEP regional seas programme.
- Undertaking by 2004 of initiatives aimed at implementing the GPA in SIDS.
- Development by 2004 of community-based initiatives on sustainable tourism.
- Assistance to SIDS in mobilizing adequate resources and partnerships for their adaptation needs relating to the adverse effects of climate change, sea level rise and climate variability.
- Supporting the availability of adequate, affordable and environmentally sound energy services.
- Supporting SIDS in the development of capacity and strengthening of efforts to reduce and manage waste and pollution.
- Undertaking of a comprehensive review of the implementation of the Barbados Programme of Action in 2004.

Partnership initiatives which were announced at the Summit and which assist in the implementation of these key commitments include the following: A UNEP International Coral Reef Action Network (ICRAN) and Initiative (ICRAI) which is applicable globally and regional

initiatives applicable to Africa and the Pacific. Details are provided on the website of the Johannesburg Summit at http://www.johannesburgsummit.org/.

Other key commitments

Other chapters, e.g., on climate change, biodiversity and of course on means of implementation, are equally important for the sustainable development of the oceans and seas. It is not possible to present all of the relevant commitments within the time available. Very briefly, they include:

- By 2015, the proportion of world's people whose income is less than \$1 a day is to be halved.
- By 2020, health and environmental problems caused by chemical pollution are to be minimized.
- By 2010, the number of endangered species is to be reduced significantly.
- By 2010, a significant reduction in the current rate of biodiversity loss is to be achieved.
- An international regime to promote and safeguard the fair and equitable sharing of benefits arising from the utilization of genetic resources is to be negotiated.

Conclusion

The implementation of the provisions of UNCLOS, related Conventions, rules and standards relating to the protection and preservation of the marine environment and to the conservation and management of living marine resources, as well as the implementation of the commitments agreed to in Chapter 17 of Agenda 21, at various sessions of the CSD and most recently at the WSSD, present some of the major challenges facing the international ocean community. These challenges cannot be met by one region, one State, one ministry, or one local community alone. It is therefore very important to strengthen cooperation and coordination at all levels. At the national level, the marine dimension must be integrated within the overall national policy. The adoption of an ocean policy is a very important mechanism to achieving an integrated, interdisciplinary, intersectoral and ecosystem-based approach to oceans management. A coherent legislative framework is also essential.

Apart from improving ocean governance, it is also necessary to take measures to address pollution from land-based activities and in particular to integrate the management of coastal areas and associated watershed management. Furthermore, States must take urgent measures to effectively conserve and manage fisheries and to minimize habitat destruction and loss of biodiversity.

Last, but by no means least, there is an urgent need to respond to the call of those States and ocean communities that lack the means for implementation: be it financial resources, transfer of technology, or assistance for capacity-building. The partnership initiatives announced during the Summit represent a step in the right direction, but much more needs to be done.
