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Building a common agenda: Discussion on the document "Guidance on the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities for 2007–2011: Global Programme of Action contribution to the internationally agreed goals and targets for the sustainable development of oceans, coasts and islands"

> Guidance on the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities for 2007–2011: Global Programme of Action contribution to the internationally agreed goals and targets for the sustainable development of oceans, coasts and islands

Note by the secretariat

Annexed to the present note is the document entitled "Guidance on the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities for 2007–2011: Global Programme of Action contribution to the internationally agreed goals and targets for the sustainable development of oceans, coasts and islands" for consideration by the Meeting.

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Annex

Guidance on the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities for 2007–2011: Global Programme of Action contribution to the internationally agreed goals and targets for the sustainable development of oceans, coasts and islands

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I. Introduction

A. Background

1. The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities is the only global action programme that addresses the interlinkages between the freshwater and coastal environments. It is a flexible, non-binding instrument that contributes to the sustainable development of coastlines, oceans and islands in an adaptive manner in the face of changing realities. In the last five years, the international community has embarked on several initiatives and reached agreement on a number of goals and targets for sustainable development. Those goals and targets aim, among other things, to increase financing for development, to alleviate poverty, to assist vulnerable countries, and to address changes in ecosystems adequately. Experience has also been gained in the development and implementation of strategies and tools to improve ecosystem management at the local, national and regional scales and thereby contribute to human well-being and the attainment of sustainable development.

2. Paragraph 36 of the Global Programme of Action states explicitly that "Effective international cooperation is important for the successful and cost-effective implementation of the Programme of Action. ... Furthermore, international cooperation is required to ensure regular review of the implementation of the Programme and its further development and adjustment".

3. Paragraph 75 of the Global Programme of Action calls upon the United Nations Environment Programme (UNEP) to perform its role as secretariat of the Global Programme of Action in an efficient and cost-effective manner, under the premise that responsibility for implementation of the Global Programme of Action, be it at the regional, national or local level, remains within the countries. The Global Programme of Action urges UNEP to "be flexible and responsive to the evolving needs of the Programme and the availability of resources".

4. The second session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities provides a timely opportunity to take stock of the impact of recent findings, developments and accords on the implementation of the Global Programme of Action.

5. The present document was prepared by the UNEP Global Programme of Action Coordination Office, with input from the Regional Seas Programme, UNEP regional offices, Governments and major international and regional groups, in the context of the preparatory process for the second session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action.

B. Purpose and nature

6. Since the adoption of the Global Programme of Action ten years ago, many important developments have taken place that must be taken into consideration to keep the Programme of Action current and consistent with the growing number of issues on the international environment and sustainable development agendas.¹

7. The purpose of the present document is to promote the Global Programme of Action as a valuable tool to achieve the goals and targets established by the international community in recent years for the sustainable development of oceans, coasts and islands. It aims to emphasize that the Global Programme of Action, due to its cross-sectoral nature, is relevant and well-suited to respond to the new challenges associated with the impact of land-based activities on the coastal and marine environments.

8. It is intended, therefore, that the present document will provide guidance and assistance to Governments and other stakeholders on their future implementation of the Global Programme of Action, and ensure coherence, mutual reinforcement and consistency with emerging issues in the international environmental context.

¹ Developments which have taken place prior to the closing date for final review of this report, i.e., 16 June 2006, have been incorporated where considered relevant.

9. Paragraph 77 of the Global Programme of Action calls upon "UNEP, in close collaboration with the relevant organizations and institutions, to convene periodic intergovernmental meetings to: (g) Consider the need for international rules, as well as recommended practices and procedures, to further the objectives of the Programme of Action".

10. In conformity with paragraph 77 (g) of the Global Programme of Action and on the occasion of the second session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action, the present guidance document aims to ensure that the Global Programme of Action maintains its currency and relevance to the needs of countries and the challenges they face in the sustainable development of their coastal and marine environments.

C. Outline

11. The guidance document consists of three chapters:

(a) Chapter I is an introduction outlining the background, the purpose and nature of the present guidance document, the structure of the document, and the state of the marine environment as it relates to the Global Programme of Action source categories.²

(b) Chapter II contains a description of developments that have taken place since the adoption of the Global Programme of Action, particularly since the first session of the Intergovernmental Review Meeting of the Global Programme of Action, which are relevant to the scope and objectives of the Global Programme of Action. It is divided into legal, policy, financial and conceptual frameworks and a fifth section referring to practical experience gained and lessons learned in the implementation of the Global Programme of Action at the national level. It addresses specifically:

- Legal framework, including the outcome of international intergovernmental processes (i.e., relevant resolutions of the United Nations General Assembly); multilateral environmental agreements, including protocols to the regional seas conventions on land-based activities; the European Union Marine Strategy and Water Framework Directive;
- (ii) Policy framework, including the United Nations Millennium Declaration³ and associated development goals; the Johannesburg Plan of Implementation and associated partnership initiatives; the Commission on Sustainable Development; the Mauritius Strategy for the further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States;⁴ the Water for Life decade; the outcome of the High-level Plenary Meeting of the sixtieth session of the General Assembly, (2005 World Summit Outcome); the Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters; heavy metals; the Strategic Approach to International Chemicals Management (SAICM); the International Nitrogen Initiative; the World Water Forum; poverty reduction strategy papers; United Nations country programming processes; and the Bali Strategic Plan for Technology Support and Capacity-building;⁵
- (iii) Financial framework, including the Monterrey Consensus on Financing for Development;⁶ the Operational Strategy for International Waters of the Global Environment Facility; and aid effectiveness.
- (iv) Conceptual framework, including concepts, approaches and methods pertinent to the sustainable development of oceans, coasts and islands i.e., the Millennium Ecosystem Assessment; the ecosystem approach; circular economy / life cycle / "3R" approaches; integrated coastal area management; integrated water resources management; and national programmes of action for the protection of

² Sewage, persistent organic pollutants, radioactive substances, heavy metals, oils (hydrocarbons), nutrients, sediment mobilization, litter, and physical alterations and destruction of habitats.

³ See General Assembly resolution 55/2.

⁴ Report of the International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, Port Louis, Mauritius, 10–14 January 2005 (United Nations publication, Sales No. E.05.II.A.4 and corrigendum), chap. I, resolution 1, annex II.

Adopted by the UNEP Governing Council at its 23rd session (decision GC-23/1 I, 25 February 2005)
Report of the International Conference on Financing for Development, Monterrey, Mexico, 18–22 March 2002 (United Nations publication, Sales No. E.02.II.A.7), chap. I, resolution 1, annex

the marine environment from land-based activities, including some of the most important lessons learned through national implementation of the Global Programme of Action.

12. Chapter III contains the guidance itself. It shows how the developments described in the second chapter relate to and impact the implementation of the Global Programme of Action. It gives suggestions on how the developments can be integrated to further implementation of the Global Programme of Action in a coherent and consistent manner.

D. Trends in the state of the environment

13. According to the report, entitled "The State of the Marine Environment: Trends and Processes", commissioned by the UNEP Global Programme of Action Coordination Office in preparation for the second session on the Implementation of the Intergovernmental Review of the Global Programme of Action, "Since the adoption of the Global Programme of Action, the legal and institutional arrangements that support action have been expanded and strengthened and now cover most regions of the world. The implementation of plans and programmes is underway and is increasingly seen as a contribution to the achievement of the targets set by the international community, such as the Millennium Development Goals and the Johannesburg Plan of Implementation. Cooperation both within the framework of the GPA as well as with other conventions and programmes is also well established".

14. As for the current status of action for the nine source categories within the framework of the Global Programme of Action, the report explains "that current trends vary for each category, as does progress in controlling deterioration. The picture that emerges shows that although much has been achieved, still more needs to be done". Briefly, the situation, as stated in the report, is as follows:

"Discharge of untreated domestic wastes is a major source of marine pollution, and perhaps the most serious problem within the framework of the GPA. Globally, in spite of action, the problem is growing worse, mainly because of growth in population and rapid urbanization. The problems are worse in developing regions, where only a fraction of sewage is treated; the main constraint to progress there is not technical but financial.

"Highly toxic and stable organic chemical substances (pesticides, industrial chemicals and associated by-products) can accumulate in organisms and persist for years and even decades in the environment. In the two decades since international controls were instituted, the situation has improved considerably, although problems still remain in developing regions dependent on agriculture and in fragile ecosystems such as the Arctic. Even in these areas steady improvements are likely, in view of the regulatory system currently in place.

"Energy generation and other civilian and military activities that could possibly release radioactive substances are highly regulated. Some countries feel there is cause of concern about the danger posed by nuclear accidents; however, the IAEA Safety has concluded that there is no support for the contention that maritime shipments of radioactive materials, as currently carried out, are unsafe. The 2005 Mauritius Strategy notes that States should maintain dialogue and consultation, in particular under the aegis of the IAEA and IMO, with the aim of improving mutual understanding, confidence building and enhanced communications in relation to safe maritime transport of radioactive materials.

"Heavy metals are essential to life in minute quantities, but become toxic in higher concentrations; mercury, lead and cadmium are considered the most dangerous. These pollutants are by-products of industrial and mining activities, and from burning of fossil fuels for energy and transport. The current situation is not clear-cut. Most developed regions have instituted control measures, but this progress is offset by new sources of pollution in emerging economies. Overall, growing awareness of the danger is having a positive effect on putting control measures in place.

"Significant amounts of oil and oil by-products are released into the environment, mainly as a result of activities related to energy production and use. Oil contamination damages habitats and wildlife as well as posing a threat to human health. There has been significant improvement since 1985, mainly in marine transportation of oil, although the danger of an oil-spill remains. However, because of growth in population and industrialization, it is expected that land-based oil runoff will increase. "Imbalances in nutrient ratios cause widespread changes in the structure and functioning of ecosystems, which, in turn, have generally negative impacts on habitats, food webs and species diversity, including economically important ones. The potential seriousness of the problem was not foreseen some decades ago when it first emerged. Both the frequency and intensity of so-called 'coastal dead zones' are rapidly increasing. Control of land-based sources of nutrients has been uneven. Relative success has been achieved with point sources but diffuse sources are proving more difficult to curtail.

"Increase or decrease in sediment flows seriously disrupts coastal ecosystems and habitats, including wetlands, coastal lagoons, estuaries, sea grass beds and mangroves. These changes result from modifying land-use and/or the hydrological regime. Overall, the situation appears to be worsening, with progress in some areas being offset by deterioration in others. In the future, growing populations and increased development can only make current trends more pronounced.

"Ecosystems and wildlife, human health and safety, cultural and aesthetic values and economic activities all suffer as a result of litter. Since most of this litter is nondegradable, or only breaks down very slowly, it inevitably accumulates over time. Thus, the problem is continually worsening, in spite of both national and international efforts to control it. As the problem has largely cultural roots (current attitudes and behaviour demonstrate that people do not feel responsible), building awareness and providing information offers some hope for the future.

"Damage to coastal habitats and wildlife is increasingly becoming more severe as a result of human population growth and increased economic and development activities. The most affected coastal systems include wetlands, mangroves and coral reefs. While deterioration is worse in regions that have faster growth in population, no area is spared.

"Overall, the situation is worsening and will most likely continue to worsen in future.

"An overall assessment of the situation concerning land-based sources of pollution and progress in implementation of the GPA shows that while the framework for action is solid, progress in dealing with the nine source categories has been uneven. There are three areas were good progress has been made (Persistent Organic Pollutants, Radioactive Substances, Oils (Hydrocarbons), two areas where results are mixed (Heavy Metals and Sediment mobilization) and yet a third group where conditions have worsened (Sewage, Nutrients, Marine Litter, Physical Alteration and Destruction of Habitats). On the one hand success is directly related to factors such as the regulatory system, institutional structures, technology or funding, all areas of concern to the GPA. On the other hand there are factors that are outside the scope of the GPA but that nevertheless have a determining influence, as is the case of population growth and development. The conclusion is that, while progress has undoubtedly been made and continues to be feasible, there is still a long way to go.

"Bearing the framework of the GPA in mind, it is important to realize that these processes often take 15 to 20 years before meaningful commitments to joint management can be secured, and an even longer time before the environment actually begins to respond."

II. Context: recent international developments relevant to the Global Programme of Action

15. A number of developments have taken place since the adoption of the Global Programme of Action, particularly since the first session of the Intergovernmental Review Meeting of the Global Programme of Action, which are relevant to the scope and objectives of the Global Programme of Action. According to their nature, these developments have been grouped under legal, policy, financial and conceptual frameworks.

A. Legal framework

16. The basis of the Global Programme of Action is the United Nations Convention on the Law of the Sea. Specific provisions of the Convention dealing with the protection of the marine environment

from land-based activities are found in Articles 207 and 213. This is acknowledged in paragraphs 4 and 5 of the Global Programme of Action as follows:

"4. International law, as reflected in the provisions of the United Nations Convention on the Law of the Sea (UNCLOS) and elsewhere, sets forth 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.

"5. In accordance with general international law, while States have the sovereign right to exploit their natural resources pursuant to their environmental policies, the enjoyment of such right shall be in accordance with the duty to protect and preserve the marine environment. This fundamental duty is to protect and preserve the marine environment from all sources of pollution, including land-based activities. Of particular significance for the Global Programme of Action are the provisions contained in articles 207 and 213 of UNCLOS."

"Article 207 requires States to "adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources, including rivers, estuaries, pipelines and outfall structures, taking into account internationally agreed rules, standards and recommended practices and procedures" as well as "other measures as may be necessary to prevent, reduce and control such pollution". It also requests that States "... endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources, taking into account characteristic regional features, the economic capacity of developing States and their need for economic development. Such rules, standards and recommended practices and procedures shall be re-examined from time to time as necessary."

17. Article 213 calls for the enforcement of laws and regulations adopted in accordance with Article 207.

18. Furthermore, paragraph 7 of the Global Programme of Action recognizes "innovative new principles and approaches applicable to the prevention of the degradation of the marine environment from land-based activities" detailed in multilateral environmental agreements such as "the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter; Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal; Convention on Biological Diversity; United Nations Framework Convention on Climate Change; regional seas conventions; International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)".

19. In this context, recent legal developments which have implications for the implementation of the Global Programme of Action, include:

1. United Nations General Assembly resolutions as they relate to oceans and the law of the sea (land-based activities, marine litter/debris and fisheries)

20. The United Nations General Assembly adopted resolution 60/30 entitled "Oceans and Law of the Sea" in November 2005 reiterating resolutions 57/141 and 58/240 relating to the adverse impacts on the marine environment and biodiversity of human activities such as marine pollution from all sources, including from land-based sources and vessels. The operative part of the resolution included a section on capacity-building in which the General Assembly, among other things, recognized the need to build the capacity of developing States to raise awareness and support the implementation of improved waste management practices, noting the particular vulnerability of small island developing States to the impact of marine pollution from land-based activities and marine debris.

21. Resolution 60/30, as it pertains to marine litter, encourages:

(a) The undertaking of studies on the extent and nature of the problem;

(b) Awareness-raising on the extent of the impact of marine debris on the health and productivity of the marine environment and consequent economic loss;

(c) The integration of the issue of marine debris within national strategies dealing with waste management in the coastal zone, ports and maritime industries, including recycling, reuse, reduction and disposal; and

(d) The development of relevant economic incentives to address this issue, including the development of cost-recovery systems that provide an incentive to use port reception facilities.

22. In resolution 60/31 related to sustainable fisheries, the General Assembly stressed its concern that marine pollution from all sources, including vessels and, in particular, land-based sources, constituted a serious threat to human health and safety, and endangered fish stocks, marine biodiversity and marine habitats and had significant costs for local and national economies.

2. Multilateral environmental agreements, including protocols to the regional seas conventions concerning pollution from land-based sources and activities

(a) Multilateral environmental agreements

23. The need for integration with existing multilateral environmental agreements and for the identification of opportunities for interaction and coordination with them has been pointed out within the framework of the UNEP-led international environmental governance process. The duty of States to preserve and protect the marine environment has been reflected and incorporated in various global conventions and regional instruments. Innovative principles and approaches applicable to the prevention of the degradation of the marine environment from land-based activities have been considered in a number of such agreements. Specific calls for the establishment of links between multilateral environmental agreements and the regional seas programmes have been made by the UNEP Governing Council/Global Ministerial Environment Forum, for example, in its decision 21/28 of 9 February 2001 on the further development and strengthening of regional seas programmes: promoting the conservation and sustainable use of the marine and coastal environment, building partnerships and establishing linkages with multilateral environmental agreements.

24. Of particular relevance is the Stockholm Convention on Persistent Organic Pollutants, because persistent organic pollutants are one of the Global Programme of Action source categories. The Convention was adopted in Stockholm, Sweden, on 22 May 2001, and entered into force on 17 May 2004. The first meeting of the Conference of the Parties to the Convention took place in Punta del Este, Uruguay, 2–6 May 2005. The Convention seeks the reduction or elimination of releases from a number of intentionally produced listed chemicals, as well as the continuation of measures to minimize or eliminate releases of unintentionally produced persistent organic pollutants, such as dioxins and furans. Stockpiles and wastes containing persistent organic pollutants must be managed and disposed of in a safe, efficient, and environmentally-sound manner, taking into account international rules, standards, and guidelines. A process incorporated into the Convention allows for substances to be added or current obligations to be modified as new information is obtained.

25. The Convention on Biological Diversity provides another example of common ground between multilateral environmental agreements, because it concerns the conservation and sustainable use of marine and coastal biodiversity. The Conference of the Parties to the Convention on Biological Diversity agreed on a programme called the Jakarta Mandate on Marine and Coastal Biological Diversity in 1995. Through its programme of work, adopted in 1998 and reviewed and updated in 2004, the Convention focuses on integrated marine and coastal area management, the sustainable use of living resources, marine and coastal protected areas, mariculture and alien species.

26. A non-exhaustive list of key multilateral environmental agreements relevant to the Global Programme of Action is as follows:

(a) Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention);

(b) United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa;

(c) Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade;

(d) Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal;

(e) Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention) and Protocol thereto; and

(f) United Nations Framework Convention on Climate Change.

(b) Land-based sources and activities protocols

27. The Global Programme of Action reconfirmed the general principle embedded in numerous global conventions and regional instruments that it is the duty of States to preserve and protect the marine environment.

28. Prior to the adoption of the Global Programme of Action, several world regions had developed regional agreements for the protection of the marine environment from land-based sources, either in the form of conventions that covered the issue of land-based sources of pollution or as protocols on land-based sources to conventions with broader coverage.

29. On a regional level, at the time of the adoption of the Global Programme of Action, a number of regional agreements dealing with the problem of land-based activities were in force, including:

(a) Convention for the Prevention of Marine Pollution from Land-based Sources (Paris Convention), signed in 1974, entered into force in 1978. This Convention was merged in 1992 with the Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft (Oslo Convention) into the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention), adopted in 1992, entered into force in 1998;

(b) Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention), signed in 1974, entered into force in 1980; a new convention under the same name was adopted in 1992 and entered into force in 2000;

(c) Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources (LBS Protocol to the Barcelona Convention), adopted in 1980, entered into force in 1983; amended in 1996 as the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities, not yet in force;

(d) Protocol for the Protection of the South-East Pacific against Pollution from Land-based Sources (Protocol to the Lima Convention); adopted in 1983, entered into force in 1986;

(e) Protocol for the Protection of the Marine Environment against Pollution from Land-based Sources (Protocol to the Kuwait Regional Convention); adopted in 1990, entered into force in 1993; and

(f) Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land-based Sources (Protocol to the Black Sea Convention); adopted in 1992, entered into force 1994; in process of revision since 2004.

30. This first generation of land-based sources and activities regional agreements, developed before 1995, apply typically to a marine application area coinciding with the jurisdictional sea area covered by the relevant convention and a land application area measured up to the freshwater limit – including intertidal zones and salt-water marshes – or determined by each contracting party.

31. Since the adoption of the Global Programme of Action, the following regional agreements dealing specifically with the protection of the marine environment from land-based activities, have been adopted:

(a) Protocol Concerning Pollution from Land-based Sources and Activities to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention), adopted in 1999, not yet in force; and

(b) Protocol concerning the Protection of the Marine Environment from Land-based Activities in the Red Sea and Gulf of Aden, adopted in September 2005.

32. Regional protocols dealing specifically with land-based sources and activities to the following regional conventions are being developed at present:

(a) Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention); adopted in 1981, entered into force in 1984;

(b) Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi Convention), adopted in 1985, entered into force in 1996; and

(c) Framework Convention for the Protection of the Marine Environment of the Caspian Sea, adopted in 2003, entered into force in 2006.

33. The second generation of the land-based sources and activities agreements (revised Barcelona Convention, Cartagena Convention and the Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (Jeddah Convention), that were adopted, as well as the revised Black Sea Protocol, the protocol to the Caspian Sea Framework Convention, the protocol to the Abidjan Convention and the protocol to the Nairobi Convention that are in preparation) is based on a more comprehensive approach both in terms of the application area - extended to the hydrologic basin - and the sources of pollution regulated - including numerous land-based activities affecting the marine environment.

(c) European Union Marine Strategy

34. In a regional context, in view of the increasing concerns about the state of the oceans and seas of Europe, the European Union's Sixth Environment Action Programme included a commitment to develop a Thematic Strategy for the Protection and Conservation of the Marine Environment (the European Union Marine Strategy) with the overall aim "to promote the sustainable use of the seas and conserve marine ecosystems". While the European Union Marine Strategy is primarily focused on the protection of the regional seas bordered by European Union countries, it also takes into account the international dimension in recognition of the importance of reducing the footprint of the European Union in marine areas in other parts of the world, including the high seas.

35. The European Union Marine Strategy was prepared after an extensive consultation process, which took place from 2002 to 2004. The Global Programme of Action Coordination Office actively participated in the process through the working groups established for that purpose (i.e., addressing the ecosystem approach, monitoring and assessment, hazardous waste, and strategic goals and objectives), the inter-organization consultation forum and stakeholder meetings. On 24 October 2005, the European Commission adopted the European Union Marine Strategy, which addresses a number of threats, including the loss or degradation of biodiversity and changes in its structure, loss of habitats, contamination by dangerous substances and nutrients, and impacts of climate change.

(d) European Union Water Framework Directive

36. The European Union Water Framework Directive, although limited to the European regional context, constitutes an important example of integrated water management including coastal waters. As part of a substantial restructuring of European Union water policy and legislation, directive 2000/60/EC, agreed upon by the European Parliament and Council in September 2000, established a new framework for community action in the field of water policy. The directive, generally known as the Water Framework Directive, came into force on 22 December 2000. It rationalizes and updates existing European Union water legislation and provides for water management on the basis of river basin districts, which include coastal waters.

37. The Water Framework Directive is designed to integrate the way water bodies are managed across Europe. It aims to protect and enhance the water environment and prevent further deterioration of aquatic ecosystems and associated wetlands, promote the sustainable use of water, reduce water pollution, lessen the effects of floods and droughts, and introduce a coordinated approach to water management based on the concept of river basin district planning.

38. The main activities for the implementation of the Directive will take place in the context of river basin management projects led by local authorities. The overall objective of river basin projects is to establish an integrated monitoring and management system for all waters within a river basin district, to develop a dynamic programme of management measures and to produce a river basin management plan that will be continually updated.

B. Policy framework

39. Chapter 17 of Agenda 21 outlines measures that States should take in fulfilling their international commitments relating to the protection of oceans, all kinds of seas and coastal areas, and the protection, rational use and development of their living resources at the national and, where appropriate, the regional and subregional levels.

40. Paragraphs 9, 10 and 12 of the Global Programme of Action invoke Agenda 21, stating:

"9. The duty to protect the marine environment from land-based activities was placed squarely in the context of sustainable development by the United Nations Conference on Environment and Development in 1992. Therein, States agreed it is necessary:

"(a) To apply preventive, precautionary, and anticipatory approaches so as to avoid degradation of the marine environment, as well as to reduce the risk of long-term or irreversible adverse effects upon it;

"(b) To ensure prior assessment of activities that may have significant adverse impacts upon the marine environment;

"(c) To integrate protection of the marine environment into relevant general environmental, social and economic development policies;

"(d) To develop economic incentives, where appropriate, to apply clean technologies and other means consistent with the internalization of environmental costs, such as the "polluter pays" principle, so as to avoid degradation of the marine environment;

"(e) To improve the living standards of coastal populations, particularly in developing countries, so as to contribute to reducing the degradation of the coastal and marine environments.

"10. As set out in paragraph 17.23 of Agenda 21, States agree that provision of additional financial resources, through appropriate international mechanisms, as well as access to cleaner technologies and relevant research, would be necessary to support action by developing countries to implement this commitment.

"12. Agenda 21 also linked action to combat marine degradation caused by land-based activities to action to address the specific problems of small island developing States. In this regard, States agreed to implement the provisions of the priority areas of the Programme of Action for the Sustainable Development of Small Island Developing States, adopted in Barbados in 1994."

41. Since the adoption of Agenda 21, numerous sustainable development policies have emanated from international forums and the international community has further advanced the concepts of integrated management and sustainable development of coastal and marine areas introduced in Agenda 21 and adopted in the Global Programme of Action, including:

1. Millennium Declaration and its associated development goals

42. In September 2000, the largest-ever gathering of Heads of State adopted the Millennium Declaration. Among other things, the Heads of State reaffirmed their support for the principles of sustainable development agreed at the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, and resolved to stop the unsustainable exploitation of water resources by developing water management strategies that promote both equitable access and adequate supplies at the regional, national and local levels. The Millennium Declaration was translated into a road map comprising eight associated development goals, all with a target date of 2015. Goal 7 emphasizes the need to ensure environmental sustainability, reversing the loss of environmental resources and calls for the reduction by half of the proportion of people without sustainable access to safe drinking water.

2. World Summit on Sustainable Development - Johannesburg Plan of Implementation -Partnership Initiatives

43. The World Summit on Sustainable Development was held in Johannesburg, South Africa, in September 2002. It focused the world's attention on meeting difficult challenges, in particular, the pursuit of sustainable development, increasing access to basic requirements such as clean water, sanitation, adequate shelter, energy and health services, and other matters such as agriculture and food security, and biodiversity protection.

44. The Johannesburg Plan of Implementation adopted at the World Summit reaffirmed the Millennium Declaration and its associated development goals. Furthermore, in the Johannesburg Plan of Implementation the international community agreed, among other things, to:

Paragraph 30 (d) "Encourage the application by 2010 of the ecosystem approach";

Paragraph 30 (e) "Promote integrated, multidisciplinary and multisectoral coastal and ocean management at the national level and encourage and assist coastal States in developing ocean policies and mechanisms on integrated coastal management";

Paragraph 30 (g) "Assist developing countries in coordinating policies and programmes at the regional and subregional levels aimed at the conservation and sustainable management of fishery resources and implement integrated coastal area management plans, including through the promotion of sustainable coastal and small-scale fishing activities and, where appropriate, the development of related infrastructure";

Paragraph 32 (c) "Develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices, the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012 and time/area closures for the protection of nursery grounds and periods, proper coastal land use and watershed planning and the integration of marine and coastal areas management into key sectors";

Paragraph 32 (d) "Develop national, regional and international programmes for halting the loss of marine biodiversity, including in coral reefs and wetlands";

Paragraph 32 (e) "Implement the Ramsar Convention, including its joint work programme with the Convention on Biological Diversity, and the programme of action called for by the International Coral Reef Initiative to strengthen joint management plans and international networking for wetland ecosystems in coastal zones, including coral reefs, mangroves, seaweed beds and tidal mud flats";

Paragraph 33 "Advance implementation of the Global Programme of Action for the Protection of the Marine Environment from Land -based Activities and the Montreal Declaration on the Protection of the Marine Environment from Land –based Activities, with particular emphasis during the period from 2002 to 2006 on municipal wastewater, the physical alteration and destruction of habitats, and nutrients, by actions at all levels to:

"(a) Facilitate partnerships, scientific research and diffusion of technical knowledge; mobilize domestic, regional and international resources; and promote human and institutional capacity-building, paying particular attention to the needs of developing countries;

"(b) Strengthen the capacity of developing countries in the development of their national and regional programmes and mechanisms to mainstream the objectives of the Global Programme of Action and to manage the risks and impacts of ocean pollution;

"(c) Elaborate regional programmes of action and improve the links with strategic plans for the sustainable development of coastal and marine resources, noting in particular areas that are subject to accelerated environmental changes and development pressures;

"(d) Make every effort to achieve substantial progress by the next Global Programme of Action conference in 2006 to protect the marine environment from land-based activities";

Paragraph 25 "Launch a programme of action, with financial and technical assistance, to achieve the Millennium Development Goal on safe drinking water. In this respect, we agree to halve, by the year 2015, the proportion of people who are unable to reach or to afford safe drinking water, as outlined in the Millennium Declaration, and the proportion of people without access to basic sanitation, which would include actions at all levels to:

"(d) Intensify water pollution prevention to reduce health hazards and protect ecosystems by introducing technologies for affordable sanitation and industrial and domestic wastewater treatment, by mitigating the effects of groundwater contamination and by establishing, at the national level, monitoring systems and effective legal frameworks";

Paragraph 26 "Develop integrated water resources management and water efficiency plans by 2005, with support to developing countries, through actions at all levels to:

"(a) Develop and implement national/regional strategies, plans and programmes with regard to integrated river basin, watershed and groundwater management and introduce measures to improve the efficiency of water infrastructure to reduce losses and increase recycling of water";

Paragraph 66 "Promote integrated water resources development and optimize the upstream and downstream benefits therefrom, the development and effective management of water resources across all uses and the protection of water quality and aquatic ecosystems, including through initiatives at all levels, to:

"(d) Protect water resources, including groundwater and wetland ecosystems, against pollution, and, in cases of the most acute water scarcity, support efforts for developing non-conventional water resources, including the energy-efficient, cost-effective and sustainable desalination of seawater, rainwater harvesting and recycling of waste";

Paragraph 58 (e) "Effectively reduce, prevent and control waste and pollution and their health-related impacts by undertaking initiatives by 2004 aimed at implementing the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities in small island developing States".

45. The emphasis on action-oriented policies and implementation also led to the setting up of Partnership Initiatives that complemented the Johannesburg Plan of Implementation. Partnership Initiatives are voluntary multi-stakeholder initiatives that contribute to the implementation of Agenda 21 and the Johannesburg Plan of Implementation. Some of the partnerships launched during the World Summit on Sustainable Development include White Water to Blue Water (WW2BW), led by the United States of America and Water for Life, led by the European Union and several countries.

3. Commission on Sustainable Development

46. At its eleventh session in May 2003, which constituted the first session since the World Summit on Sustainable Development, the Commission on Sustainable Development agreed on its future programme and organization of work for the following 15 years. It was decided that the Commission would function on the basis of two-year implementation cycles, which would include both a review and a policy year. During the review year, progress made in implementing sustainable development goals and identifying obstacles and constraints would be evaluated, while during the policy year, measures to speed up implementation and mobilize action to overcome obstacles and constraints would be decided upon. In addition to means of implementation, a number of cross-cutting issues would be addressed during each two-year cycle, including poverty eradication, changing unsustainable patterns of production and consumption, health, education, sustainable development of small island developing States, and sustainable development in a globalizing world.

47. For the first two-year cycle (2004–2005), the Commission focused on the issues of water, sanitation and human settlements. At its thirteenth session in April 2005, the Commission adopted policy decisions on practical measures and options to expedite implementation of commitments related to water, sanitation, and human settlements.

48. At its thirteenth session, the Commission adopted resolution 13/1, which included various provisions of relevance to the Global Programme of Action:

Paragraph 2 "Emphasizes that:

"(d) The policy options and practical measures for expediting implementation relating to water, sanitation and human settlements should be nationally-owned and integrated into poverty reduction strategies and/or national sustainable development strategies, whose implementation should begin by 2005, or national development plans";

Paragraph 3 "Decides to call on Governments, and the United Nations system, within existing resources and through voluntary contributions, and invites international financial institutions, and other international organizations, as appropriate, working in partnership with major groups and other stakeholders, to take action as follows:

"Integrated water resources management

"(d) Recognizing that the 2005 target on integrated water resources management may not be met by all countries, accelerate the provision of technical and financial assistance to countries in preparing nationally-owned integrated water resources management and water-efficiency plans tailored to country-specific needs, paying particular attention to economic development, social and environmental needs, supporting implementation through learning-by-doing, directed, inter alia, towards the following:

"(i) Improving water governance through strengthening of institutional and regulatory reforms, capacity development and innovation;

(vii) Strengthening the prevention of pollution resulting from wastewater, solid waste, industrial and agricultural activities;

"Waste water collection, treatment and reuse

"(n) Expand and improve waste water treatment and reuse, with a focus on the following:

"(iv) Education and training in building, operating and maintaining waste water collection and treatment systems;

"(vi) Dissemination of information and guidelines on surface and ground water quality and the safe reuse of treated waste water;

"(o) Support regional and subregional arrangements, to protect water resources from pollution, addressing the specific needs of arid, semi-arid and coastal countries".

49. For the second two-year cycle (2006–2007), the Commission agreed to focus on energy and sustainable development, industrial development, air pollution and atmosphere, and climate change.

50. Ministers identified a number of challenges to be addressed over the course of the policy year with a view to strengthening the implementation of Agenda 21, the Johannesburg Plan of Implementation and the Mauritius Strategy, including: promoting, with a sense of urgency, international cooperation on climate change, including both mitigation and adaptation, strengthening international support to vulnerable countries on adaptation measures, in particular for Least Developed Countries and small island developing States, and reinforcing the functioning of the Clean Development Mechanism.

51. The Commission agreed that during the 2014–2015 cycle it would concentrate on the issues of oceans and seas, marine resources, small island developing States, disaster management and vulnerability. The 2016–2017 cycle will be devoted to an overall appraisal of the implementation of Agenda 21, the Programme for the Further Implementation of Agenda 21 and the Johannesburg Plan of Implementation.

4. Small island developing States and the Mauritius Strategy

52. In the Johannesburg Plan of Implementation, Governments agreed to provide support to small island developing States to develop their capacity, to strengthen efforts to reduce and manage waste and pollution, and to maintain and manage systems to deliver water and sanitation services in both rural and urban areas.

53. To that end, the United Nations Secretary-General convened an International Review Meeting held in Mauritius in January 2005. The Mauritius Declaration and the Mauritius Strategy were adopted at that meeting. The Declaration reaffirmed the world's commitment to support the sustainable development of small island States through the effective implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (Barbados Programme of Action), in part through the achievement of the internationally agreed development goals, including those contained in the Millennium Declaration.

54. The Mauritius Strategy states that the Barbados Programme of Action remains the blueprint for the sustainable development of small island developing States. With regard to coastal and marine resources and freshwater resources, it was agreed, among other things, that:

"IV. Coastal and marine resources

"32. Small island developing States and the international development partners should fully implement the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, particularly with the support of the UNEP, by undertaking initiatives specifically addressing the vulnerability of small island developing States".

"V. Freshwater resources

"35. Further action is required by small island developing States, with the necessary support from the international community, to meet the Millennium Development Goals and World Summit on Sustainable Development 2015 targets on sustainable access to safe drinking water and sanitation, hygiene, and the production of integrated water resources management and efficiency plans by 2005".

55. Following the adoption of the Mauritius Strategy, at its fifty-ninth session held in August 2005, the United Nations General Assembly requested "the relevant agencies of the United Nations system, within their respective mandates, to mainstream the Mauritius Strategy further in their work programmes and to establish a focal point for small island developing States within their respective secretariats". This request was reiterated by the General Assembly at its sixtieth session held in March 2006.

5. Water for Life decade

56. The Water for Life decade 2005–2015 was launched on World Water Day on 22 March 2005. It aims to promote efforts to fulfil international commitments related to water issues by 2015, placing special emphasis on the involvement and participation of women in those efforts. The Water for Life decade is being coordinated by UN-Water, which is a gathering of all relevant agencies, departments and programmes within the United Nations system involved with water-related issues. The secretariat for UN-Water is based at the United Nations Department of Economic and Social Affairs. At the national level, it is expected that each country will take its own approach to organizing activities around the Water for Life decade.

6. 2005 World Summit

57. In 2005, a World Summit was convened to discuss, among other matters, the status of internationally agreed development goals, including those contained in the Millennium Declaration. In the Summit Outcome document, Governments resolved:

Decision 56 (h) "To assist developing countries' efforts to prepare integrated water resources management and water efficiency plans as part of their national development strategies and to provide access to safe drinking water and basic sanitation in accordance with the Millennium Declaration and the Johannesburg Plan of Implementation, including halving by 2015 the proportion of people who are unable to reach or afford safe drinking water and who do not have access to basic sanitation;"

Decision 56 (l) "To improve cooperation and coordination at all levels in order to add ress issues related to oceans and seas in an integrated manner and promote integrated management and sustainable development of the oceans and seas".

7. Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters

58. In conformity with its resolution A/RES/58/214, the United Nations General Assembly convened a World Conference on Disaster Reduction that was held in Kobe, Hyogo, Japan, from 18 to 22 January 2005.

59. The Conference took stock of progress in disaster risk reduction accomplished since the World Conference on Natural Disaster Reduction held in Yokohama , Japan, 23–27 May 1994, approved a results-oriented plan of action for the next decade, the Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters, adopted the Hyogo Declaration and the Common Statement of the Special Session on the Indian Ocean Disaster: risk reduction for a safer future.

60. The Conference adopted five priorities for action. One of them relates to the reduction of the underlying risk factors, which, among others, refers to land-use planning and other technical measures. In this regard, the Hyogo Framework for Action 2005–2015 indicates:

Paragraph 15: "In their approach to disaster risk reduction, States, regional and international organizations and other actors concerned should take into consideration the key activities listed under each of these five priorities and should implement them, as appropriate, to their own circumstances and capacities.

- "4. Reduce the underlying risk factors
- "(iii) Land-use planning and other technical measures

Paragraph 16, 4, (iii): "(q) Incorporate disaster risk assessment into rural development planning and management, in particular with regard to mountain and coastal flood plain areas, including through the identification of land zones that are available and safe for human settlement …"

8. Heavy metals

61. Heavy metals is one of the pollution source categories identified in the Global Programme of Action (paragraphs 114 to 120).

62. At its twenty-first session, in February 2001, the UNEP Governing Council/Global Ministerial Environment Forum adopted decision 21/5 on Mercury. The decision included an invitation to the Executive Director, in cooperation with other members of the Inter-Organization Programme for the Sound Management of Chemicals, to initiate an expeditious, open, transparent and inclusive process,

including contributions from Governments, intergovernmental and non-governmental organizations and the private sector, to undertake a global assessment of mercury and its compounds for submission to the Governing Council/Global Ministerial Environment Forum, at its twenty-second session held in Nairobi, Kenya, in February 2003.

63. The Johannesburg Plan of Implementation also called for action at all levels to promote the reduction of risks posed by heavy metals that are harmful to human health and the environment, including a review of relevant studies, such as the UNEP global assessment of mercury and its compounds.

64. The Global Mercury Assessment report was published in December 2002 and was submitted to the Governing Council/Global Ministerial Environment Forum for its consideration at its twenty-second session. Based on the key findings of the report, the Governing Council concluded that there was sufficient evidence of significant global adverse impacts from mercury and its compounds to warrant further international action to reduce the risks to human health and the environment. The Governing Council decided that national, regional and global actions, both immediate and long-term, should be initiated as soon as possible. The Governing Council, through its decision 22/4 V, urged all countries to adopt goals and take national actions, as appropriate, with the objective of identifying exposed populations and ecosystems, and reducing anthropogenic mercury releases that impact human health and the environment. It also requested that UNEP initiate technical assistance and capacity-building activities to support the efforts of countries to take action regarding mercury pollution. In response to that request, UNEP established a Mercury Programme within UNEP Chemicals.

65. Based on the progress made by countries in reducing mercury releases that impact human health and the environment, the Governing Council, at its twenty-third session, continued to consider further measures to deal with the significant global adverse impacts of mercury, including, for example, the possibility of developing a legally binding instrument, a non-legally binding instrument or other measures or actions. As a result of its discussions, the Governing Council adopted an omnibus decision on chemicals management (decision 23/9 of 25 February 2005). The decision strengthened the UNEP Mercury Programme by requesting that UNEP develop a report on the supply, trade and demand for mercury on the global market for consideration by the Governing Council at its twenty-fourth session and calling for partnerships between Governments and other stakeholders as one approach to reducing risks to human health and the environment caused by the release of mercury and its compounds into the environment.

66. The Governing Council, in connection with its discussions on the need for global action to deal with the adverse impacts of mercury pollution, has discussed on several occasions the possible need for global action to address other heavy metals, such as lead and cadmium.

67. At its twenty-first session in 2001, the Governing Council, emphasizing the importance of accelerating the process of eliminating the unsafe uses of lead, adopted decision 21/6 of 9 February 2001 that called upon Governments that had not yet done so to eliminate the use of lead in gasoline.

68. In 2003, having considered progress in its goal to eliminate the use of lead in gasoline, the Governing Council adopted decision 22/4 III of 7 February 2003, calling upon Governments that had not yet done so to act urgently to eliminate the use of lead in gasoline. It further called on them to act urgently on the commitment made at the World Summit on Sustainable Development to phase out lead-based paint and lead in other sources of human exposure, to prevent exposure to lead, in particular children's exposure to lead, and to strengthen the monitoring, surveillance and treatment of lead poisoning. It also appealed to Governments, intergovernmental organizations, including UNEP, non-governmental organizations and civil society, to participate actively in assisting Governments, through information exchange, technical assistance, capacity-building and funding to developing countries and countries with economies in transition, with a view to furthering their efforts to phase out lead in gasoline, lead-based paint and other sources of human exposure, to prevent exposure to lead and to strengthen efforts in the monitoring, surveillance and the treatment of lead poisoning.

69. In 2005, the Governing Council, in decision 23/9 III on lead and cadmium, reaffirmed its decision 22/4 III (see below) on lead and requested UNEP to undertake a review of scientific information on lead and cadmium, focusing especially on long-range environmental transport, to inform future discussions on the need for global action in relation to lead and cadmium. These scientific reviews will be developed during 2005–2006 and made available to the Governing Council at its twenty-fourth regular session in 2007.

9. Strategic Approach to International Chemicals Management

70. Governing Council decision 21/7 of 9 February 2001 on chemicals management, welcomed and supported the Bahia Declaration and Priorities for Action beyond 2000, adopted by the Intergovernmental Forum on Chemical Safety at its third session held in Salvador da Bahia, Brazil, in October 2000. It also requested the UNEP Executive Director, in consultation with Governments, the Inter-Organization Programme for the Sound Management of Chemicals, the Intergovernmental Forum on Chemical Safety and other relevant organizations and stakeholders, to examine the need for a strategic approach to international chemicals management and to prepare a report on the subject for detailed consideration of the Governing Council/Global Ministerial Environment Forum in 2002 at its seventh special session.

71. On the basis of the mentioned report, at its seventh special session in February 2002, the Governing Council/Global Ministerial Environment Forum adopted decision SS.VII/3 on a strategic approach to international chemicals management. The Governing Council decided that there was a need to develop a strategic approach and endorsed the Bahia Declaration as a foundation for that approach. The strategic approach was intended to promote the incorporation of chemical safety issues into the development agenda.

72. The international community also endorsed the further development of SAICM in the Johannesburg Plan of Implementation.

73. In February 2003, the UNEP Governing Council adopted decision 22/4 endorsing the concept of an international conference being held to develop SAICM. A first meeting of the preparatory committee on the strategic approach was held in Bangkok from 9 to 13 November 2003, following the fourth session of the Intergovernmental Forum on Chemical Safety. The second preparatory meeting was held in Nairobi, Kenya, from 4 to 8 October 2004. In decision 23/9, part II, dealing with the proposed strategic approach (February 2005), the Governing Council requested the Executive Director to make the necessary preparations, including intersessional work and preparation of documents, for a third and final meeting of the preparatory committee, to be held in September 2005 in Vienna, and for the International Conference on Chemicals Management, which was envisaged to take place in conjunction with the ninth special session of the Governing Council/Global Ministerial Environment Forum, at which the adoption of the strategic approach would be considered.

74. The ninth special session of the Governing Council/Global Ministerial Environment Forum endorsed the Strategic Approach on International Chemicals Management (decision SS IX/1 of 9 February 2006), as adopted and recommended by the International Conference on Chemicals Management held in Dubai on 6 February 2006. The Strategic Approach supports the achievement of the goal agreed at the World Summit on Sustainable Development of ensuring that, by the year 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health. The Strategic Approach, as finalized by the International Conference on Chemicals Management, comprises three core elements:

(a) Dubai Declaration, which expresses the commitment of ministers, heads of delegation and representatives of civil society and the private sector to the Strategic Approach;

(b) Overarching policy strategy, which sets out the scope of the Strategic Approach, the needs it addresses and objectives for risk reduction, knowledge and information, governance, capacity-building and technical cooperation and curbing of illegal international traffic, as well as underlying principles and financial and institutional arrangements. The International Conference on Chemicals Management adopted the Overarching Policy Strategy, which together with the Dubai Declaration constitutes a firm commitment to the Strategic Approach and its implementation;

(c) Global plan of action, which sets out proposed work areas and activities for the implementation of the strategic approach. The International Conference on Chemicals Management recommended the use and further development of the Global Plan of Action as a working tool and guidance document.

75. Two of the four resolutions adopted by the International Conference on Chemicals Management deal with implementation arrangements for the Strategic Approach and the Quick Start Programme for the implementation of Strategic Approach objectives, building upon the outcomes of the International Conference on Chemicals Management and the Bali Strategic Plan. The objective of the Quick Start Programme is to support initial enabling capacity-building and implementation activities in developing countries, least developed countries, small island developing States and countries with economies in transition.

10. International Nitrogen Initiative

76. Nutrients are another of the source categories identified in the Global Programme of Action (paragraphs 127 to 132). The International Nitrogen Initiative was launched jointly by the Scientific Committee on Problems of the Environment and the International Geosphere-Biosphere Program in 2003. The main impetus behind the Initiative was the concern expressed by many in the scientific community over the effects of nutrient overload on the environment.

77. The Initiative began through a series of scientific exercises, most notably the organization of the International Nitrogen Conferences, three of which have been held to date, one in the Netherlands in 1998 with a focus on Europe; one in the United States of America in 2001 with a focus on North America; and one in China in 2004. While the initial aim is to produce a preliminary scientific assessment (a draft of which was circulated at the Nanjing Conference in 2004), the International Nitrogen Initiative is intended to enable the development of appropriate policies to avert some of the projected impacts of nitrogen on human health, the economy and the environment.

78. UNEP and the Food and Agriculture Organization of the United Nations (FAO), private sector groups led by the International Fertilizer Industry Association, as well as governmental and non-governmental organizations have all come together to identify nitrogen as a priority area for action. Stakeholders' involvement grew with developments such as the report adopted by the eighth special session of the Governing Council/Global Ministerial Environment Forum held in Jeju, Republic of Korea, in 2004, which noted that the issue demands more public attention and policy intervention. Some of the observations contained in the document are revealing. The report points out, among other things, that: "The impact of synthetic fertilizer use is not uniform over the planet and varies greatly from region to region. In many parts of Europe, Asia, and North America, nitrogen deposition from the atmosphere and nitrogen fluxes in rivers have increased tenfold or more since the introduction of synthetic fertilizer. On the other hand, some regions in North America, where population levels are low and where there is little agriculture, have seen little if any change in nutrient fluxes in the landscape. Some parts of the world, including much of Africa, suffer from too little fertilizer availability to support agriculture needs - a stark contrast to the nutrient surpluses that characterize the developed world and East and South Asia."

11. World Water Forum

79. The fourth World Water Forum was convened in Mexico City, from 16 to 22 March 2006. The Forum is the largest international event on freshwater and seeks to enable multi-stakeholder participation and dialogue to influence water policymaking at a global level, in pursuit of sustainable development.

80. The main theme of the fourth Forum, "Local actions for a global challenge", was addressed through five framework themes: water for growth and development; implementing integrated water resources management; water supply and sanitation for all; water management for food and the environment; and risk management. Sessions were convened on the link between freshwater and coastal environments.

81. The Forum concluded with a ministerial conference on 21 and 22 March 2006 at which a ministerial declaration was adopted that called for international action on water and sanitation issues.

12. Poverty reduction strategy papers

82. In order to address poverty, countries have prepared or are in the process of preparing poverty reduction strategy papers through a participatory process involving domestic stakeholders as well as external development partners. Poverty reduction strategy papers describe a country's macroeconomic, structural and social policies and programmes to promote growth and reduce poverty, as well as associated external financing needs. The international community has been challenged to develop, support and enforce adequate policies that balance the impacts of increased food production to attain the targets contained in section III of the Millennium Declaration (aimed at eradicating extreme poverty and hunger) with the need for environmental sustainability (section IV).

83. As stated in paragraph 2 of the Global Programme of Action, the bulk of the world's population lives in coastal areas, and there is a continuing trend towards its concentration in these regions and, therefore, the health, well-being and, in some cases, the very survival of coastal populations depend upon the health and well-being of coastal systems - estuaries and wetlands -as well as their associated watersheds and drainage basins and near-shore coastal waters.

13. United Nations country programming process

84. The United Nations Secretary-General created the United Nations Development Group in 1997 as an instrument of the United Nations reform process with a view to improving the effectiveness of United Nations development support at the country level. The United Nations Development Group brings together the operational agencies working on development.

85. The United Nations Development Group has considered proposals for the simplification of the common United Nations country programming process, aimed at aligning the process much more closely with national development planning processes. The United Nations Development Group has endorsed the replacement of the current United Nations Development Assistance Framework with its Results Matrix, and the agency-specific country programme documents and country programme action plans by a single consolidated programme document. Countries developing their United Nations Development Assistance Frameworks in 2006 for country programmes in 2007 could be the first to use the new simplified approach.

86. UNEP is part of the United Nations Development Group. As such, its specific contribution to the national programming processes and development plans in each country needs to be mainstreamed into the overall United Nations work at the national level.

14. Bali Strategic Plan for Technology Support and Capacity-building

87. The Governing Council/Global Ministerial Environment Forum adopted the Bali Strategic Plan for Technology Support and Capacity-building in its decision 23/1 I of 9 February 2005. The Bali Strategic Plan is one of the major results of the UNEP-led international environmental governance process aimed at strengthening, at all levels, the world's ability to deal with wide-ranging environmental threats more effectively.

88. The Bali Strategic Plan supports improved inter-agency coordination and cooperation based on transparent and reliable information and reporting consistent with established frameworks and with a special focus on the role that UNEP should play in enhancing an effective response to identified needs. In this regard, the plan provides:

(a) The basis for UNEP to play a more substantial role in the United Nations Development Group framework;

(b) A coherent platform for internal coordination and exchange of information within UNEP and also for enhanced coordination between UNEP and other United Nations agencies and other relevant partners; and

(c) A coherent approach to strengthening national and regional institutions responsible for environmental management.

89. The ninth special session of the Governing Council/Global Ministerial Environment Forum held in Dubai, United Arab Emirates, in February 2006, considered progress in the implementation of decision 23/1 I on the Bali Strategic Plan as well as proposals for practical steps during the period 2006–2007. Countries provided positive feedback and many developing countries stressed the need for increased funding for implementation of the Plan, greater South–South cooperation and improved coordination with the United Nations Development Programme (UNDP).

C. Financial framework

1. Monterrey Consensus on Financing for Development

90. An International Conference on Financing for Development convened by the United Nations Secretary-General was held in Monterrey, Mexico, in March 2002. The Conference has been widely regarded as a turning point in the approach to development cooperation by the international community and a new point of reference for policymaking on the interconnections of domestic and international finance, trade and other development issues.

91. The outcome of the Conference, the so-called Monterrey Consensus on Financing for Development, emphasizes the importance of developing good governance and democratic institutions, sustaining sound macroeconomic policies, mobilizing foreign and domestic investment, liberalizing trade and increasing market access, and increasing the amount and effectiveness of official development assistance.

2. Global Environment Facility Operational Strategy for international waters

92. The 1995 Global Programme of Action (paragraphs 69–71) included references to the Global Environment Facility (GEF) Operational Strategy that was being developed at the time and invited GEF to build upon the work of the Global Programme of Action.

93. The GEF Operational Strategy includes six focal areas, one of which, International Waters, is particularly relevant to the Global Programme of Action. It sets out the priorities and policies used to develop projects in the different focal areas. Approved by the GEF Council in October 1995, the Operational Strategy provides many opportunities to incorporate Global Programme of Action issues into GEF projects. Three initial operational programmes were identified in the Strategy and one of them – the Operational Programme on Contaminants – specifically responds to and internalizes the Global Programme of Action.

94. GEF recommends the use of large marine ecosystems as a geographic unit for its ecosystem-based approach to improving the management of oceans and coasts as well as integrating improved management of adjacent freshwater basins and activities of the UNEP Regional Seas Programmes. These projects often contain Global Programme of Action elements, such as the development of national programmes of action for the protection of the marine environment from land-based activities, that complement these freshwater basin projects. Since 2002, several of these country-driven projects have aimed to assist countries in meeting the Global Programme of Action and marine-related targets of the Johannesburg Plan of Implementation.

95. By mid-2006, more than 120 countries had participated with their neighbours in GEF international waters projects that aim to improve the management of large marine ecosystems and often address Global Programme of Action concerns that are transboundary in nature.

96. Decision 21/10 on the Global Programme of Action, adopted by the Governing Council/Global Ministerial Environment Forum at its twenty-first session held in Nairobi in 2001, notes with appreciation the proactive role of GEF in facilitating the implementation of the Global Programme of Action and encourages it to continue supporting relevant projects. In decision VII/6 (February 2002), the Governing Council/Global Ministerial Environment Forum called on GEF and international financial institutions, consistent with their operational strategies and policies, to facilitate and expeditiously finance activities related to the implementation of the Global Programme of Action at regional and national levels.

3. Aid effectiveness

97. Ministers of developed and developing countries responsible for promoting development and heads of multilateral and bilateral development institutions, met in Paris, France, from 28 February to 2 March 2005 and resolved to take far-reaching and monitorable actions to reform the ways they deliver and manage aid in looking ahead to the United Nations five-year review of the Millennium Declaration and its associated development goals later in 2005. They adopted the "Paris Declaration on Aid Effectiveness: Ownership, Harmonization, Alignment, Results and Mutual Accountability", which includes concrete actions to increase the impact that aid has in reducing poverty and inequality, increasing growth, building capacity and accelerating the achievement of internationally agreed development goals.

98. Commitments from the Paris Declaration on Aid Effectiveness include that:

(a) Developing countries will exercise effective leadership over their development policies, strategies, and coordinate development actions;

(b) Donor countries will base their overall support on receiving countries' national development strategies, institutions, and procedures;

(c) Donor countries will work so that their actions are more harmonized, transparent, and collectively effective;

(d) All countries will manage resources and improve decision-making for results;

(e) Donor and developing countries pledge that they will be mutually accountable for development results.

D. Conceptual framework

99. Another important aspect in the advancement of the sustainable development of the coastal and marine agenda has been the development of new concepts, approaches and methods that show, among other things, the economic value of ecosystems services; the linkages between people and the environment; between land, freshwater, coasts and oceans; and that contribute to the reduction of marine pollution.

1. Millennium Ecosystem Assessment

100. The United Nations Secretary-General launched the Millennium Ecosystem Assessment in 2001 and this was completed in 2005. The Millennium Ecosystem Assessment is the international work programme designed to meet the needs of decision makers and the public for scientific information concerning the consequences of ecosystem change for human well-being and options for responding to those changes.

101. The Millennium Ecosystem Assessment focuses on ecosystem services (the benefits people obtain from the conditions and processes in natural ecosystems, and the species which make them up), how changes in ecosystem services have affected human well-being, how ecosystem changes may affect people in future decades, and response options that might be adopted at local, national, or global scales to conserve and improve ecosystem management as well as poverty alleviation. The Millennium Ecosystem Assessment has drawn attention to, among other matters, the ecosystem services delivered by wetlands that contribute to human well-being, which include fish and fibre, water supply, water purification, climate regulation, flood regulation, coastal protection, recreational opportunities and, increasingly, tourism.

102. A summary of the Millennium Ecosystem Assessment findings as they relate to coasts and oceans is available in the 2006 UNEP document entitled "Marine and Coastal Ecosystems and Human Well-being: A synthesis report based on the findings of the Millennium Ecosystem Assessment", a report prepared by UNEP World Conservation Monitoring Centre at the request of and with the support of the UNEP Division on Early Warning and Assessment.

2. Ecosystem approach

103. The ecosystem approach to the management of marine resources has been endorsed by international bodies and initiatives such as the Convention on Biological Diversity and the Millennium Ecosystem Assessment as a valuable conceptual framework for analyzing and acting on the linkages between people and their environment. The Johannesburg Plan of Implementation also adopted the target to encourage the application of the ecosystem approach by 2010 for the sustainable development of the oceans, particularly in the management of fisheries and the conservation of biodiversity. The large marine ecosystem projects formulated and implemented through the Global Environment Facility worldwide are showing the practical implementation of the ecosystem approach. Numerous countries are acting to meet the ecosystem-related targets and to address integrated marine management.

104. The seventh meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, held on 12–16 June 2006 in New York, United States of America, addressed ecosystem approaches and oceans. The meeting agreed by consensus on elements relating to ecosystem approaches and oceans. The outcome of the meeting includes a report, which will be submitted to the General Assembly for consideration at its sixty-first session under the agenda item on oceans and the law of the sea. The report proposes that the General Assembly should invite States to consider that improved application of an ecosystem approach will require, among other things, capacity-building through technology, knowledge and skill transfer, particularly to developing countries, including small island developing States and coastal African States, and the exchange of information, data and lessons learned. It will further require, according to the report, capacity-building in support of science, information management and exchange, monitoring, control and surveillance, assessment and reporting, as well as public outreach and education.

3. Circular economy / life cycle / "3R" (reduce, reuse and recycle) approaches

105. The circular economy / life cycle / "3R" approaches call for higher efficiency in resource flows as a way of sustaining improvement in quality of life within natural and economic constraints. They promote economic development models based on profound knowledge of relations between resource consumption and environmental pollution, aimed at improving resource and environmental efficiency, and realizing the sustainable development of economy and society. On the premise of meeting the

demand of social development and economical feasibility, they aim at maximizing resource efficiency as well as minimizing environmental pollution, including that affecting the coastal and marine environments. The circular economy / life cycle / "3R" approaches are therefore particularly relevant to address the Global Programme of Action source categories, which include: sewage, persistent organic pollutants, radioactive substances, heavy metals, oils, nutrients, sediment mobilization and litter.

4. Integrated Coastal Area Management and Integrated Water Resources Management

106. The concept of integrated and differentiated management has evolved over the last three decades. Several different labels are used to describe coastal management initiatives but one common element in all the different terms is the use of the phrase "integrated management".

107. The integrated coastal area management approach has been strongly supported by international institutions and initiatives as one of the most suitable frameworks for sustainable development planning in coastal and marine areas. Integrated coastal area management (which is also referred to as integrated coastal zone management or integrated coastal management), is a continuous, proactive and adaptive process of resource management that builds on participation and provides a framework for the management of multisectoral activities and demands, and maintain options for future uses of resources. Many countries are already using integrated coastal area management for planning and management of coastal resources and there is growing increasing interest in the use of integrated coastal area management as a complementary framework to harmonize sectoral planning and to resolve multiple-use conflicts of coastal resources. Integrated coastal area management, being a planning and management tool for coastal resources, is thus suited for the promotion of poverty reduction strategies.

108. The integrated water resources management approach promotes the coordinated development and management of water, land and related resources, in order to maximize economic and social welfare in an equitable manner, without compromising the sustainability of ecosystems. Integrated water resources management provides an ecosystem-based approach to water resources management. It builds on the interconnectivity of the various components of the natural resource base (i.e., ecosystems) and links it with the institutional, social and economic elements of water resources management, providing an integrated management framework necessary to address the particular problems related to the sustainable maintenance of the ecosystems and services they provide.⁷ Integrated water resources management is viewed positively by countries, but has not yet been fully reflected in the actual creation of solid, stable systems (be they public, private or of a joint nature) except in a few cases and in respect of some rivers.

5. National programmes of action for the protection of the marine environment from land -based activities and lessons learned through national implementation of the Global Programme of Action

109. Paragraph 19, chapter II, of the Global Programme of Action states that "States should, in accordance with their policies, priorities and resources, develop or review national programmes of action within a few years and take forward action to implement these programmes with the assistance of the international cooperation identified in chapter IV, in particular to developing countries, especially the least developed countries, countries with economies in transition and small island developing States (hereinafter referred to as "countries in need of assistance"). The effective development and implementation of national programmes of action should focus on sustainable, pragmatic and integrated environmental management approaches and processes, such as integrated coastal area management, harmonized, as appropriate, with river basin management and land-use plans".

110. The Johannesburg Plan of Implementation type II partnership on Integrated Coastal Area and River Basin Management has promoted the linkages between integrated coastal area management and integrated water resources management as detailed in the supporting document for the second session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action entitled "Ecosystem-based management: Markers for assessing progress".

111. Since the first session of the Intergovernmental Review Meeting of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities that was held in Montreal, Canada, in 2001, many useful lessons have been learned in the development of national programmes of action. It has been realized that more emphasis is needed on affordable programming as well as realistic implementation and integration with other relevant national development actions. It has been understood that in order to be successful, institutional, financial, legislative and technical barriers

⁷ Global Water Partnership, policy brief, Technical Committee, 2004

should be considered more thoroughly in planning activities. In addition, it is important to ensure a realistic, step-by-step implementation of priorities within a cross-sectoral, participatory framework, through a dynamic and interactive process.

112. Interlinkages with other strategic processes, such as those highlighted above, have become essential. This includes interlinkages with the Millennium Declaration and its associated development goals, the Johannesburg Plan of Implementation goals and targets, with national sustainable development partnerships, poverty reduction strategies and sectoral policies, and processes aimed at linking coastal areas and upstream river basin and watershed management.

6. Lessons learned through national implementation of the Global Programme of Action

113. Since Governments started to implement the Global Programme of Action, a number of lessons have been learned, in particular, at the national level. In 2002, UNEP, as secretariat of the Global Programme of Action, published a handbook on the development and implementation of national programmes of action for the protection of the marine environment from land-based activities. It provides guidance for environmental managers and policymakers on how to implement the Global Programme of Action in their own countries.

114. Over sixty national programmes of action have now been initiated or formulated but concrete measures and action is lagging behind. The national programme of action handbook was revised and its 2006 version stresses that institutional, financial, legislative, social and technical aspects should be addressed further. In the revised version, emphasis is put on affordable programming, calling for realistic, step-by-step implementation of priorities within a cross-sectoral, participatory framework, through a flexible and interactive process. Linkages with other strategic processes, such as the Millennium Declaration and its associated development goals, sustainable development partnerships, poverty reduction strategies and sectoral policies, and linkages between coastal areas and upstream river basins and watersheds, are made more explicit.

115. The revised version of the national programme of action handbook has been re-named, using the word "guidance" instead of the word "handbook", since it points mainly to relevant sources that provide specific guidance. Under its new title, "Protecting Coastal and Marine Environments from Land-based Activities: Guidance for National Action", the document presents examples that reflect on experiences gained during national programme of action development and implementation processes and illustrate that concrete national programme of action activities can be successful. Many innovative approaches and tools have been developed in the context of national programmes of action and they are described in the guidance document. The second chapter of the revised publication briefly describes action taken so far at global and regional levels and summarizes lessons learned from relevant national strategic planning tools such as the national programmes of action and sustainable development strategies.

III. Guidance on the implementation of the Global Programme of Action for 2007–2011

A. Introduction

116. Paragraph 77 of the Global Programme of Action calls upon "UNEP, in close collaboration with the relevant organizations and institutions, to convene periodic intergovernmental meetings to: (g) Consider the need for international rules, as well as recommended practices and procedures, to further the objectives of the Programme of Action".

117. In conformity with paragraph 77 (g) of the Global Programme of Action and on the occasion of the second session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action, the UNEP Global Programme of Action Coordination Office has identified the following recommended practices and procedures to advance the implementation of the Global Programme of Action in 2007–2011. The purpose of the present guidance document is to ensure that the Global Programme of Action maintains its currency and relevance to countries' needs and challenges to ensure the sustainable development of their coastal and marine environments.

B. Emerging frameworks

118. In response to emerging frameworks relevant to the implementation of the Global Programme of Action, described in chapter II above, Governments may wish to consider the following actions.

119. As regards the ecosystem approach, Governments may wish to:

(a) Contribute to the achievement of the Johannesburg Plan of Implementation target regarding the application by 2010 of the ecosystem approach as it relates to the sustainable use of oceans and coasts;

(b) Implement ways to integrate the ecosystem approach more effectively in sustainable development and conservation strategies at national and other levels;

(c) Jointly, with international and regional partners, use the requirements of the ecosystem approach to identify specific technical and other capacity-building needs to support implementation;

(d) Take note of the outcome of the seventh meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, held at United Nations Headquarters, New York, 12-16 June 2006;⁸

(e) Ensure that the quantity, quality and reliability of freshwater required to maintain ecological functions of coastal ecosystems is maintained, so that water use does not compromise the long-term sustainability of coastal and associated ecosystems.

120. As regards the economic valuation of goods and services, Governments may wish to:

(a) Take note of the Millennium Ecosystem Assessment;

(b) Strengthen internalization of the environmental and economic value of the goods and services that oceans and coasts, and associated watersheds provide, as well as biodiversity loss, in their decision-making processes;

(c) Introduce the use of payment for ecosystem services, applying these through socially acceptable and pro-poor mechanisms, and reflecting the need for their conservation.

121. As regards the approaches of circular economy / life cycle / "3R" approaches (reduce, reuse and recycle), Governments may wish to:

(a) Promote the approaches of circular economy / life cycle / "3R" to promote high resource efficiency and low pollution of coastal and marine environments, particularly as they relate to the

⁸ The document available at the time of the last review of the present document was "Advance and unedited text of Part A of the report on the work of the Consultative Process containing the agreed consensual elements to be suggested to the General Assembly for consideration under its agenda item entitled "Oceans and the law of the sea" (http:// www.un.org/Depts/los/consultative_process/consultative_process.htm).

Global Programme of Action source categories, namely, sewage, persistent organic pollutants, radioactive substances, heavy metals, oils, nutrients, sediment mobilization and litter;

(b) Ensure the adoption and implementation of legislation on cleaner production and consumption that addresses the activities and processes taking place in coastal areas.

122. As regards partnerships, Govenments may wish to:

(a) Jointly, with international and regional organizations, non-governmental organizations, research institutions, universities, the private sector and other partners, support and encourage the further implementation of the Global Programme of Action in the work programmes of existing and new partnerships.

C. Advancing the Global Programme of Action

123. In addition and in order to further the objectives of the Global Programme of Action, in the light of the developments described in chapter II above, Governments may wish to take the following matters into consideration when implementing actions pursuant to the provisions of the Global Programme of Action

1. Actions at the national level (chapter II of the Global Programme of Action)

124. While implementing national actions as detailed in paragraphs 19 and 20 of the Global Programme of Action, Governments may wish to:

(a) Promote the adoption of national programmes of action for the protection of the marine environment from land-based activities by the pertinent authorities so as to ensure that they are adequately incorporated into the relevant national initiatives, strategies, policies and legislation, in particular, those dealing with integrated coastal area management and integrated water resources management, and thus, effectively implemented and budgeted through national processes;

(b) Further support the implementation of resolution 13/1, adopted by the Commission on Sustainable Development at its thirteenth session, as it relates to the prevention of the degradation of the coastal areas. As indicated above, in paragraph 3 the Commission decided to:

"Call on Governments, and the United Nations system, within existing resources and through voluntary contributions, and invites international financial institutions, and other international organizations, as appropriate, working in partnership with major groups and other stakeholders, to take action as follows:

"Integrated water resources management

"(d) Recognizing that the 2005 target on integrated water resources management may not be met by all countries, accelerate the provision of technical and financial assistance to countries in preparing nationally-owned integrated water resources management and water-efficiency plans tailored to country-specific needs, paying particular attention to economic development, social and environmental needs, supporting implementation through learning-by-doing, directed, *inter alia*, towards the following:

"(i) Improving water governance through strengthening of institutional and regulatory reforms, capacity development and innovation;

"(vii) Strengthening the prevention of pollution resulting from wastewater, solid waste, industrial and agricultural activities";

(c) Improve or introduce mechanisms by which communication and coordination between institutions responsible for integrated coastal area management and integrated water resources management are strengthened and hence links between coastal and freshwater are addressed;

(d) Use the Global Programme of Action as an instrument to promote further the integration of freshwater, oceans and coasts management into all economic and development activities emphasizing the need to address poverty while ensuring environmental sustainability;

(e) Ensure that the social, economic and environmental dimensions of the Global Programme of Action are incorporated into poverty reduction strategy papers. In this regard, Governments may wish to work closely with international development and financial institutions; (f) Incorporate coastal vulnerability and natural hazards factors into the development of coastal area management plans and related national strategies, policies and programmes;

(g) Undertake the necessary revision of the relevant financing and legislative instruments for water, coastal and marine management in order to enhance their implementation, including compliance and enforcement mechanisms, institutional building and public awareness;

(h) Establish financial mechanisms at the national level to ensure the availability of adequate resources to address land-based activities;

(i) Build capacity on economic valuation of coastal and marine ecosystems and ensure that those values are taken into account in the relevant decision-making processes;

(j) Foster stronger and more effective partnerships, improved coordination and collaboration with all stakeholders involved in water, coastal and marine management;

(k) Ensure greater coordination of actions at the national level between the Global Programme of Action and multilateral environmental agreements to ensure that they are implemented more effectively and identify whether there are any opportunities for relevant multilateral environmental agreements to contribute to the attainment of the objectives of the Global Programme of Action within their mandates and whether the Global Programme of Action within its mandate can appropriately contribute to the implementation of multilateral environmental agreements at the national level;

(1) Support the long-term sustainability of national programmes of action for the protection of the marine environment from land-based activities in small island developing States through increased focus on strategic planning, prioritization, strengthening sustainable financing (mainly through domestic resource mobilization and effective leveraging of international sources).

125. While implementing national actions as detailed in paragraph 28 of the Global Programme of Action, Governments may also wish to:

(a) Prioritize targets and objectives in regional and national Global Programme of Action-related programmes and projects in order to address internationally agreed development goals adequately, including those contained in the Millennium Declaration and the Johannesburg Plan of Implementation;

(b) Promote the Water for Life decade and carry out the necessary activities to ensure that public awareness work undertaken in connection with the Global Programme of Action is coordinated with that initiative.

2. Regional cooperation actions (chapter III of the Global Programme of Action)

126. While implementing regional cooperation actions as detailed in paragraph 31 of the Global Programme of Action, Governments may also wish to:

(a) Revise, develop, adopt, ratify and implement protocols concerning pollution from landbased sources and activities to regional seas conventions;

(b) Promote the exchange of experiences, lessons learned and knowledge on the implementation of regional measures to address pollution of the seas stemming from the land;

(c) Showcase successful approaches on the implementation of regional measures aiming at lowering discharges of point sources and non-point sources;

(d) Create networks among land-based sources and activities activity centres or regional centres across different regional seas conventions and action plans;

(e) Further encourage interregional cooperation for the sustainable use of coastal and marine environments;

(f) Establish financial mechanisms at the regional level to ensure the availability of adequate resources to address land-based activities;

(g) Seek interaction between the Global Programme of Action, the European Union Framework Directive on Water and the European Union Marine Strategy, as applicable to the countries and regional seas programmes concerned.

3. International cooperation actions (chapter IV of the Global Programme of Action)

127. While implementing international cooperation actions as detailed in paragraphs 40 and 41 of the Global Programme of Action, Governments may also wish to:

(a) Undertake activities under South-South cooperation schemes, in particular, with regard to capacity-building, including through the exchange of expertise, experiences, information and documentation between the institutions of the South in order to develop human resources and strengthen the institutional capacities.

128. While implementing international cooperation actions as detailed in paragraphs 58–64 of the Global Programme of Action, Governments may also wish to:

(a) Raise the profile of the Global Programme of Action through regional and national action programmes showing the importance of addressing public health, economic losses and degradation of coastal ecosystems, and taking into account poverty alleviation strategies;

(b) Assess ways and means to increase domestic contributions to the environment sector ensuring long-term sustainable domestic financing;

(c) Promote continual and preferential increased international commitment to the environment sector through official development assistance, international financial institutions and financial development institutions;

(d) Explore how the gap between what is committed and what is needed in the environment sector can be reduced through alternative use of current funds and technology choices;

(e) Assess, review, adopt and implement long-term strategies to direct domestic resources towards addressing the protection of the coastal and marine environments and associated watersheds from land-based activities;

(f) Promote coordination and cooperation, where appropriate, among multilateral environmental agreements, the Global Programme of Action, regional seas conventions and action plans, and with global environmental conventions and related agreements, with particular attention to multilateral environmental agreements related to the scope of the Global Programme of Action, such as the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change, the Ramsar Convention, the Stockholm Convention, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention), and the protocol thereto.

129. While implementing international cooperation actions as detailed in paragraphs 69–71 of the Global Programme of Action, Governments may also wish to:

(a) Invite GEF, international finance institutions and bilateral assistance organizations to increase support for the protection of the marine environment from land-based activities;

(b) In providing that support, incorporate lessons from previous Global Programme of Action-related programmes, projects and activities at the national and regional levels; fill gaps in responses to land-based activities for regions and countries not covered by existing projects; and ensure that data, information, and documentation are used to guide concrete, on the ground action to protect the marine environment;

(c) Call upon international financial institutions, such as regional development banks, the World Bank and others, to facilitate access to necessary funding within the framework of integrated management of coastal areas and, where appropriate, associated watersheds;

(d) Further explore other financing avenues such as the European Union Water Facility for African, Caribbean and Pacific (ACP) countries.

130. While implementing international cooperation actions as detailed in paragraphs 84–86 of the Global Programme of Action, on wastewater treatment and management, Governments may also wish to:

(a) Expand and improve wastewater treatment and reuse, with a focus on the dissemination of information and guidelines on surface and ground water quality and the safe reuse of treated wastewater, in line with decisions adopted by the Commission on Sustainable Development at its thirteenth session;

(b) Support regional and subregional arrangements to protect water resources from pollution, addressing the specific needs of arid, semi-arid and coastal countries, in line with decisions adopted by the Commission on Sustainable Development at its thirteenth session.

4. Recommended approaches by source category (chapter V of the Global Programme of Action)

131. While implementing actions as detailed in paragraph 106 of the Global Programme of Action relating to Persistent Organic Pollutants, Governments may also wish to:

(a) Ratify or accede to, as applicable, the Stockholm Convention, and deploy their best efforts to implement it while taking into consideration Global Programme of Action recommended approaches;

(b) Develop concrete cooperative arrangements between the national implementation plans for the Stockholm Convention and the national programmes of action for the protection of the marine environment from land-based activities;

(c) Call for the enhancement of exchange and sharing of information between the Stockholm Convention secretariat and the Global Programme of Action Coordination Office through their respective websites, among other mechanisms.

132. While implementing actions as detailed in paragraph 120 of the Global Programme of Action relating to heavy metals, Governments may also wish to:

(a) Ensure the integration of mercury and other heavy metals programmes, as applicable;

(b) Welcome the development of partnerships between Governments, international organizations, non-governmental organizations and the private sector in order to reduce pollution of mercury, cadmium and lead, among other objectives.

133. While implementing actions as detailed in paragraph 132 of the Global Programme of Action relating to nutrients, Governments may also wish to:

(a) Request international organizations to support States' efforts to address the treatment of nutrient over-enrichment by determining the relative susceptibility of coastal ecosystems to nutrient over-enrichment, defining desirable and achievable outcomes for rehabilitation efforts, reducing nutrient sources, enhancing nutrient sinks, strategically targeting these efforts within watersheds, and predicting and observing responses in an adaptive management framework.

134. While implementing actions as detailed in paragraphs 140–148 of the Global Programme of Action relating to Litter, Governments may also wish to:

(a) Raise awareness and support implementation of improved waste management practices, noting the particular vulnerability of small island developing States to the impact of marine pollution from land-based sources and marine debris;

(b) Implement United Nations General Assembly resolution 60/30 as it relates to marine litter, which:

- (i) "... [E]ncourages relevant national and international organizations to undertake further studies on the extent and nature of the problem ...;
- (ii) "[E]ncourages States to develop partnerships with industry and civil society to raise awareness of the extent of the impact of marine debris on the health and productivity of the marine environment and consequent economic loss;
- (iii) "Urges States to integrate the issue of marine debris into national strategies dealing with waste management in the coastal zone, ports and maritime industries, including recycling, reuse, reduction and disposal ...;
- (iv) "Urges States to ... encourage the development of appropriate economic incentives to address this issue, including the development of cost recovery systems that provide an incentive to use port reception facilities"

135. While implementing actions as detailed in paragraphs 149–154 of the Global Programme of Action relating to physical alteration and destruction of habitats, Governments may also wish to:

(a) Adequately tackle the impact of land-based sources of marine pollution on fish stocks, marine biodiversity and marine habitats;

(b) Further promote linkages with regional or subregional fisheries arrangements, as well as other mechanisms dealing with conservation of marine species, to promote collaboration in the exchange of data and information and mutual reinforcement in the achievement of the respective objectives;

(c) Support the implementation of United Nations General Assembly resolution 60/31, which:

- (i) "... [U]rges all States to implement the Global Programme of Action and to accelerate activity to safeguard the marine ecosystem, including fish stocks, against pollution and physical degradation;
- (ii) "Calls upon States, FAO, the International Maritime Organization, UNEP, in particular its Regional Seas Programme, regional and sub-regional fisheries management organizations and arrangements, and other appropriate intergovernmental organizations that have not yet done so, to take action to address the issue of lost or abandoned fishing gear and related marine debris, including through the collection of data on gear loss, economic costs to fisheries and other sectors, and the impact on marine ecosystems".

D. Concluding remarks

136. The Global Programme of Action Coordination Office is confident that adequate consideration by Governments of the suggested actions, practices and procedures will be of assistance to them in complying with their obligation to protect and preserve the marine environment through the enhanced implementation of the Global Programme of Action.

137. Since global sustainable development is not feasible without sustainable oceans, coasts and islands and associated watersheds, Governments are called upon to integrate the Global Programme of Action into their responses to the above-mentioned major global environmental challenges and development themes. Consideration and implementation of the actions outlined above will be useful to achieve that goal.