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Item 4 (a) of the provisional agenda*

Policy issues: state of the environment

**Updated water policy and strategy of the United Nations
Environment Programme: progress report on the implementation of
decision 23/2**

Report of the Executive Director

Summary

The present report is being submitted to the twenty-fourth session of the Council/Forum pursuant to paragraph 16 of decision 23/2 of 25 February 2005.

* UNEP/GC/24/1.

Updated water policy and strategy of the United Nations Environment Programme: progress report on the implementation of decision 23/2

Report of the Executive Director

I. Introduction

1. This report is presented in response to decision 23/2 of the twenty-third session of the Governing Council/Global Ministerial Environment Forum of the United Nations Environment Programme (UNEP), which was held in February 2005. By that decision, the Council/Forum adopted an updated UNEP water policy and strategy as a general framework and guidance for UNEP activities in the water and sanitation field for the 2006–2007 biennium. The Council/Forum also requested the Executive Director to take the necessary effective measures to monitor the implementation of the water policy and strategy as updated and to report on the implementation of decision 23/2 to the Council/Forum at its twenty-fourth session.

II. Status of Implementation of decision 23/2

2. The present chapter discusses the status of implementation of decision 23/2.

A. Review of Updated Water Policy and Strategy

3. Paragraph 6 of decision 23/2 requested

“the Executive Director, in anticipation of the outcomes of the thirteenth session of the Commission on Sustainable Development and the high-level meetings of the United Nations General Assembly to review implementation of the Millennium Declaration and other major relevant international meetings, in consultation with Governments, further to review the water policy and strategy to ensure that it contributes to the achievement of the internationally agreed goals contained in the Millennium Declaration and the Plan of Implementation of the World Summit on Sustainable Development.”

4. Paragraph 7 of the decision requested “that the draft updated water policy and strategy should be circulated by the ninth special session of the Governing Council/Global Ministerial Environment Forum in order that a final draft may be circulated no later than September 2006[.]”

5. In response, UNEP prepared a draft water policy and strategy in close consultation with Governments. The draft was presented at the ninth special session of the Governing Council/Global Ministerial Environment Forum, in Dubai, United Arab Emirates, in February 2006. Government comments from the ninth special session were then incorporated into the draft, which will be presented at the twenty-fourth session of the Governing Council/Global Ministerial Environment Forum in document UNEP/GC.24/4/Add.1. Relevant outcomes of international meetings including the thirteenth session of the Commission on Sustainable Development and the high-level meetings of the United Nations General Assembly to review implementation of the Millennium Declaration were also incorporated. The draft was circulated and discussed by the Committee of Permanent Representatives to UNEP on 31 August 2006.

6. The new water policy and strategy has been aligned with the Bali Strategic Plan on Technology Support and Capacity-building by focusing on, among other things, building national and regional capacity, promoting stakeholder participation and building on existing programmes. It is based on strategic principles including the promoting ecosystem-based approaches; contributing to sound economic and social development, including poverty reduction through integrated assessment and management of water resources and associated ecosystems; and addressing risks.

7. Paragraph 8 of decision 23/2 requested the Executive Director “to circulate a report on the implementation and resource allocation of the water policy and strategy before the ninth special session of the Governing Council/Global Ministerial Environment Forum”. Accordingly, a report entitled “Progress report on activities to implement the water policy and strategy of the United Nations

Environment Programme” (UNEP/GCSS.IX/INF/10) was circulated at the special session in Dubai. The report described UNEP activities and resource allocations for the period August 2004–November 2005.

B Assessment

8. Paragraph 10 of decision 23/2 requested the Executive Director of UNEP “to facilitate the further development of the United Nations Environment Programme Global Environment Monitoring System on Water” (GEMS/Water). In response, UNEP undertook measures to facilitate the expansion of the system. The number of countries participating in GEMS/Water increased from 69 to 117, with 97 countries participating in quality assurance and control activities. Within the framework of the Bali Strategic Plan, UNEP and the national water agency of Brazil signed a memorandum of understanding on the establishment of a GEMS/Water focal point in the Latin American region. GEMS/Water-Japan (National Institute for Environmental Studies) also supports the implementation of the memorandum of understanding. As a result, 1,000 new monitoring stations have been established in Brazil as of the end of October 2006. A similar increase is expected in all countries in the Latin American region. The GEMS/Water global monitoring network has grown to over 2,700 stations with over two million data points. The data are searchable online on the GEMStat global water quality database, which has been expanded to an open web service. Further, GEMSoft software and other interactive programmes have been developed to improve on-line service to Governments. A publication entitled “Water Quality for Ecosystem and Human Health” and an e-learning platform for modular training in monitoring and analysis (see www.gemswater.org and www.gemstat.org.) have also been produced.

9. GEMS/Water has launched a new youth-focused initiative, “Living on the Edge Youth Project”, designed to raise awareness and promote information sharing among young people around the world. Activities have started with the promotion of the Wadi Environmental Science Centre in Egypt. Project activities include linking youth from different parts of the world, encouraging youth-centered learning initiatives on water quality and training youth in the mitigation of water quality problems.

10. As the lead United Nations body on environment, UNEP was assigned by UN-Water, the United Nations mechanism for interagency coordination on water resources, to coordinate the provision of water quality and aquatic ecosystem data and information inputs to the United Nations World Water Assessment Programme and the second World Water Development Report. This included developing global water quality indicators and ultimately, a global water quality index, all of which is being implemented by GEMS/Water.

C. Global Programme of Action for the Protection of the Marine Environment from Land-based Activities

(a) Strategic Action Plan on Municipal Wastewater

11. The Strategic Action Plan on Municipal Wastewater of the Global Programme of Action, developed jointly with the World Health Organization (WHO), the United Nations Human Settlement Programme (UN-Habitat) and the Water Supply and Sanitation Collaborative Council, was adopted at the Global Programme of Action’s first Intergovernmental Review Meeting, which took place in 2001 in Montreal, Canada. The Strategic Action Plan on Municipal Wastewater was prepared to further develop guidance on sewage that had been prepared under the auspices of the Global Programme of Action and to promote concrete action at the local and national levels aimed at addressing sewage as one of the major source categories impacting the coastal and marine environment.

12. Paragraph 9 of decision 23/2 requested the revision of the Strategic Action Plan on Municipal Wastewater with a view to addressing the environmental dimensions of both urban and rural sanitation. Paragraph 13 of the decision requested UNEP to take fully into account the work carried out by others such as national Governments, international and regional organizations, multilateral environmental agreements and other United Nations agencies, when addressing environmental aspects of water and sanitation.

13. In response to these requests, UNEP, in partnership with WHO, UN-Habitat and the Water Supply and Sanitation Collaborative Council, in September 2006, proposed to elaborate further on both rural and urban sanitation, including wastewater management, within the framework of UN-Water. UN-Water constituted a task force on sanitation, which is preparing a thematic policy brief on sanitation and a results-based logical framework detailing a proposed UN-Water-wide programme of work on sanitation. The programme of work would serve to focus and coordinate concerted action under the mandate of UN-Water, in response to both the UNEP Governing Council request and the compendium of actions proposed by the Secretary General’s Advisory Board on Water and Sanitation in March 2006.

The Compendium of Actions includes a proposal that 2008 be designated the United Nations International Year of Sanitation and that a global conference on sanitation be held towards the end of the current decade, which would be known as the “Water for Life” Decade. The proposal received the support of the participants at a municipal wastewater partnership workshop that was held during the Global Programme of Action’s second Intergovernmental Review Meeting, which took place in Beijing in October 2006.

(b) Second Intergovernmental Review Meeting of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities

14. Paragraph 12 of decision 23/2 requested the Executive Director “to proceed with organizing the second Intergovernmental Review Meeting of the Global Programme of Action, working to ensure as broad participation as possible”. The second Intergovernmental Review Meeting was held in Beijing, China, from 16 to 20 October 2006. The meeting was hosted by the State Environmental Protection Administration of China and attended by over 800 participants representing 104 Governments and the European Commission, 19 intergovernmental organizations, 17 United Nations agencies and civil society.

15. In preparation for the review meeting, a number of assessments on the status of the marine environment as it relates to land-based sources of pollution were undertaken. The findings suggested good progress at the global level in persistent organic pollutants, radioactive substances and oils (hydrocarbons); mixed results in heavy metals and sediment mobilization; and deterioration in sewage, nutrients, marine litter, physical alteration and destruction of habitats.

16. The goals of the second Intergovernmental Review Meeting were to strengthen the implementation of the Global Programme of Action at the national, regional and international levels; to contribute to the achievement of specific targets of the Johannesburg Plan of Implementation as they relate to the Global Programme of Action, ecosystem approaches, and sanitation; and to provide guidance on the programme of work for the UNEP/GPA Coordination Office for the period 2007–2011.

17. Over the course of the five-day meeting, delegates addressed several key issues, including the way forward with national plans of action; a review of accomplishments in implementation of the Global Programme of Action in the period 2002–2006; guidance for the implementation of the Global Programme of Action for the period 2007–2011; and a proposed programme of work for the GPA Coordination Office for the period 2007–2011. Delegates also engaged in 19 partnership workshops on mainstreaming the implementation of the Global Programme of Action. Ministers, vice-ministers and high-level officials attending the high-level segment deliberated on the currency and relevance of the Global Programme of Action as a flexible, non-binding, integrative and catalytic instrument for the sustainable development of coasts, oceans, islands and their associated watersheds and as an effective instrument for supporting broader environmental management and sustainable development goals.

18. The outcomes of the second Intergovernmental Review Meeting include a general endorsement of a new direction for the further implementation of the Global Programme of Action in the period 2007–2011 and strong support for the continuing value of the Global Programme of Action as a flexible instrument for the sustainable development of oceans, coasts and islands and their associated watersheds. The new strategic directions for the Global Programme of Action are reflected in the documents approved during the second Intergovernmental Review Meeting and include:

(a) *Mainstreaming and integration*: Participants discussed and shared experiences in practical and innovative ways to implement the Global Programme of Action further at the national level, as reflected in annex I of the meeting report (UNEP/GPA/IGR/2/7), and fully endorsed such an approach in the programme of work for the UNEP/GPA Coordination Office. The programme of work contains a recommendation that the UNEP/GPA Coordination Office focus on assisting Governments in mainstreaming the implementation of the Global Programme of Action in national development planning and budgetary mechanisms, which will require integration of the Programme across sectors and ministries as well as integration in domestic and international aid budgets, development plans, strategies, legislation and actions;

(b) *The Global Programme of Action as a flexible instrument for integrated management of coasts and oceans*: Participants agreed that the Global Programme of Action must remain responsive to new developments in the international agenda. They welcomed the document entitled “Guidance to the implementation of the Global Programme of Action: 2007–2011”, which outlines how the Global Programme of Action can respond to international environmental developments and remain current and flexible to adapt to new challenges associated with the impact of land-based activities on the coastal and

marine environments. The document provides guidance on the future implementation of the Global Programme of Action, ensuring coherence, mutual reinforcement and consistency with internationally agreed goals and targets as well as emerging issues in the international environmental context as they relate to the sustainable development of oceans, coasts and islands;

(c) *Partnership approach key to success*: An entire day of the second Intergovernmental Review Meeting was devoted to discussing existing partnerships, with a particular focus on planning activities for the next five-years, and to the launch and further development of new partnerships. A multi-stakeholder, multi-partner approach is seen as a principal tool for furthering the global implementation of the Global Programme of Action and for replicating successful practices. A summary of the main outcomes of this partnership day is highlighted in the report of the second Intergovernmental Review Meeting, in particular annex 2 of the report;

(d) *Beijing Declaration*: Some of the key outcomes noted above are reflected in the Beijing Declaration on Furthering the Implementation of the Global Programme of Action, which was adopted by the participants at the second Intergovernmental Review Meeting. The Beijing Declaration marks a new direction in the implementation of the Global Programme of Action, with greater emphasis on national and local-level action supported by a call for creating sustainable financial mechanisms, economic valuation of goods and services provided by oceans and integrated approaches, in particular approaches linking freshwater and coastal management. The interlinkages between implementation of the Global Programme of Action and poverty reduction-focused development strategies are clearly recognized, as are those with the Johannesburg Plan of Implementation's targets for implementing the ecosystem approach and integrated water resource management activities.

III. Implementation of the water policy and strategy

19. Paragraph 4 of decision 23/2 requested the "Executive Director to take the necessary effective measures to monitor the implementation of the water policy and strategy as updated." As noted above, a progress report on UNEP activities for the period August 2004–November 2005 was presented at the ninth special session of the Governing Council/Global Ministerial Environment Forum in February 2006. The present chapter describes UNEP activities for the period December 2005–October 2006.

20. In line with the UNEP mandate, the updated UNEP water policy and strategy focuses on the environmental aspects of water. This comprises freshwater (including rain water, surface water and ground water) and coastal and marine waters. UNEP implements the updated water policy and strategy in accordance with its three key components: assessment; management; and coordination.

A. Assessment

21. As part of its efforts to strengthen the scientific base of the Global Environment Outlook (GEO), UNEP continued to conduct water assessments that emphasize the state of and trends in ecosystems taking into account interactions with the atmosphere, land and biodiversity. The assessments also analyzed the human driving forces and pressures, the impact of natural phenomena on the environment and the consequences of environmental change for ecosystem services and human well being.

22. The linkages between on-going water assessment projects and assessment processes such as the Global Environment Outlook and the Africa Environment Outlook contributed to strengthening partnerships and networks for conducting assessments. Progress and barriers towards meeting commitments under multilateral agreements and the effectiveness of policy responses were analyzed critically.

23. The Global International Waters Assessment (GIWA) report was made public at the 4th World Water Forum in March 2006 in Mexico City, Mexico. The report provides a comprehensive review of the most important findings at the global and regional levels. On the global level, the assessment confirmed the widespread concern that pressures from human activities have weakened the ability of aquatic ecosystems to perform critical functions. The GIWA regional teams determined that transboundary pollution was a top priority concern in 20 of the 66 subregions. The transboundary pollution issue with the greatest impact was suspended solids. The regional assessment reports were launched during the Stockholm Water Week, in August 2006. From the regional causal chain analysis, it appears that agricultural run-off and municipal and industrial discharges were the most prevalent pollution sources. Habitat modification has reduced biodiversity and changed community structures in many regions, causing significant social and economic losses. The GIWA reports can be accessed on <http://www.unep.org/dewa/giwa>. UNEP, in partnership with a wide range of others including Finland, Norway, Sweden, the United States of America, the Intergovernmental Oceanographic Commission of

the United Nations Education Scientific and Cultural Organisation and the University of Kalmar, is coordinating the preparation of a Global Environment Facility (GEF) project on a regionally-based international waters assessment as a follow up to the GIWA assessment. The project is based on existing work by UNEP and will identify demonstration activities for the sustainable management of transboundary water resources.

24. UNEP, in cooperation with the United States National Aeronautics and Space Administration and the United States Geological Survey, compiled an atlas entitled “Africa’s Lakes: Atlas of Our Changing Environment”. This publication builds on the document “One Planet Many People: Atlas of our Changing Environment”. The African lakes atlas compares and contrasts satellite images of African lakes from the past few decades with contemporary images. Environmental changes, which in many cases can only be truly appreciated from space, are brought into sharp focus. The atlas warns that unsustainable management of lakes may result in increasing tensions and instability as rising populations compete for limited and deteriorating water resources. The atlas has generated widespread interest and is currently featured on the “Google Earth” website. The African Ministers’ Council on Water has acknowledged the importance of the atlas as an essential tool for assessing and monitoring changes in African lakes as part of their management.

25. UNEP continued to support selected subregions in Asia and the Pacific and in Africa in the assessment of rivers, lakes and groundwater basins. Since water stress and scarcity are expected to increase, emphasis was placed on vulnerability risk assessments of transboundary, national and local rivers and lake basins using an integrated approach. These activities contributed to enhancing skills and capacity of experts in the African and Asian regions in data collection, analysis, assessment, monitoring and information exchange.

26. The UNEP project entitled “Assessment of Pollution Status and Vulnerability of Water Supply Aquifers of African Cities: Phase II” ended in 2005. This groundwater vulnerability assessment carried out by UNEP and the United Nations Educational, Scientific and Cultural Organization (UNESCO) involved capacity-building and networking among Governments, local authorities and university researchers in 11 participating countries. As a follow-up to the project, UNEP is seeking to extend the assessment to a wide regional grouping by highlighting the status of groundwater in the region through presentations at various forums like the 4th World Water Forum and by bringing the issues raised by the project to the attention of the African Ministers’ Council on Water. The focus will be on monitoring pollution threats arising from unplanned developments, open sewers, leaking septic tanks and latrines and uncontrolled industrial and commercial activities. There will be efforts to enhance and increase the capacity of countries to formulate and implement policies on groundwater in the selected countries.

B. Management

(a) Global Programme of Action for the Protection of the Marine Environment from Land-based Activities

27. The Global Programme of Action is the primary mechanism for strengthening global, regional and national efforts to address the interface between the freshwater and marine environments. It has a special focus on land-based sources of pollution and the physical alteration and destruction of coastal habitats. The Global Programme of Action is an effective and flexible tool for integrating environmental concerns into development planning and strategies at the regional and national levels. As such, it contributes substantially to the achievement of internationally agreed development goals, including those contained in the Millennium Declaration and those highlighted in Agenda 21, the Barbados Programme of Action, the Johannesburg Plan of Implementation and the Mauritius Strategy for the Sustainable Development of Small Island Developing States.

28. The GPA Coordination Office progress report, “Progress in implementing the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities at the international, regional and national levels in the period 2002–2006” (UNEP/GPA/IGR.2/2), presented at the second Intergovernmental Review Meeting, contains detailed information on outputs and results. From this report it is evident how addressing the interaction of land and ocean and integrating freshwater with coastal and marine management approaches directly contributes to fighting poverty and protecting human health and livelihoods while fostering the application of ecosystem-based approaches.

29. The development of national programmes of action, presently in progress in over 60 countries, aims at assuring that measures and activities relevant to the Global Programme of Action are mainstreamed into national planning and budgets and development processes. Direct contribution to the goals and objectives of the Bali Strategic Plan are being made through the Oceans Training Partnership,

a joint project with the UNESCO-IHE Institute for Water Education; the Train-Sea-Coast Programme of the United Nations Division for Ocean Affairs and the Law of the Sea, funded by the United Nations Development Programme (UNDP) and GEF; the International Waters Learning Exchange and Resource Network programme of GEF; the UNEP Global Programme of Action; and the Ocean Learn programme of the International Ocean Institute. These initiatives are strongly supported by various donors, including the European Union's African, Caribbean and Pacific Water Facility, UNDP and GEF. Furthermore, regional mechanisms in support of the implementation of the Global Programme of Action such as the UNEP Regional Seas Programme, the GEF International Waters portfolio and programmes of international financial institutions are regarded as instrumental by various countries for their progress in building institutional capacity and developing legislative frameworks and environmental policies for the sustainable management of coasts, oceans, islands and associated watersheds.

(b) Regional seas

30. During the period under review, the UNEP Regional Seas Programme focused on strengthening the individual regional seas programmes, particularly through the implementation of the global strategic directions that were agreed at the 5th Global Meeting of the Regional Seas Conventions and Action Plans in Nairobi in 2003 and endorsed by the chairs of the conferences of the Parties to the regional seas conventions or their representatives at the 6th Global Meeting of the Regional Seas Conventions and Action Plans in Istanbul in 2004. This has led to a strengthened global alliance of the various regional seas programmes as they continue to implement their conventions and action plans aimed at the protection and sustainable management of the marine and coastal environments.

31. With the aim of strengthening the capacities of the regional seas programmes in the implementation of the global strategic directions, UNEP activities resulted in the following:

(a) Increased partnerships and collaboration as well as increased visibility of the regional seas programmes. The regional seas programmes published a brochure entitled "Partnerships for Sustainable Development", which gives an overview of the various regional seas programmes, their partners and actors and their combined efforts toward the conservation and management of the marine and coastal environments (see <http://www.unep.org/regionalseas/Publications/default.asp>). A consolidated database was launched in October 2006, providing an overview of all major actors and players as well as ongoing projects in the regions. That has continued to facilitate partnerships, collaboration and consultations on best practices. (See the "In Focus" section of the Regional Seas homepage at <http://www.unep.org/regionalseas/>);

(b) Enhancement of key partnerships in the area of marine litter through the launch of the UNEP Global Initiative on Marine Litter. Implementation of this initiative is already underway in several regional seas programmes, which are conducting beach clean-ups such as the International Coastal Cleanup, that have attracted substantive support from the community and civil society. The regional seas programmes participating in this initiative include those for the Black Sea, the Caspian Sea, East Asia, Eastern Africa, the Northwest Pacific, the Mediterranean, the Red Sea and the Gulf of Aden, South Asia, the Southeast Pacific and the Wider Caribbean. A comprehensive section within the regional seas programmes website has been dedicated to addressing the global problem of marine litter. This has been instrumental in creating awareness and developing mitigating strategies to combat marine litter. Additional information is available on the website at http://www.unep.org/regionalseas/Issues/Marine_Litter/default.asp;

(c) Increased financing in the regional seas programmes in recent years. This has resulted in institutional strengthening of the regional coordinating units and has enhanced capacities to execute national and regional activities. UNEP continues to provide guidance in strengthening the long-term sustainability of the regional seas programmes and has assisted in mobilizing donor support for various regional seas programmes and linking partners and stakeholders. The seventh global meeting of the regional seas programmes, which took place in Helsinki, Finland in October 2005, focused on sustainable financing mechanisms and provided a forum for sharing experiences for all the regional seas programmes, donors and other stakeholders on three levels of financing (the secretariats, programmes of work and national implementation). As follow-up to this meeting, a document for guiding national action was published recently entitled "Financing the implementation of Regional Seas Conventions and Action Plans". It further explains the entire financing process including the challenges that regional seas programmes face while continuing to move forward with the next phase of activities. The report mainly focuses on domestic resource mobilization and national implementation and is already being used in various regional seas programmes. Regions such as the Red Sea and Gulf of Aden, Eastern Africa, the Mediterranean and the Caribbean have successfully benefited from these efforts to increase resources for environmental activities;

(d) Provision of legal advice at the regional level in order to enhance the effectiveness of the regional seas programmes in translating the conventions and protocols into national legislation. Two legal capacity-building training workshops on implementing legislation and strengthening institutional structures for improved compliance and enforcement were held in 2005 in the Caribbean and the Pacific. The ratification of the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Tehran Convention) in August 2006 is a reflection of the continued commitment and ownership of the countries in the region. In advancing the development, ratification and implementation of the protocols addressing land-based sources of pollution (and activities), a partnership was launched during the second Global Programme of Action Intergovernmental Review Meeting;

(e) Continued provision by the Regional Seas Programme of a platform for promoting synergies and coordinated regional implementation of multilateral environment agreements and global and regional initiatives. There has been enhanced collaboration the GPA Coordination Office and global conventions including the Convention on Biological Diversity, the Convention on the Conservation of Migratory Species of Wild Animals and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, as well as coordination with the International Maritime Organization, with which a joint forum was held in May 2006, providing an opportunity to share expertise and enhance cooperation in combating marine pollution. The eighth global meeting of the regional seas programmes was held back-to-back with the second Intergovernmental Review Meeting of the Global Programme of Action. A brochure entitled "GPA Implementation in the Regional Seas" gives an overview on how the Global Programme of Action is being implemented in the regions through land-based sources and activities protocols and various other mechanisms. Synergies are also created by collaboration with the World Conservation Monitoring Centre, the International Coral Reef Network, GEF and other United Nations agencies including the United Nations Division for Ocean Affairs and the Law of the Sea;

(f) Training courses on the management of marine and coastal invasive species. These are being carried out in various regions with the effect of strengthening regional and national capacities. Relevant national representatives taking part in these courses in turn assist to mobilize country ownership in subsequent national strategies;

(g) Significant increase in the number of marine protected areas in the Caribbean, Mediterranean, and Eastern Africa regions, among others;

(h) Continued awareness raising on ecosystem-based management related to the marine and coastal environment. A joint UNEP-IUCN report entitled "Critical Ocean Issues: Ecosystems and Biodiversity in Deep Waters and High Seas" was published and released in June 2006. The report raises awareness on the increasing need to take ecosystem-based management measures to help protect the biodiversity of the high seas. Through the Regional Seas/Large Marine Ecosystem partnership, a number of activities have been carried out including a brochure produced jointly with the National Oceanic & Atmospheric Administration of the United States of America. The brochure contains gives a map overlay of the 18 regional seas programmes and the 64 large marine ecosystems of the world and also provides an overview of Global Environmental Facility–Large Marine Ecosystems (GEF-LME) projects within the regional seas programmes, leading to increased collaboration and strengthening of the programmes through these GEF projects. A publication entitled "Accounting for Economic Activities in Large Marine Ecosystems and Regional Seas" is targeted towards government policy and decision makers with the aim of highlighting the potential value of goods and services provided by the marine and coastal environments and calling for a commitment to their conservation. A handbook entitled "Governance and Socioeconomics of LMEs" provides important insights into good governance practices and the socioeconomic dimensions of marine and coastal ecosystems. At the same time, the UNEP LME report entitled "A Perspective on Changing Conditions in the Large Marine Ecosystems of the World's Regional Seas" provides a perspective on the changing conditions of the large marine ecosystems of the worlds regional seas, describing the ecological condition of each and illustrating the emerging pattern of temperature fronts affecting primary productivity levels of the 64 large marine ecosystems. All the above reports are helping to raise awareness, provide guidance and promote a common vision and integrated management based on ecosystem approaches of priorities and concerns related to the coastal and marine environments and their resources.

(c) Integrated water resources management implementation

32. Water resources are critical for economic and social development as well as for supporting ecosystems which provide many goods and services to communities in catchment areas. UNEP work in the water sector is guided by the integrated water resources management (IWRM) approach. IWRM provides a framework for integrating the physical, social, economic and environmental aspects of water

development within a catchment area with the full participation of all stakeholders, including the disadvantaged, in a gender-sensitive manner. The following is a brief synopsis of UNEP work in this area.

(i) Support for the IWRM 2005 target

33. In July 2005 UNEP and the UNEP Collaborating Centre on Water and Environment started a project to assist developing countries in developing IWRM roadmaps in order to reach the Johannesburg Plan of Implementation target to develop integrated water resources management and water efficiency plans by 2005. The project is being implemented in 10 subregions (North Africa, West Africa, Central Africa, Southern Africa, Central Asia, Southeast Asia, Central America, the Caribbean, South America-Andean countries; and South America-Southern Cone) The project is also providing assistance to national Governments upon request through expert training and national workshops. Concrete results stemming from the project include:

(a) Ten countries in South-east Asia and Central Asia, 29 countries in sub-Saharan Africa, five countries in Northern Africa, 11 Caribbean countries and 7 countries in Central America have reported on progress in IWRM reform processes;

(b) Ten countries in Central Africa have reached consensus at the ministerial level on subregional collaboration on IWRM under the auspices of the Economic Community of Central African States and a subregional water policy and action plan for Central Africa is expected to be finalized by the end of 2006;

(c) Ten countries (in Southeast Asia and Central Asia) have drafted national IWRM roadmaps;

(d) Three countries in West Africa, two countries in Central Africa and two countries in Central America have initiated development of national IWRM roadmaps;

(e) Six countries in Southeast Asia have reached high-level consensus on IWRM roadmaps;

(f) Focal countries in West Africa (three), Central Africa (two), Southern Africa (two) and Latin America (eight) are expected to finalize national IWRM roadmap exercises by the end of 2006.

34. It is envisaged that a significant number of additional countries will finalize their IWRM roadmaps during the last part of the project cycle, from January to March 2007. The project has resulted in the development and dissemination of IWRM guidance documents to assist workshops and training in the sub-regions of the project. The national progress reporting guidelines and templates used in the project have, moreover, been developed into a general framework for monitoring IWRM, which is being considered as a basic framework for UN-Water's continuing work on developing formal indicators for progress in IWRM.

35. Besides implementing the IWRM project, the UNEP Collaborating Centre on Water and Environment is addressing a number of other issues related to water and environment. Among other things the Centre is host to the secretariat of the FreshCo partnership on Integrated Coastal and River Basin Management and is developing guidelines to add to the Global Water Partnership's IWRM toolbox for addressing the issues of coastal and river basin management.

(ii) Promoting the use of non-conventional water sources

36. Rainwater is an easily accessible resource that can be used near its source. Technologies for its use are low cost and highly decentralized, enabling individuals and communities to manage their water resources. They have been used successfully in domestic, agricultural, environmental and industrial activities for thousands of years. Despite these advantages, however, rainwater is not considered in many water policies and strategies. As a result, the resource is used in isolated projects and not in a programmatic manner, as a result of which it has only a minimal impact. UNEP is promoting the mainstreaming of rainwater management into water policies at the global, regional and national levels through the Rainwater Partnership. At the regional level, the African Ministers' Council on Water endorsed the Rainwater Partnership during its 5th ordinary session, which was held in November 2004 in Entebbe, Uganda, and included it in its work programme for 2006.

37. UNEP is promoting the use of rainwater as a catalyst for development in the semi-arid area of Kajiado, Kenya. This initiative started in 2000 when UNEP, in partnership with EarthCare Africa, empowered women in the area to implement rainwater harvesting and other development projects through informal training. As a follow up, in 2005 UNEP, the World Agroforestry Centre's Regional Land Management Unit and the Rotary Club of Nakuru began to implement a project to promote the use

of rainwater for productive purposes in order to encourage the sustainable use of natural resources. The following outputs contributed to improving the life of the community:

(a) Eighty-four rooftop rainwater-harvesting tanks were installed to provide drinking water to over 400 families, contributing to the Millennium Development Goal 7 target of reducing by half the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015;

(b) One-hundred-twenty ponds for harvesting run-off were constructed. The water is used for kitchen gardens and for watering small livestock and trees in family woodlots. This contributes to the Millennium Development Goal 1 target of reducing by half the proportion of people living on less than a dollar a day and the proportion of people who suffer from hunger;

(c) Trenches to collect runoff and water stored in the soil were constructed in 50 percent of the homesteads. The water is used to maintain moisture for family woodlots; 1,200 trees were planted in family woodlots containing trees for medicinal, fruit, firewood and timber purposes;

(d) As a spin-off, energy efficient stoves were constructed by 65 percent of the households. Use of less firewood will contribute to the reduction of deforestation and thus improve catchment conditions;

(e) A microfinance system to improve sustainability of the project was established. The community has collected over half a million Kenyan shillings from its own resources, despite a drought which affected its economy. This is an indication of the community's willingness to improve its livelihood.

38. The most visible impact of the Kajiado project is the availability of safe drinking water near people's homes and the reduction of the time required to fetch firewood and water. The time saved and money borrowed from the microfinance component of the project is being used for income-generating activities such as bead making and small-scale trading. Availability of water has enabled women to establish kitchen gardens that have resulted in monthly savings of up to 1000 Kenyan shillings per family. The use of energy-saving stoves has reduced the amount of wood cut from nearby forests by 50 percent and has contributed to the reduction of deforestation in the area.

39. UNEP, in partnership with the Caribbean Environmental Health Institute (CEHI), extended its rainwater harvesting initiative to the Caribbean region. At the regional level, a programme to promote rainwater harvesting in the Caribbean region was developed by CEHI and will be presented to Governments for adoption. At the national level, Grenada developed a national rainwater harvesting programme. Maps indicating rainwater potential using the geographic information systems (GIS) for planning purposes and outreach material for promoting rainwater harvesting were also developed.

40. UNEP and the World Agroforestry Centre's Regional Land Management Unit developed GIS maps indicating rainwater utilization potential. The maps show the expansive opportunities for rainwater harvesting that exist in nine selected African countries (Botswana, Ethiopia, Uganda, Kenya, Tanzania, Malawi, Mozambique, Zambia and Zimbabwe). Areas suitable for harvesting rainwater from rooftops, surface runoff and flood-flow and for storing water in the sand/sub surface and in soil (in situ) are also shown on the maps. From the rainwater potential calculated from the maps it is clear that water scarcity in Africa is more an economic than a physical issue.

(iii) Support for the environmental management of the Iraqi marshlands

41. UNEP continued implementing the project entitled "Support for the Environmental Management of the Iraqi Marshlands", which was designed to support the restoration and sustainable management of the Iraqi Marshlands. The project started in 2004 with contributions from the Governments of Japan and Italy and is implemented in collaboration with the Ministry of Environment, the Ministry of Water Resources and the Ministry of Municipalities and Public Works of Iraq and the Marsh Arab Forum. The overall goal of the project is to support the restoration and sustainable management of the Iraqi Marshlands by facilitating strategy formulation, monitoring marshland conditions raising the capacity of Iraqi decision makers and supporting the development of a long-term marshland management plan. In addition, the project is providing technology support by implementing environmentally sound technologies for drinking water and sanitation and wetland management and restoration on a pilot basis.

42. Through targeted training, the project has contributed to capacity-building for over 400 Iraqis from the Government, civil society and local communities in water quality management, IWRM, phytotechnology applications, wetland management and sustainable sanitation. Three hundred Iraqis

have participated in capacity-building programmes internationally. One hundred have participated in programmes inside Iraq taught by Iraqi instructors who were trained by UNEP.

43. A feature of the project is the Marshland Information Network, which was developed using the Environmentally Sound Technology Information System, an internet-based data management and exchange system developed by the UNEP International Environmental Technology Centre for the exchange of information among ministries and other stakeholders. Under another feature of the project, the Iraqi Marshlands Observation System, flooding patterns and changes in vegetation cover in the marshes are monitored throughout the year.

44. The project has provided drinking water to communities in six pilot sites in southern Iraq through the implementation of environmentally sound technology and has benefited up to 22,000 inhabitants. Construction of a sanitation facility that uses an artificial wetland for wastewater treatment and the rehabilitation of degraded wetlands in two pilot sites are in progress.

45. The second phase of the project started in 2006 and was intended to continue key activities with financial support from the Governments of Japan and Italy. Activities supported by the Italy, which started in April 2006, include data collection and analysis to support decision-making on marshland management, training on management of the Marshland Information Network and the provision of necessary equipment for data management. Activities supported by Japan, which started in July 2006, include extending the provision of safe drinking water to another community in the marshland area, strengthening the capacity of government and community representatives in managing water quality and providing drinking water, organization of an international workshop and the support of community level initiatives with emphasis on women and marshland environment through awareness-raising campaigns and basic training.

(iv) Dams and Development Project

46. During the period under review, the Dams and Development Project focused on strengthening frameworks and on improving decision-making processes in response to identified inadequacies in dealing with environmental and social issues in the planning and management of water infrastructure. The project has enhanced technical, institutional and human capacity at the national and regional levels.

47. Key outputs from the project include a series of global dialogues. National dialogues were undertaken in more than 20 countries, resulting in recommendations aimed at improving the way that environmental and social issues are taken into account in the planning and management of dams and their alternatives. Practical tools were developed that would provide policy makers and legislators with information on how emerging social and environmental issues have been addressed world wide. These include a compendium of relevant practices and online inventories of normative frameworks.

48. Through the above activities, the dissemination of the project's outputs and the promotion of networking, awareness of dams and development issues has been broadened and a dialogue on contentious issues on dams and development has been kept alive. Some measure of consensus has been reached on some key issues which are useful to decision makers and all stakeholders. Further, the debate on dams and development has moved forward: enough consensus has been reached so that the debate has shifted from whether to build good dams but rather how to do so. The focus of the debate has shifted, from dams versus alternatives to dams and complementary measures. Thus, the project has established a basis for further work around sustainability and infrastructure development.

IV. Management and coordination

49. In line with the Bali Strategic Plan, UNEP works with other United Nations agencies, government institutions and civil society actors in the implementation of its updated water policy and strategy. UNEP has built on existing programmes, addressing needs identified by countries during implementation. To create synergies and avoid duplication during the period under review, UNEP worked with existing partners and formed new partnerships with various institutions in the water sector where necessary.

A Global level coordination

50. UNEP actively contributes to the coordinating mechanisms of both UN-Water and UN-Oceans. These two mechanisms provide a vehicle for United Nations-system-wide concerted action to address the naturally interlinked IWRM and the integrated coastal management approaches. They also serves as a means for coordinated follow-up to the Millennium Declaration and the Johannesburg Plan of Implementation and their associated goals and targets relating to freshwater and the marine

environment, such as the 2005 target on IWRM, the 2010 target on ecosystem-based approaches and the 2015 target on water and sanitation. Also, through those coordinating mechanisms, concerted action is secured in response to the Secretary General's Advisory Board on Water & Sanitation proposed compendium of actions and the outcomes of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea.

51. UNEP is a key member of a UN-Water task force on IWRM indicators and has taken the lead on drafting indicators to be used globally to monitor progress on IWRM plans and implementation.

52. UNEP also collaborates with forums composed of representatives from various sectors of civil society, including the private sector, in order to mainstream environmental considerations relating to water into sustainable development. Among these forums are the World Business Council for Sustainable Development, the World Economic Forum, the World Water Council, the Global Water Partnership, the Global Forum on Oceans, Coasts and Islands and others.

53. As discussed above, the second Intergovernmental Review Meeting of the Global Programme of Action was held in Beijing from 16 to 20 October 2006. Major outcomes of the meeting are discussed above in chapter II, section C, of the present report.

B. Regional-level coordination

54. UNEP provides support to several other high-level regional forums and implementation mechanisms. These are, among others, the Forum of Ministers of the Environment of Latin America and the Caribbean, the European Commission in developing its marine and maritime strategies, and the New Partnership for Africa's Development. The GPA Coordination Office progress report, "Progress in implementing the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities at the international, regional and national levels in the period 2002–2006" (UNEP/GPA/IGR.2/2), was presented at the second Intergovernmental Review Meeting of the Global Programme of Action. It contains detailed information on outputs and results in this area.

55. UNEP has continued to work with regional institutions on water issues. It provides technical support to the African Ministers' Council on Water. It also hosts and manages the Council's trust fund, which it launched with a contribution of \$100,000 in February 2005. Subsequently, the European Union provided \$3.3 Million (2.6 million euros) to support the implementation of the Council's 2007–2009 work programme. African Government members of the Council have committed to contributing at least \$530,000 annually to the trust fund to facilitate the implementation of the work programme. Some of the components of the work programme are support for subregional and transboundary cooperation through protocols; promoting progress in IWRM processes; development and implementation of strategic action plans; and capacity-building initiatives. Strengthening river and lake basin organization networks is critical to this process.

56. Within the framework of the GEF-funded Caspian Environment Programme, the UNEP Regional Office for Europe facilitated the development and negotiation of the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Tehran Convention). The convention was adopted by the five Caspian littoral States (Azerbaijan, Islamic Republic of Iran, Kazakhstan, Russian Federation and Turkmenistan) in November 2003 and entered into force in August 2006. It addresses over-exploitation, habitat destruction, pollution and the many other threats facing the world's largest land-locked body of water. The first meeting of the Conference of the Parties is planned for the first half of 2007. The Regional Office for Europe acts as the convention's interim secretariat and is assisting the Caspian States in the development of the four priority protocols on the subjects of environmental impact assessment in a transboundary context; pollution from land-based sources; the Convention on Biodiversity; and regional preparedness, response and cooperation in combating oil pollution incidents. Partners include the World Bank, UNDP, the European Union and the private sector.

57. UNEP, through its Vienna office (known informally as UNEP-Vienna) acts as the interim secretariat for the Framework Convention on the Protection and Sustainable Development of the Carpathians. In cooperation with UNDP and the International Commission for the Protection of the Danube River it supports sustainable development in the Tisza River basin. The Tisza River basin is the largest sub-basin of the Danube River catchment and is shared by Hungary, Romania, Serbia, Slovakia and Ukraine. Under the auspices of these cooperating entities, a project entitled "Establishment of Mechanisms for Integrated Land and Water Management in the Tisza River Basin" has been approved as a medium-sized project by GEF under its Project Development Facility phase A (PDF A). The project is being prepared.

58. The Regional Office for Latin America and the Caribbean, in collaboration with the UNEP Collaborating Centre on Water and Environment, has implemented workshops to support countries in Central America, the Caribbean and the Andean and Southern Cone subregions in the development of national IWRM plans in response to the Johannesburg Plan of Implementation. National workshops were also held in Honduras and Nicaragua. Countries developed IWRM road maps as a result of the workshops.
59. In line with the Bali Strategic Plan, and in collaboration with the United Nations Development Fund for Women (UNIFEM), the Regional Office for Latin America and the Caribbean has enhanced the capacity of rural women in Central America to harvest rainwater. It co-sponsored an international training workshop on rainwater harvesting techniques that took place at the International Training Center for Rain Water Harvesting at the "Colegio de Postgraduados" in Mexico. Collaboration with UNIFEM will continue into 2007.
60. The UNEP Regional Office for West Asia cooperates closely with other United Nations bodies in the region such as the Economic and Social Commission for Western Asia (ESCWA), the Food and Agriculture Organization of the United Nations, UNESCO and WHO in the implementation of its water programme. As part of this cooperation, a workshop on efficient water demand management in arid regions', was organized with UNESCO and other international and regional organizations in Sharm El-Sheikh, Egypt, in September 2006. In partnership with ESCWA, UNEP conducted an IWRM training workshop for Arab parliamentarians in Cairo, Egypt, in November 2006 aimed at identifying opportunities for developing national IWRM strategies.
61. The Regional Office for West Asia has also cooperated with the Council of Arab Ministers Responsible for the Environment, for example by providing logistical support for the Chinese-Arab cooperation programme, in particular the Chinese-Arab First Training Session on Water Pollution and Control, which was organized by the State Environmental Protection Administration and took place in Beijing from 1 to 12 June 2006.
62. A methodology for assessing water vulnerability has been developed for six river basins in South, Southeast and Northeast Asia. The project aims to develop a vulnerability index for mapping vulnerability in all three subregions. Water pollution and water scarcity were identified as key priority issues for Central Asia and the Greater Mekong subregion, respectively. Chapters on water were prepared following the driving force-pressure-state-impact-response framework as part of the Global Environment Outlook.
63. A publication entitled "Case Studies of Coral Reef Monitoring and Management Projects" was produced and distributed at the Third International Marine Tropical Ecosystems Management Symposium, which was under the auspices of the International Coral Reef Initiative in Cozumel, Mexico, in October 2006. Further capacity-building activities for local communities in coral reefs conservation in Vinh Hai and Thanh Hai communes, in the Ninh Hai district of Ninh Thuan Province in Viet Nam was completed in 2006. With respect to the implementation of the Global Programme of Action, a policy brief entitled "Partnership Opportunities for Enhancing GPA Implementation in the East Asian Seas Region (2007–2011)" based on the outcomes of this workshop, was subsequently published launched during the second Intergovernmental Review Meeting of the Global Programme of Action.

C. National level coordination

64. Within the framework of the Bali Strategic Plan, UNEP supported Lesotho and Kenya in undertaking capacity-building needs assessments in the water sector. Gaps identified by both countries include technical capacity for managing industrial waste water; use of non conventional water resources, in particular rainwater harvesting; harmonizing legal and regulatory frameworks which apply to water resources; and data collection and management. Information communication technology was the most fundamental technological need identified in the assessment.
65. Since 1999, UNEP has coordinated the Nairobi River Basin Programme through the Regional Office for Africa. This is an intervention designed to address the increasing levels of urban and industrial pollution affecting river systems passing through Nairobi. To date, the Government of Belgium has provided \$ 1.4 million to support the programme, which is in its third and last four-year phase. The vision of the programme is "a restored riverine eco-system with clean water for the capital city and a healthier environment for the people of Nairobi." The private sector in Nairobi is increasingly playing a leading role in supporting the programme and has launched a three-year resource mobilization strategy aimed at raising \$ 3 million to rehabilitate, restore and manage the Nairobi River ecosystem. The goal is to improve livelihoods (especially for the poor), enhance biodiversity and ensure a

sustainable supply of water for domestic, industrial, recreational and emergency uses. The programme will be replicated in other cities.

66. The implementation of the Global Programme of Action has led to initiatives to develop national programmes of action in over 60 countries.

D. Partnerships

67. The GPA Coordination Office facilitated numerous partnerships, 19 of which attended the second Global Programme of Action Intergovernmental Review Meeting in Beijing. These partnerships pertain to a range of issues, from freshwater-coast linkages and multi-stakeholder projects on large marine ecosystems supported by GEF, to partnerships in the context of the Regional Seas Programme and various multilateral environmental agreements relevant to the Global Programme of Action, to capacity-building and technology transfer coalitions and partnerships with civil society representatives. Two of the partnerships, i.e., the Global Forum on Oceans, Coasts and Islands and the Stakeholder Forum for Our Common Future, aim at providing an open platform for the many stakeholders that support the implementation of the Global Programme of Action.

68. The report of the second Intergovernmental Review Meeting of the Global Programme of Action (UNEP/GPA/IGR.2/2) contains an annex describing the 19 partnership events in support of the Global Programme of Action that took place during the Intergovernmental Review Meeting partnership day.

69. In partnership with the Danish Ministry of Foreign Affairs, UNEP and the Danish Hydraulic Institute jointly host the UNEP Water Collaboration Centre on Water and Environment. The Centre assists UNEP in various areas of assessment, management and cooperation to implement the UNEP water policy and strategy. The Centre has been responsible for executing the UNEP IWRM 2005 project, as discussed above.

70. The Rainwater Partnership held its second meeting in March 2006 in Mexico, at which UNEP was appointed secretariat for the Partnership. The Partnership has provided a framework for member collaboration and information exchange. UNEP and the Kenya Rainwater Harvesting Association will co-sponsor the International Conference on Rainwater Harvesting for Disaster Mitigation and Sustainable Development, which will take place in December 2006 in Mombasa, Kenya.
