

Promote the development of a common vision and integrated management, based on the ecosystem approach, of priorities and concerns related to the coastal and marine

Collaboration with International Maritime Organizations (IMO)

The joint IMO/UNEP Forum on regional arrangements in emergency response to marine pollution has, in collaboration with several Regional Seas Conventions and Action Plans, continued to develop regional systems for cooperation in preparedness for and response to oil spills, including implementation of regional training courses. IMO related activities have been carried out in e.g. PERSGA, ROME and NEP (see separate sections), and in Eastern Africa a joint UNEP-IMO Regional Workshop of the London Dumping Convention will be held in April 2004, in collaboration with the NEPAD Coastal and Marine Secretariat. Discussions on the role of UNEP and the Regional Seas in preventing the spread of alien invasive species, particularly through addressing non-shipping vectors, were also initiated.

Collaboration with the Intergovernmental Oceanic Commission of UNESCO (UNESCO-IOC)

A draft Memorandum of understanding between UNESCO-IOC and UNEP Regional Seas on collaboration in the regional implementation of the GOOS programme was developed. The draft MoU, which was discussed at the IOC Assembly in June 2003, will be finalized early in 2004. The WESTPAC office in Bangkok continues to provide organizational and substantial support to NOWPAP activities related to monitoring and data and information networking.

Collaboration with Multilateral Environmental Agreements (MEAs):

Regional Seas Conventions and Action Plans provide an effective platform for the regional implementation of the substantive issues addressed by MEAs. In particular, collaboration with the CBD on development of a representative network of Marine Protected Areas, including transboundary MPAs, and other aspects of the Jakarta Mandate, is increasing. Also, discussions are ongoing between the UNEP Regional Seas Unit and the Basel Convention Secretariat regarding residue reception facilities for the recycling of ships and on the issue of marine litter.

Global Environment Facility (GEF)

Several GEF proposals for Regional Seas Conventions and Action Plans have been developed in collaboration with the UNEP/GEF office and the GPA. In East Africa the WIOLab PDF B Project on land-based activities has been approved and implementation will commence in 2004, and the Guinea Current LME for West Africa was approved in November 2003. Further GEF projects under implementation or development include the MSP Development and Protection of the Coastal and Marine Environment in Sub-Saharan Africa, PDF B Projects on Land Based Activities in the NOWPAP and the Eastern Northwest Pacific regions, and the South China Sea LBA full project in East Asian Seas. In the Arctic, Black Sea, Caribbean, Caspian, Mediterranean and Red Sea and Gulf of Aden projects continue to run. A new LBA project has been initiated as a PDF A in the Southeast Pacific.

Food and Agricultural Organization (FAO) and the Regional Fisheries Bodies (RFB)

In response to General Assembly Decision A/RES/58/14: 'Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments', the Regional Seas Coordination Office has entered into a dialogue with FAO and the RFBs on increased collaboration, particularly in relation to the environmental aspects of fisheries and the ecosystem approach.

Global Marine Assessment

In the area of environmental assessment, UNEP, particularly through the Division of Early Warning and Assessment, continues to cooperate with partners, contributing to the regular process through its programmes and collaborating centres, such as the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA), the

evaluation of two other RACs and MED POL are on going and the overall evaluation of MAP structure will be undertaken during the 2004-2005 biennium.

Upon the request of the CP, the reference and operating currency for UNEP/MAP will be the

adverse impacts of human activities other than pollution came into force for the first seven Contracting Parties to have ratified it in 2000. Under the four-fold approach adopted by the OSPAR strategy on biodiversity and ecosystems the Commission is required:

- a. OSPAR 2003 confirmed the work on the North Sea pilot project on ecological quality objectives, as a basis for considering how to extend the approach to the whole OSPAR maritime area;
- b. OSPAR 2003 adopted the Texel/Faial criteria for identifying such species, and the Initial OSPAR List of Threatened and/or Declining Species and Habitats;
- c. OSPAR 2003 adopted a Recommendation on a Network of Marine Protected Areas, together with guidelines for identifying and selecting and for managing such areas;
- d. OSPAR 2003 adopted agreements on offshore wind-energy farms, sand and gravel extraction, and a Recommendation on a framework for reporting encounters with sea-dumped munitions.

In addition, OSPAR completed the identification of the eutrophication status of the different parts of its maritime area, to serve both as a basis for further harmonization of criteria for identifying eutrophication problems and for assessing what additional action is needed. The OSPAR list of chemicals for priority action was further revised and action has been taken on 21 substances. A Recommendation was adopted on mercury emissions from crematoria. A Recommendation on environmental management systems in the offshore oil and gas industry was adopted. Further progress was made in implementing the radioactive substances strategy.

The Bonn Agreement on the Protection of the North Sea from oil and other hazardous substances adopted a new Oil Appearance Code, which enables observers to classify oil spills from their appearance from the air and thus to estimate the thickness of the oil film. Together with estimates of the area of the spills, this enables calculations to be made of the amount of oil in the spill, as a basis for decisions on the appropriate response to an incident and for any prosecutions of the ships involved.

The Baltic Marine Environment Protection Commission (HELCOM)

The annual Commission meeting and a joint HELCOM/OSPAR meeting took place at Ministerial level. Areas of special priority were discussed and Declarations adopted. It was agreed that issues should be addressed according to an ecosystem approach to the management of human activities. Emphasis was given to changes likely to occur in connection with the accession of new members to the EU. By May 2004 eight of the nine countries around the shores of the Baltic Sea will be EU members.

Environmental Monitoring and Reporting

HELCOM is currently reviewing monitoring and reporting procedures, taking into account the ecosystem approach and the need to ensure these activities are compatible with the requirements of other international activities. A pilot study into the development of Ecological Quality Objectives (EcoQOs) for the Baltic Sea has been initiated. Reports have been finalized providing e.g. an assessment of the state of the Baltic Sea and an assessment of Radioactivity in the Baltic Sea.

Eutrophication and hazardous substances

A review of the strategic 50% reduction target for nutrient loads showed good progress at point sources. However, nutrients releases from agriculture have not met the targets, and eutrophication has considerably reduced oxygen levels even in shallow coastal waters. A HELCOM Hazardous Substances Project Group has compiled data on sources, pathways, markets and the legal situation relating to selected hazardous substances and a project regarding integrated Dioxin and PCB Monitoring has been initiated.

The Baltic Sea Joint Comprehensive Environmental Action Programme (JCP)

Ten regional workshops and one bilateral meeting were held under the JCP. Reductions in pollution loads from Hot Spots have made a substantial contribution to the overall pollution load reductions in the Baltic Sea. Out of the 132 original HELCOM Hot Spots a total of 47 have been deleted. The reported investments made at the deleted Hot Spots amounts to about 1.1 billion Euros. The Programme Implementation Task Force (PITF) has now been closed down.

Navigational safety and oil spills

HELCOM has compiled a detailed inventory on maritime transportation, identifying high-risk areas. Three Expert Groups are examining the feasibility of potential measures to improve navigational safety: mandatory pilotage in high risk areas, a special transit route for ships carrying oil and other harmful substances, and new regulations for winter shipping traffic. The possible designation of the Baltic Sea as a Particularly Sensitive Sea Area (PSSA) has been discussed but not agreed.

Harmonizing and compliance with HELCOM Recommendations

The Recommendations have been reviewed and some have been aggregated and new have been adopted. It was decided to cease work on industrial Recommendations covered by the EU IPPC Directive. A new recommendation is being elaborated to cover the effective use of Best Available Technologies (BAT). Implementation of Recommendations has improved since 1998, although only few Recommendations have been fully implemented by all Contracting Parties. There is a need for proposals on how implementation can be accelerated and better enforced. A \$12 million World Bank GEF project aiming to improve the Baltic environment based on the Large Marine Ecosystem approach has been started.

HELCOM and OSPAR

Caspian Environment Programme

The Caspian Environment Programme was launched in 1998 as an inter-governmental umbrella environmental programme of the five Caspian littoral countries, namely Azerbaijan, Iran, Kazakhstan, Russia and Turkmenistan, supported by international partners including GEF, the EU, and UN agencies and the oil and gas industry. GEF was instrumental in developing, launching and implementing the programme, with over \$ 9 million funding up to 2003 and a further \$ 6 million for the second phase starting in 2004. EU has funded the programme to the tune of \$ 5 million up to 2003 and has approved close to \$ 4 million for 2004-2006. The World Bank, other UN agencies and the industry have contributed close to \$ 1 million, and the littoral countries have substantially supported the programme through in-kind contributions.

The programme has been a major success in three inter-related areas: establishing a platform for regional environmental dialogue; carrying out transboundary diagnostic analytical work; and resource mobilization.

Platform for Environmental Dialogue

meetings coupled with participation in the analytical and policy formation processes such as the formulation and the development of the TDA and the SAP helped the regional stakeholders to become familiarized with the issues of common concern and become sensitized to the need for joint action. The programme public participation activities including formation of Coastal Caspian Concern Groups also helped the process. The inter-agency cooperation, which has been a major feature of the programme, was instrumental in ensuring the success of the analytical studies.

The analytical work identified four major areas of regional environmental concerns namely fisheries management; pollution abatement & monitoring; biodiversity protection including invasive species and protection and sustainable development of coastal communities. The work also resulted in a consensus regarding five regional Environmental Quality Objectives: conservation and sustainable use of bioresources; conservation of biodiversity; improved water quality of the Caspian; sustainable development of coastal zones; and strengthened stakeholders participation in Caspian environmental stewardship. To link the areas of concern to the EQOs a total of 20 targets and 79 interventions were developed in the SAP. The SAP was costed at approximately \$ 170 million for the first five years.

The five NCAPs each determine both the transboundary and the national areas of concern, identify the root causes at the national level and recommend regional and national interventions. The NCAPs provide a policy framework for Caspian related activities in the littoral countries and form pillars of the SAP.

The Transboundary Diagnostic Analysis (TDA) published in 2002, a Biodiversity Strategy and Action Plan released in 2003, the five NCAPs, and tens of supporting studies are available on the programme website (www.caspianenvironment.org).

Resource Mobilization

A Caspian Fund has not been established. However, fundraising from industry has been successful, with over \$ 300,000 mobilized to assist the programmes pollution studies and emergency response management. Further, the World Bank has taken a leading role in resource mobilization activities, and supported numerous activities in the member countries, e.g. managing the Matched Small Grant Programme.

The programme is evolving towards enhanced regional ownership; increased country funding of activities and technical assistance focus on activities rather than on funding management and institutional structures. Under its new projects the programme will focus on SAP implementation including the associated NCAPs. In particular the programme will concentrate on the four identified major areas of environmental concerns with EU/Tacis focusing on fisheries management and sustainable development of coastal areas with an approximate budget of Euro 3.5 million and GEF focusing on pollution abatement and monitoring and biodiversity protection with an approximate budget of \$ 6 million. The region will contribute over \$ 21 millions to the programme.

Nairobi Convention (Eastern Africa/Western Indian Ocean) Abidjan Convention (Western and Central Africa)

A Nairobi Convention Coral Reef Taskforce (CRTF) has been established to co-ordinate work on coral reefs throughout the region, including the development and implementation of national action plans or strategies. The task force members also act as Group of Experts on Marine

Protected Areas (GEMPA). The 2nd meeting of GEMPA discussed the development of a toolkit for MPA managers on the establishment and management of MPAs in the Western Indian Ocean Region, which will be published early 2004.

Under a Memorandum of Understanding signed between UNEP and the Western Indian Ocean Science Association (WIMOSA), the association will act as a Regional Activity Centre for the Eastern African Programme. WIOMSA also implement GPA projects in Eastern Africa on behalf of the secretariat.

UNEP/the Nairobi Convention Secretariat, WWF and IUCN have signed a Memorandum of Understanding aiming to strengthen coordination between the Secretariat and the NGOs in

ICRAN

UNEP/the Nairobi Convention Secretariat signed a Memorandum of Understanding with IUCN
on the establishment of a network of protected areas. The development of ICRAN/UNEP Project
Assessment of Marine Ecosystems in the Southern African Region (ICRAN/UNEP Project
Assessment of Marine Ecosystems in the Southern African Region) in the Western

The Remote Sensing Laboratory of ROPME has been active in acquiring the aerospace remote

An independent review and assessment of the future direction of COBSEA was carried out in 2003, aiming to review relevant previous and on-going programmes carried out by other international organizations in the region complementary to the objectives of the East Asian Action Plan, to prepare a concrete proposal to strengthen the East Asian Seas Action Plan for 2003-2005, and to provide an analysis of the secretariat functions to the Action Plan. The review report, containing recommendations in the areas of financial sustainability, secretariat structure and function, geographic focus, and programme focus, will be presented to the COBSEA intergovernmental meeting in March 2004 for approval.

The implementation of the East Asian Seas Action Plan included: implementation of the UNEP/GEF Project entitled, "Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand,"

Coral Reef Monitoring

This project's objective is to form a network of monitoring sites using standardized methods to illustrate the state of the region's coral reefs. International Coral Reef Action Network (ICRAN) sites are used to test the agreed monitoring methods and parameters.

Achievements under this project consisted of local-scale coral reef monitoring activities throughout the region. The activities resulted in collection of additional information on coral reefs and associated organisms, a metadatabase hosted by SEA START RC, and an MPA network of coral reef monitoring. Parameters for biophysical and socio-economic monitoring have been agreed on, and will be tested in the coming year. In the public awareness area, two journalist workshops were held in Thailand and Philippines to expose journalists to the importance of coral reefs, and to encourage the journalists to advertise the need to protect the reefs. Children's activity booklets in local languages were printed and distributed to schools.

A Small Grants Fund Programme was held in collaboration with the ICRAN Project. The two projects pooled together some funds to implement activities addressing coral reef monitoring for management. Other collaborative activities included training workshops in Cambodia, sharing equipment and personnel to implement activities, and using results from one project as guidelines for activities at another.

The collaboration between the coral reef monitoring and ICRAN projects has resulted in a wide range of successes whose momentum should not be lost. The two projects are encouraged to maintain its collaborative efforts to continue protecting the marine resources in the region.

The International Coral Reef Action Network (ICRAN)

Eight project sites were selected for activity implementation based on a study on management gaps, based on their management strategies: multiple use, community-based management, or sustainable tourism. Activities and achievements included: training workshops to increase management capacity; preparation and distribution of public awareness materials in local languages; stakeholder meetings; coral reef monitoring; tourism carrying capacity studies; and feasibility studies on pilot projects for alternative income livelihoods.

Activities have implemented at each site include :Handbook on coral reef monitoring for management translated into Khmer, Thai, Chinese, and Viet Nameese, and distributed to park managers, schools, dive shops, government agencies, NGOs; Feasibility studies for alternative livelihoods (Ninh Thuan, Sanya, Gilli); Training in ReefCheck and LIT monitoring methods (Koh Rong, Gilli); Training on cooperative management (Bunaken, Gilli); Preparing guidelines for

developing sustainable tourism practices (Bunaken, Gilli); and Training on identifying and minimizing socio-economic impacts on coral reefs (Ninh Thuan).

Land-Based Sources of Pollution

The project, "Identification of Regional 'Hot Spots on Land-based Pollution, Their Characteristics and Impacts – Towards Better Management," will provide a means for participating countries to control and manage pollutant discharge into the seas of the region. A workshop was held to identify hot spots of pollution from land-based sources and the format of the information to be included in the GIS database established.

Enhancing Regional Coordination

A project to enhance regional coordination of coastal and marine environmental activities has been initiated, and an inception workshop was held in December 2003, where EAS/RCU and Sida agreed on an implementation plan. Activities will commence in 2004. The objectives of this project are: to improve and enhance coordination of national and regional projects; assist countries with developing "strategies" to address national and regional priorities in coastal and marine environmental management; develop sustainable mechanisms addressing coastal and marine environmental issues; facilitate the development of regional agreements in addressing environmental priorities; and direct the EAS/RCU Action Plan to provide a service-oriented platform.

Northwest Pacific Action Plan (NOWPAP)

The Regional Seas Coordinating Unit, in its capacity of interim secretariat of NOWPAP, has been supporting the implementation and the strengthening of the Action Plan. The Seventh Intergovernmental Meeting in Vladivostok, Russian Federation, 2000, requested the Executive Director to proceed with the establishment of the co-hosted RCU and to recruit the staff for the RCU under UNEP auspices. During 2002-03 UNEP and the two host countries negotiated a Host Country Agreement (HCA), and the HCA for the Toyama, Japan office was signed on 16th September 2003. Negotiations between the Government of the Republic of Korea and UNEP are ongoing and it is expected that they will be finalized soon, after which staff will be recruited for the two offices. The Regional Seas Coordinating Unit in UNEP will continue to facilitate in the establishment process and will continue to support NOWPAP through guidance and advice during the first years of the operation of the RCU.

The 8th Intergovernmental Meeting of NOWPAP was held in Sanya, China, in November 2003. As an interim operational arrangement, the meeting adopted a Regional Oil Spill Contingency Plan as technical and operational guidelines for cooperation in case of emergencies, until the Memorandum of Understanding on regional cooperation regarding preparedness and response to oil spills in the marine environment of the Northwest Pacific region comes into effect.

UNEP has assisted NOWPAP to vitalize the activities of the four Regional Activity Centers. All four RACs have established National Focal Points Fora and held Focal Point meetings during 2003. The 8th IG meeting approved the Terms of Reference for all the RAC Focal Point Meetings.

CEARAC (Special Monitoring and Coastal Environmental Assessment Regional Activity Center), located in Toyama, Japan, at the Northwest Pacific Region Environment Cooperation Center (NPEC), has defined the activities of its working groups on Harmful Algal Blooms (HAB) and Remote Sensing (RS), and elaborated its work priorities for 2004-05.

DINRAC (Data and Information Regional Activity Center), located in Beijing, China, at the State Environment Protection Administration (SEPA), in collaboration with the Marine Information Research Center/Japan Hydrographic Association (MIRC/JHA), has initiated preparation of comprehensive documents on Establishment of a NOWPAP Policy on Data and Information Sharing and Establishment of Principles and Guidelines for NOWPAP Meta-database Management System. DINRAC is finalizing national reports on data and information network and is developing a database on institutions and experts for the NOWPAP region.

MERRAC (Marine Environmental Emergency Preparedness and Response Regional Activity Center), located in Taejon, Republic of Korea, at the Research Institute of Ships and Ocean Engineering/Korea Ocean Research and Development Institute (KRISO/KORDI), has completed three MOUs on Oil Spill Prediction Modelling, Sensitivity Mapping and Oil Dispersants, and held a NOWPAP Regional OPRC course (IMO Level 2 course) in Korea in November 2003.

POMRAC (Pollution Monitoring Regional Activity Center) located in Vladivostok, Russia, at the Pacific Geographical Institute (PGI), has developed a workplan and guidance for its Working Groups on Atmospheric Deposition and River and Direct Inputs.

The La Antigua Guatemala Convention (Northeast Pacific Action Plan NEP)

The Central American Commission for Maritime Transportation (COCATRAM) and UNEP organized the Second Intergovernmental Meeting of the La Antigua Barbuda Convention in Managua, Nicaragua 6-7 March 2003. The meeting took a decision to initiate the elaboration of national contingency plans in preparedness and response to oil spills and hazardous substances, and a project is under development by UNEP, in collaboration with IMO, GPA, COCATRAM. Implementation of a Sida-supported three-year project on strengthening the institutional capacity of the region to address pollution arising from shipping and land based sources will commence in 2004, with an inception meeting to be held in March.

A document entitled "Assessment of Land-based Sources of Pollution and Activities which affect the Marine and Coastal Environment and Associated Freshwater Areas in the North-east Pacific Region" is being published in English and Spanish ("Evaluación Sobre las Fuentes Terrestres y Actividades que afectan al Medio Marino, Costero y de Aguas Dulces Asociadas en la Región Pacífico Nordeste").

Permanent Commission for the South Pacific (CPPS)

The Lima Convention for the Protection of the Marine Environment and Coastal Zones of the South East Pacific and the South East Pacific Action Plan were approved in 1981. Since then, a number of protocols and agreements have been developed, e.g. Agreement on Combating Pollution from Hydrocarbons and other Harmful Substances in cases of Emergency in the South East Pacific (1981); Complementary Protocol of the Agreement (1983); Protocol for the Protection of the South East Pacific against Pollution from Land-based Sources (1983); Protocol for the Conservation and Management of Marine and Coastal Protected Areas of the South East Pacific (1989); and Protocol for the Protection of the South East Pacific from Radioactive Pollution (1989).

The 11th Meeting of the General Authority (Contracting Parties) of the South East Pacific Action Plan, taking into account the recommendations of the previous Consultative Group Meeting

(Scientific and Technical Advisory Body) reviewed, for first time since its creation in 1981, the institutional and financial framework of the South East Pacific Action Plan, approving the updated institutional and financial mechanisms as well as the organization and function of the General Authority, the Consultative Group; the Executive Secretary; National Focal Points; National Institutions and the Mechanisms of Support of the International Organizations.

Activities implemented during 2003 include: Consulting on updating of the Regional Contingency Plan on Oil Spill in the South East Pacific (with the support of IMO); Meeting of Experts on the impact of the introduction of Alien Species in the South East Pacific: Problem of the ship ballast water (IMO/CBD/CPPS); Regional Workshop on Education to the Sustainable Development of the Coastal and Marine Areas of the South East Pacific (IOC-UNESCO/CPPS); Regional Training Course on Preparedness, Response and Control in Cases of Oil Spill (UNEP/IMO/CPPS); and ICARM Workshop in the South East Pacific. The Third Meeting of Experts on Marine Mammals and the Fourth Meeting of Experts on Marine and Coastal Protected Areas are under preparation.

The Medium Size GEF Project for the Prevention, Reduction and Control of Pollutants in the Eastern Equatorial Pacific and Humboldt Current Large Marine Ecosystem: South East Pacific Component, is in the final process of evaluation of by GEF/UNEP. This project will allow the effective regional implementation of GPA, the LBA Regional Protocol for the South East Pacific and the PROSET.

CPPS is currently participating as a Focal Point in the Global International Water Assessment (GIWA) for the Sub-region 64 (Humboldt Current) and 65 (Eastern Equatorial Pacific). The project is mobilizes scientists on environment and socio-economic issues following the GIWA Methodology on Scaling and Scoping, Detailed Assessment, Causal Chain Analyses and Policy Option Analysis.

The 12th COP of the South East Pacific Action Plan will be held in Guayaquil-Ecuador in March 2004, with emphasis on the decisions of the 22 Session of UNEP's Governing Council and in

Horizontal cooperation between the Permanent Commission for the South Pacific (CPPS) and the South Pacific Regional Environment Programme (SPREP)

As requested by the 22nd UNEP Governing Council and promoted by the Regional Seas Coordination Office, CPPS and SPREP signed a Memorandum on twining arrangements between the two Regional Seas Organizations in 2001. Cooperation comprises the development of joint activities such as research and monitoring of marine pollution; integrated marine and coastal area management; marine and coastal protected areas; climate change; biodiversity and natural resource conservation and environmental education, as well as the coordination of bioregional meetings to review the state of the marine environment in the South Pacific as a whole; exchange of information and the cooperation in capacity building in institutional aspects.

A Bioregional Conference between CPPS and SPREP will be held in 2004, with a technical support from UNEP and the Regional Seas Coordination Office. A joint conference between the Regional Seas Programmes of the Pacific Basin is also planned for 2004, to develop and share knowledge of the state of the marine environment in the Pacific as a whole.

Global Programme of Action (GPA)

The Third Global Environment Outlook (GEO 3)¹ reports that at a global level the degradation of coastal and marine environments not only continues but has intensified. Land-based sources are responsible for approximately 80 per cent of the pollution of the oceans and affect the most productive areas of the marine environment. Sewage remains the largest source of contamination, by volume, as coastal sewage discharges have increased dramatically in the past three decades. In particular, the provision of basic sanitation, as well as urban sewer systems and sewage treatment in the developing world, has not kept pace with rates of urbanization or improved services in many developed countries.

Nitrogen levels in coastal waters are exacerbated by the widespread loss of natural interceptors such as coastal wetlands, coral reefs and mangrove forests. In some coastal areas, atmospheric inputs derived from vehicle and industrial emissions, animal manure and fertilizer, dominate anthropogenic nitrogen inputs. Excessive nutrient levels can result in blooms of toxic or otherwise undesirable phytoplankton and there is increasing evidence that these are increasing in frequency, intensity and geographic distribution.

Other serious land-based threats to the oceans include Persistent Organic Pollutants (POPs), many of which are transported globally via the atmosphere, non-biodegradable litter, and changes to natural sediment loads in rivers. Groundwater, storm water, rivers, sewerage systems and the wind all transfer terrestrially derived pollutants to the oceans where the pollutants accumulate in both biological and geophysical resources, thus reducing the economic, social and environmental value of coastal and oceanic systems. This has significant negative implications of global magnitude for human health, poverty alleviation, food security and safety, and for affected industries.

Article 207 of UNCLOS requires States to adopt laws and regulations to prevent, reduce and control pollution from land-based sources and to endeavor to establish global and regional rules, standards and recommended practices and procedures, acting especially through

¹UNEP, *Global Environment Outlook 3*, Earthscan Publications, 2002

competent international organizations and diplomatic conferences. Responding to the need for multilateral action to protect the marine environment, the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) was adopted by an Intergovernmental Conference in November 1995. The GPA is the only global programme addressing the interface between freshwater and saltwater environments.

The World Summit on Sustainable Development (WSSD) Plan of Implementation, adopted in Johannesburg, South Africa, 26 August – 4 September 2002, calls on governments to advance implementation of the GPA and the Montreal Declaration, with particular emphasis during the period from 2002 to 2006 on municipal wastewater, the physical alteration and destruction of habitats, and nutrients.

With the support of donors the UNEP/GPA Coordination Office is supporting the development and implementation of National Programmes of Action for the Protection of the Marine Environment from Land-based Activities (NPA) with a view to realizing a target of 40 NPAs by 2006. 17 Governments have developed or are currently preparing formalized NPAs. The commencement of a further 25 NPAs in the South Pacific, South Asia, West and East Africa is expected in 2004. In May 2004 the UNEP / GPA Coordination Office, with the support of the Government of Australia, will host the Global H₂O: Hilltops-2-Oceans Partnership Conference in Cairns, Australia. Emphasizing the link between freshwater and marine environments, the conference will, , facilitate the sharing of experience vis-à-vis the development of NPAs and assist UNEP in realising the target of 40 NPAs by 2006.

In 2003 the UNEP/GPA Coordination Office continued to implement the UNEP/WHO/HABITAT/WSSCC Strategic Action Plan on Municipal Wastewater. This included the articulation of Ten Keys for Local and National Action on Municipal Wastewater Management to be reviewed by the Global Ministerial Environment Forum in 2004, and submitted for adoption at the Twenty Third Governing Council of UNEP in 2005. Capacity building through the selection and implementation of pilot projects demonstrating the concepts advocated in the Ten Keys is ongoing, as is the development of training modules through the Train-Sea-Coast programme. Jointly through UNEP's Regional Seas Programme the use of regional Wastewater Emission Targets (WET) is also being explored and will be further addressed at the Global H₂O: Hilltops-2-Oceans Partnership Conference in Cairns, Australia.

In 2003 the UNEP/GPA Coordination Office facilitated a number of regional reports and workshops on the Physical Alteration and Destruction of coastal Habitats (PADHtmi

Asia and East Asia. ICARM pilot projects are currently being developed for river basins in Europe, Africa and South America.

In 2004 the UNEP/GPA Coordination Office will continue efforts to engage the private sector and civil society in the implementation of the GPA. In November 2003 the UNEP/GPA Coordination Office co-sponsored the Global Forum on Oceans, Coastal and Islands (GFOCI) Initiative in Paris, an event attended by some 250 participants, including national representatives, international organizations, NGO's and experts. The purpose of the conference was to review what has been done to date in implementing the WSSD commitments and to catalyze multi-stakeholder action on WSSD implementation. Similarly, the GPA Coordination Office contracted the Stakeholder Forum for Our Common Future to launch and disseminate to

for the sustainable development of coral reefs. The CRU also presented its work on coral reef ecosystems in both tropical and temperate/cold climates at the Joint Ministerial Meeting of the Helsinki and OSPAR Commissions, June 2003. The CRU and RS Coordination Office are working closely in the administration of counterpart contributions from the US government to support the Global Coral Reef Monitoring Network (GCRMN) and coral reef projects carried out, , under the Regional Seas Conventions in the Caribbean, East Africa and East Asian Seas. The implementation of ICRAN has been further strengthened at demonstration and target sites in the Wider Caribbean, Eastern Africa, East Asian Seas and South Pacific Regions, and activities expanded to include South Asian Seas and the PERSGA and ROPME region. UNEP continues to provide advice and contributions for ICRAN's strategic direction and continuation. In 2003, ICRAN launched a biannual newsletter, which particularly focuses on the achievements of site level activities implemented through UNEP Regional Seas Programmes (see www.icran.org).

UNEP's Role in the International Coral Reef Initiative (ICRI)

The CRU is the UNEP focal point for ICRI, co-ordinating support and contributing to meetings of the ICRI Coordination and Planning Committee (Gland, May 2003; Turks & Caicos, November 2003). UNEP has recommended the inclusion of cold water corals in the ICRI programme of work. The ICRI membership will make its decision in July 2004.

Reports and meetings

The 2nd International Tropical Marine Ecosystems Management Symposium (ITMEMS2), March 2003, Manila, was convened by ICRI, and supported by CRU and the RS Coordinating Office, to discuss multi-disciplinary approaches to sustainable management of tropical marine ecosystems. A publication is under preparation on the outcomes of the special ICRAN session at ITMEMS2. The Integrated Global Observing Strategy (IGOS) Coral Reef Sub-theme report, prepared by UNEP and the National Oceanographic and Atmospheric Administration (NOAA) was approved by the IGOS partnership and is available at <http://coral.unep.ch/igoscrrp.htm>