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Information Document. Review of accomplishments, focusing on progress in implementing the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities at the National Level

Progress in implementing the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities at the National Level

Note by the Secretariat

The present document has been issued without formal editing.

Progress in implementing the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities at the National Level

1. The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) was adopted by 108 governments, the European Commission and other relevant stakeholders in an intergovernmental conference held in Washington D.C, USA in November 1995. The Programme represented a clear commitment among national governments, international and regional organizations and programmes, non-governmental organizations and major groups to protect and preserve the marine environment from adverse environmental impacts of land based activities. The GPA provides a series of recommendations as well as criteria for their development at different levels with a focus on actions by governments. It provides a comprehensive yet flexible framework to assist countries in fulfilling their duty to preserve and protect the marine environment from sewage, physical alterations and the destruction of habitat, nutrients, sediment mobilisation, persistent organic pollutants, oils, litter, heavy metals and radioactive substances. There have been two inter-governmental reviews of the progress in implementing the GPA, the first in Montreal, Canada in 2001, the second in Beijing, People's Republic of China in 2006.

2. This report highlights progress of countries implementing the Global Programme of Action from 1995 to 2011 with a focus on achievements made between 2006 and 2011. Information contained in this report has been collected from a variety of sources including UNEP regional offices, UNEP Regional Seas Programmes, GPA related GEF projects, web searches and voluntary national reporting. The latter was an exercise carried out by the GPA Coordination Office in August-November 2011 where information was collected from countries through a questionnaire looking at GPA implementation at the national level, as well as constraints and opportunities. By highlighting national level achievements it is the aim of this report to share knowledge and lessons learned amongst countries engaged in activities related to the GPA. The annexes to this report contain a table that presents a global overview of the status of National Programmes of Action (NPAs) for the protection of the marine environment from land based activities, and also examples of countries who have mainstreamed marine and coastal issues into local or national policies, budgets and plans.

A summary of implementation of the Global Programme of Action from 1995-2001

3. The 1st Intergovernmental Review (IGR1) of the GPA was held in Montreal in November 2001, and reviewed accomplishments of GPA implementation from 1995 to 2001. The strategic direction set out at IGR1 was "to facilitate the process of moving from planning to action at all levels". Progress was reported in developing regional and national action plans, increasing the use of integrated coastal area management and environmental impact assessment and identifying problems and policy needs, though it was noted that little concrete action had yet taken place. Identified barriers to implementation included a lack of political will, finance and awareness of the GPA, limited availability of appropriate technologies, weak compliance and enforcement of policies and an institutional divide between the freshwater, coastal zone and marine communities. At the regional level, inventories of pollution sources were identified and land based sources protocols such as the Aruba Protocol to the Cartagena Convention and the Mediterranean Programme of Action were developed and adopted.

4. During this period three countries developed NPAs (Brazil, Canada, Russian Arctic) and three regions developed land based sources Protocols.

5. At the national level, National Programmes of Action were developed and adopted in Brazil, Canada, and for the Russian Arctic, and key lessons in implementing the GPA were shared, for example: involving all relevant stakeholders; beginning with immediate priorities and proceeding to address all priorities; building on existing management strategies; building capacity; ensuring sustainable financing; and maintaining flexibility [1].

6. At the regional level, an important achievement was the successful development and negotiation of three legally binding agreements. The first of these, the revised Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities to the Barcelona Convention for the Protection of the Mediterranean Sea was adopted in 1996. The second, the Protocol Concerning Pollution from Land-based Sources and Activities to the Cartagena Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region, was adopted in 1999. The third, the draft Convention for the

[1] UNEP/GPA/IGR.1/2 'Review of Accomplishments on the Implementation of the Global Programme of Action, 1995-2001

Protection and Sustainable Management of the Marine and Coastal Environment of the Northeast Pacific was endorsed in August 2001 and adopted in 2002.

7. Regional efforts were catalytic for national action. For example, the signature of the revised Mediterranean Protocol to combat Land Based Sources was the policy catalyst which underpinned national progress in this area for many Mediterranean countries. The Protocol helped the region to achieve integration between the socio-economic and environmental aspects of action needed to combat land-based pollution of the Mediterranean Sea through a Strategic Action Programme (SAP) and subsequent National Plans of Action in 12 Mediterranean countries.

8. The UNEP/GPA Coordination Office launched the GPA's Strategic Action Plan (SAP) on Municipal Wastewater and Guidance on Municipal Wastewater. The aims of the SAP were to further develop GPA guidance on sewage and to support regional seas and other relevant bodies to address sewage as a priority problem. In addition several regional workshops were held to review the guidance document, share experiences on best practices and identify pilot projects for municipal wastewater.

9. IGR1 adopted the Montreal Declaration on the Protection of the Marine Environment from Land-based Activities, which focused on mainstreaming the GPA, oceans and coastal governance and financing the GPA. The Montreal Declaration pledged cooperation to improve coastal and ocean governance to accelerate GPA implementation by mainstreaming, integrating coastal area and watershed management, and by enhancing global, regional and national governance processes. It also pledged to identify new and additional financial resources to accelerate GPA implementation by building capacity for effective partnerships among governments, industry, civil society, international organizations and financial institutions, and by making better use of domestic and international resources.

A summary of implementation of the Global Programme of Action from 2001-2006

10. The Second Intergovernmental Review (IGR2) meeting of the GPA took place in Beijing China in October 2006. The meeting examined achievements and constraints in GPA implementation culminating in the Beijing Declaration. Some countries which had finalised NPAs were moving to implementation through pilot projects to address priority issues. These small projects aimed to demonstrate sustainable management approaches and the testing of new technology to address land-based sources of coastal and marine pollution where examples included the use of constructed wetlands or mangroves for improved wastewater management.

11. Global level achievements included integrating the GPA into the international environmental agenda; strengthening the UNEP Regional Seas Programmes to help address GPA-related issues. Concrete results included strategic partnerships with the Global Environment Facility (GEF) through its large marine ecosystem projects and with the regional seas conventions and action plans. Regional GEF projects and Regional Seas Programmes helped to achieve national gains in tackling land based sources.

12. During this period UNEP produced guidelines and key principles for the protection and sustainable use of the coastal and marine resources. Multiple international and regional environmental assessments were conducted contributing to a Global Marine Assessment (the 'Assessment of Assessments'). The GPA Coordination Office carried out a number of scientific reviews including "The State of the Marine Environment: Trends and Processes". The GPA Coordination Office contributed significantly to the Mauritius Declaration and the Mauritius Strategy promoting a Programme of Action for the Sustainable Development of Small Island Developing States.

13. At the regional level GPA implementation was facilitated through the development of protocols to regional seas conventions which specifically addressed the protection of the marine environment from land-based sources of pollution and activities. Geographically the six protocols applied to the Black Sea, the Mediterranean Sea, the Regional Organization for the Protection of the Marine Environment (ROPME) Sea Area, the Southeast Pacific, the Wider Caribbean, and the Red Sea and Gulf of Aden. In addition, the GPA Coordination Office coordinated or supported the following efforts: (a) Black Sea, within the framework of the GEF "Black Sea ecosystem recovery project, phase II"; (b) The Caspian Sea, within the framework of the Caspian Sea Environment Programme; (c) The Wider Caribbean, within the framework of the Caribbean Environment Programme; (d) The development of the project "Addressing land-based activities in the Western Indian Ocean project (WIO-LAB); and (e) The development of the GEF Guinea Current Large Marine Ecosystem (GCLME) project for west and central Africa. Other regional level achievements included the GPA being embedded in high-level policy discussions within various regional forums for example, The Bali

Plan of Action "Towards Healthy Oceans and Coasts for the Sustainable Growth and Prosperity of the Asia-Pacific Community" was adopted in September 2005. The GPA also featured strongly in forums such as 'Partnerships in Environmental Management for the Seas of East Asia', the South Asia Cooperative Environment Programme, the Forum of Ministers of the Environment of Latin America and the Caribbean and in the development of the EU's Marine Strategy which includes a number of land based threats to the marine environment.

14. Many of the above regional initiatives supported the development of National Programmes of Action. Notable regions included the Mediterranean and the Caribbean. During the period, more than 60 national programmes of action were under implementation either through specifically designed programmes or through national development policies, programmes, initiatives and frameworks. Many countries initiated integrated coastal management programmes or integrated coastal zone management programmes as a vehicle to implement their national programme of action. In several countries, national programme of action development processes triggered the reformulation of coastal policy and coastal development strategies (for example in Bangladesh, India and Sri Lanka, Republic of Korea and the Philippines and for the 21 member countries of the Barcelona Convention of the Mediterranean). Several countries in Latin America and the Caribbean engaged in the development or implementation of integrated coastal zone management programmes. Some of these countries receive Inter-American Development Bank support for their integrated coastal zone management programmes including: Barbados, Brazil, Costa Rica, Ecuador, Guyana, Panama, and Trinidad and Tobago.

15. IGR2 also discussed efforts to progress the implementation of NPAs focussing on mainstreaming the GPA into national development planning; to identify mechanisms to increase financing for GPA implementation, and the strengthening of legislative and institutional frameworks. To provide guidance on how these could be achieved, the GPA Coordination Office partnered with the Stockholm Environment Institute and produced the publication 'Making Mainstreaming Work - An analytical framework, guidelines and checklist for the mainstreaming of marine and coastal issues into national planning and budgetary processes'.

16. Governments committed to furthering the implementation of the GPA from 2007−2011 by: Integrating ecosystem approaches into sustainable development and conservation strategies; Integrating environmental and economic values of watersheds, coasts and oceans; Establishing partnerships at the national, regional and international levels; Cooperating at the regional and interregional levels; Mainstreaming the GPA into national development planning and budgetary mechanisms; and Supporting the UNEP GPA Coordination Office in undertaking its task of facilitating, furthering and promoting the implementation of the GPA.

17. The resulting Beijing Declaration shifted focus from international and regional action to national and local-level action by calling for the creation of sustainable financial mechanisms, the economic valuation of goods and services provided by oceans, coasts and watersheds, enhanced local participation and integrated approaches. The Beijing Declaration also called for stronger links between GPA implementation and poverty reduction and development strategies, as well as with integrated water resource management activities and with the Johannesburg Plan of Action (from the World Summit on Sustainable Development in 2002).

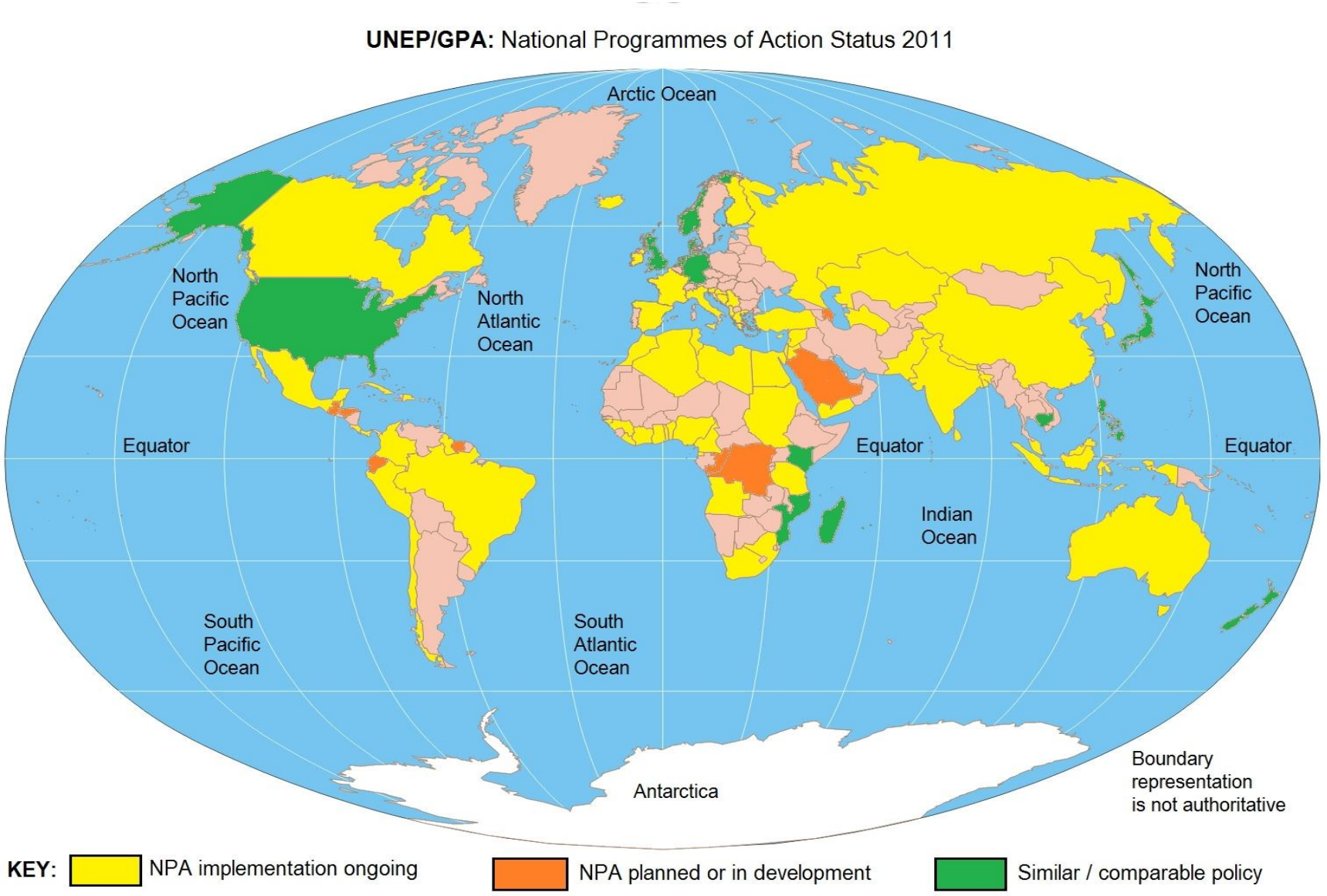
National level implementation of the GPA from 2006

18. Through the GPA mechanism considerable progress has been made across the globe to address the impacts of land-based activities on the marine environment. Much of this progress has been made at the national level, for example sewerage and wastewater treatment, limits to effluent discharges, improved solid waste management, capture and destruction of Persistent Organic Pollutants, pollution prevention legislation, and improved nutrients management particularly in the agricultural sector. This section outlines what has been achieved in the current reporting period (2007-2011): starting with the 'backbone' of GPA implementation: a NPA. This section also includes a summary from a voluntary national reporting exercise that took place from August to November 2011, and country level mainstreaming case studies.

Development of National Programmes of Action

19. From 2007-2011, 11 countries completed their NPAs: Cameroon, Cuba, Democratic Republic of Congo, Gabon, Guyana, Indonesia, Jordan, Malaysia, South Africa, Thailand and Viet Nam. Since the GPA's inception in 1995, 72 countries have developed NPAs. 14 NPAs are currently under development. 8 countries are currently updating or revising their NPAs: Albania, Bosnia & Herzegovina, Cote d'Ivoire, Croatia, Malaysia, Mexico, and the then Serbia & Montenegro and Turkey. A number of countries have developed similar or comparable policies to NPAs. Notable examples include: Chile - National policy of use of coastal

zone; Ecuador - National development plan & environment laws; Japan - Environmental Pollution Control Act of 1967 and its amendments; Kenya - Integrated Coastal Zone Management Action Plan; Madagascar - National Plan for Integrated Coastal Zone Management; Mozambique - Marine and Coastal Assessment; Nepal - Environment and Climate Change Policies; New Zealand - Coastal Policy; Seychelles - Environmental Management Strategy; USA - National Oceans Policy, Clean Water Act, Water Quality Act; UK, Netherlands, Germany - Implementing national initiatives as well as requirements of EU Water and Marine Strategy Directives. A summary table of the status of development of National Programmes of Action is contained in Annex 1.


UNEP/GPA: National Programmes of Action Status 2011
Arctic Ocean
North Pacific Ocean
North Atlantic Ocean
North Pacific Ocean
Equator
Equator
Equator
Indian Ocean
South Pacific Ocean
South Atlantic Ocean
Antarctica
Boundary representation is not authoritative
KEY:
NPA implementation ongoing
NPA planned or in development
Similar / comparable policy

Implementing national actions through regional initiatives

20. In the reporting period many national actions have been driven by regional initiatives: UNEP's Regional Seas Programmes have supported NPA development in the Caribbean, Mediterranean, African, Asia & Pacific regions. Regional projects financed through the Global Environment Facility (GEF) and other financing have also contributed to the development of National Programmes of Action where results of these initiatives have included policy reform, capacity building and pilot projects. The table below gives a brief summary of marine-related regional programmes and a selection of respective national actions/results.

Table 1 - National GPA actions through regional initiatives

Regional Project/Programme	Countries involved	National Actions/Results
The Bay of Bengal Large Marine Ecosystem Project	Bangladesh, India, Indonesia,Malaysia, Maldives , Myanmar, Sri Lanka and Thailand	• Set up of a BOBLME Pollution Working Group • National consultations and inputs to transboundary pollution issues, causes and priorities identified in a Transboundary Diagnostic Analysis. • National land based pollution reports completed for all 8 countries. • Nutrient pilot activities implemented in Chilika Lake, India, and Trang Province, Thailand. • Proposed: review of the status of the National plans of Action - Pollution in BOBLME countries, and development of a plan to assist their development.
The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR)	Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom	• Countries have phased out of a third of the 26 priority chemicals which pose a risk to the marine environment and are moving to a cessation of discharges, emissions and losses of these substances by 2020. • Countries have achieved a 50% reduction in phosphorus discharges but nitrogen discharges are still a key problem, especially from agriculture. • Denmark has achieved its target of a 50% reduction in phosphorus and nitrogen discharges to the Danish part of the OSPAR Maritime Area • Sweden has adopted a reduction target of 40% for marine litter in its OSPAR area.
Guinea Current Large Marine Ecosystem Programme	Angola, Benin, Cameroon, Cote d'Ivoire, Democratic Republic of Congo, Equatorial Guinea, Gabon, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Sao Tome & Principe, Sierra Leone. (NPAs)	• Mangrove restoration demonstration project in Nigeria • Integrated coastal area management project pilot in Cameroon • Marine protected area project in Benin • Waste swap project in Ghana • Coastal erosion project in Cote d'Ivoire • Developing national capacity in marine monitoring, assessment and analysis • Developing national policies on oil spill management and response • NPA and LBS protocol development
Addressing Land Based Activities in the Western Indian Ocean	The Comoros, Kenya, Madagascar, (Coastal Zone Management Plans), The Seychelles (Environmental Management Plan), South Africa and Tanzania (NPAs)	• Wetland-lagoon system for wastewater management at Shimo La Tewa Prison, Mombasa, Kenya. • Development of eco-tourism in the Marine Park of Toliara, Madagascar. • Application of vetiver grass for erosion and leachate control at a landfill site in Dar es Salaam, Tanzania. • Solid Waste Management in Port Louis Harbour, Mauritius. • Enhancing the ecological function of mangroves in Mozambique. • Wastewater management on Pemba Island, Zanzibar. • Integrated management and protection of the coastal zone at Itsamia, Mohéli in the Comoros. • Use of native species to control soil erosion within The Black River Gorges National Park in Mauritius • Development of NPAs in South Africa and Tanzania and coastal/environmental management plans in other WIO-LAB countries.
Baltic Marine Environment	Denmark, Estonia, Finland, Germany,	• The development of national implementation programmes to combat 11 hazardous substances from municipal and industrial wastewater, landfill leachates and storm water in eight countries around the Baltic Sea.

Protection Commission (HELCOM)	Latvia, Lithuania, Poland, Russian Federation and Sweden are implementing their Baltic Sea Action Plans.	• The elimination of four major pollution hot spots in Lithuania. • Better decision support for farmers for nutrients investments in sensitive Baltic ecosystems • An annual reduction of 300-500 tons of phosphorus discharges to the marine environment via upgrades to wastewater treatment plants in Belarus, Estonia, Poland and Latvia • The adoption of the Baltic Sea Action Plan which aim at reducing eutrophication, hazardous substances, promoting maritime activities and biodiversity by developing national programmes in its 9 member countries.
Mediterranean Action Plan	Albania, Algeria, Bosnia Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Tunisia, Turkey.	• National Action Plans for the control of industrial pollution implemented in the framework of the Land Based Sources Protocol under the Barcelona Convention • National Reports on pollutants releases from industrial sources submitted by all Mediterranean countries (reporting periods 2003 and 2008) • National marine monitoring programmes implemented in the framework of the MED POL Programme and data reported to MAP Secretariat • Demonstration projects related to chromium, BOD5 and nutrients in tanneries (Turkey), phoshogypsum slurry (Tunisia), recycling lead batteries (Syria) and recycling used lub oil (Algeria) • National meeting for the development of environmental inspection systems in Montenegro • National training courses for the safe use of wastewater in Albania and Syria • Establishment of a Pollutants Releases and Transfer Register (PRTR) system in Turkey • Development of a modeling system to assess the variations of Environmental Quality Standards with Emission Limit Values for nitrogen and mercury (case study Gulf de Lion, France and Izmir Bay, Turkey) • Identification and planning of new Marine Protected Areas (MPAs) in Albania, Croatia, Montenegro and Tunisia • Demonstration Project on the establishment of a National network of MPAs in Libya
Tehran Convention	Azerbaijan, Islamic Republic of Iran, Kazakhstan, Russian Federation and Turkmenistan are developing Land Based Sources Protocols in the context of their overall National (Tehran) Convention Action Plans.	• Clean up of oil contaminated soil in Absheron in Azerbaijan. • Farmer Field Schools in Iran to improve pesticides and nutrients management. • Cleaning the Ural River in west Kazakhstan. The removal of over 5,200 tons of foreign material from the river. • Collection, recycling and processing of plastic wastes in the Turkmenbashi City, Turkmenistan.
The Northwest Pacific Action Plan (NOWPAP)	PR China, Japan, RO Korea, the Russian Federation	• National contingency planning for hazardous and noxious substances, including oils & hydrocarbons. • Development of integrated coastal zone and river basin management. • Marine litter clean up campaigns in each NOWPAP country.
Reversing Environment Degradation in the South China Sea and Gulf of Thailand	Cambodia, China, Indonesia, Malaysia, South Korea, Thailand and Viet Nam. (National Action Plans).	• Mangrove and wetland demonstration and rehabilitation projects in Cambodia, China, Indonesia, Malaysia, Thailand and Viet Nam • 7 National Action Plans developed (all countries except Thailand). National reports on land-based sources of pollution? • 6 National Action Plans for addressing the issues of Land-based Pollution; • An overview of land-based pollution problems in the South China Sea; • A model for riverine inputs of nutrients to the South China Sea that can be used in management decision making; and, • Identified areas sensitive to inputs of nutrients from rivers bordering the South china Sea

Integrating Watershed and Coastal Area Management (IWCAM) in the Caribbean	Antigua & Barbuda, The Bahamas, Barbados, Cuba, Grenada, Dominica, Dominican Republic, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent & the Grenadines, and Trinidad & Tobago.	• Marina waste management at Elizabeth Harbour in Exuma, The Bahamas. • Rehabilitation and restoration of the Basseterre Valley and protection for the underlying aquifer. • Mitigation of groundwater and other coastal impacts from sewage discharges at St John's, Antigua & Barbuda. • Protecting watershed services and developing management incentives in the Font D'or watershed in Saint Lucia. • Watershed restoration in the Courland watershed and Buccoo reef area in Trinidad & Tobago. • Mitigation of impacts of industrial wastes on the Lower Haina River Basin and coast of the Dominican Republic. • Protecting the Cienfuegos Bay and watershed in Cuba. • Development of a 'toolkit' for national legislative professional to amend or draft legislation in support of the objectives of the Caribbean LBS Protocol. • The development of IWCAM indicators at the national level: 73 Stress reduction indicators, 65 environmental status/socioeconomic indicators, and 11 Process indicators.
Secretariat of the Pacific Regional Environment Programme (SPREP)	American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji, France, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, United States, Vanuatu, and Wallis and Fortuna	• The Pacific IWRM programme supports its member countries to develop governance systems which develop, promote and implement appropriate policy, planning, regulatory frameworks and community awareness for improved national water management. • Pacific IWRM demonstration projects support national water managers to implement applicable and effective Integrated Water Resource Management and Water Use Efficiency (WUE) plans which address national priority water issues. • The Pacific Water Quality Monitoring programme aims to build national capacity to monitor the quality of drinking water, surface water, ground water and coastal waters. Countries are provided with basic water testing equipment and in-country training on best laboratory practices. • The Water Supply, Sanitation and Hygiene (WASH) programme promotes the use of appropriate technologies and approaches for domestic water supply and sanitation issues through awareness raising, demonstrating best practices and advocacy. This includes rainwater harvesting and mainstreaming gender and community participation in water supply and sanitation.
Partnership in the Environmental Management of the Seas of East Asia	Cambodia, DPR Korea, Indonesia, Japan, Lao PDR, PR China, Philippines, RO Korea, Singapore, Thailand, Timor-Leste, Viet Nam	• Integrated Coastal Management sites in all PEMSEA countries addressing national and local priority issues including nutrient reduction and improving waste management. • Construction of new sewage treatment plants in China and Shenyang, Liaoning Province and a $395 million in Fujian in water pollution control. • A community-based solid waste management project in Sikhanoukville.

Policy, Institutional and Investment Reform

21. A National Programme of Action often acts as a catalyst or starting point for other reforms related to improving the management of the coastal zone or tackling land based sources of marine pollution. This section describes some of the results or achievements at the national level in terms of policy change, institutional reform and increased investment.

22. It is worth noting that many countries have embarked on GPA related activities in the absence of a formal policy document such as a National Programme of Action. Notable examples include: Algeria which has developed a Costal Area Management Programme for the densely populated region of Algiers which was the first integrated coastal management process to be implemented in the country. The success of this initiative is reflected in it being replicated along the entire Algerian coastline. China has developed coherent legislation in separate jurisdictions for improving the management of the Bohai Sea. The Bohai Sea Management Law provides a cross-regional legal framework and promotes a 'joined-up' approach for joint management, responsibility and enforcement. In the Caribbean, a multi-stakeholder approach is helping to tackle marine litter where government ministries, the private sector and local communities are partnering to develop and mainstream local marine litter management plans. Viet Nam has developed a marine policy and law (Law of Marine Resources and Environment) in 2009 and the USA has passed a Coastal Zone Management Act and adopted a National Oceans Policy. In Canada the responsibility for the marine environment is shared at all levels of government: Federal, Provincial, Local and Aboriginal Lands. The Marine and Coastal Access Act (2009) in the UK is considered ground-breaking because it brings together for the first time the UK's key marine decision-making powers and delivery mechanisms.

23. Because the marine and coastal environment overlaps with many different government departments and ministries, many countries have realised that institutional reform can help accelerate efforts to improve the marine and coastal environment. Countries such as Barbados, Germany, Kenya, Madagascar, Malaysia and Yemen have re-organised government sectors and agencies to better manage water resources and tackle marine pollution. The Vietnamese government is increasingly recognising the importance of its coastal seas and islands in their contribution to the marine economy and to national development. As a result the government re-organised itself to better capitalise on its marine economy by creating the Viet Nam Administration for Seas and Islands (VASI). In July 2010, an Executive Order from the US Government titled 'Stewardship of our Ocean, Our Coasts and Great Lakes' created a National Oceans Council for the USA to implement their National Oceans Policy. The Caribbean island of Saint Lucia has created a Coastal Zone Management Unit which has established inter-sectoral committees which coordinates and brings together the island's institutional framework for environmental management. The UK has established a new Marine Management Organisation which brings different ministries and departments together marking a fundamental shift in planning, regulating and licensing activity for the UK's marine area. At the local or regional level, many countries who are implementing integrated river basin or coastal management have recognised that a coordinating mechanism is required which can comprise a re-organisation of existing roles and responsibilities or the creation of a coordinating body.

24. Regarding investment for tackling land based sources of marine and coastal pollution, some countries have reported an increase in financial resources (Finland, Kenya, Malaysia). Sri Lanka's Environmental Conservation Levy established in 2008 is a levy on specific items and services that are likely to have harmful impacts on the environment. The revenue accumulating from the levy is used for taking corrective action to eliminate or alleviate the source of the hazard. The UK has spent £3.6bn (US$5.7bn) to tackle the 39 million tonnes of storm sewer overflows that enter the River Thames annually. This combined with other initiatives has led to a significant increase in biodiversity and habitat quality of the River Thames estuary. In Jamaica, funds for the protection of the marine environment have been bolstered by the introduction of an environment levy for sewage treatment and disposal. In Mozambique, the government has recognised the value of its coastal and marine resources and has established a donor fund specifically set up to address marine and coastal issues. Sweden has created a special budget line amounting to EUR 100 million for the marine environment which has to date supported over 600 marine related projects. In the Chinese province of Fujian, the significant improvements brought about by the cleanup and rehabilitation of Xiamen's Yuan Dang Lagoon inspired the provincial government to invest RMB 3 billion ($395 million) in water pollution control. In Canada, the Health of Oceans (HOTO) initiative has provided CAN$1.5 million to restore and protect precious habitats, foster better human and environmental health, and support communities in the Gulf of Maine Ecosystem. Specific actions include marine chemicals contaminant monitoring, ecosystem indicators, adapting to the impacts of climate change, education and outreach.

Mainstreaming the GPA for National Action

25. Efforts to integrate policies and practices for environmental sustainability into the mainstream of development practice can help countries speed up the achievement of their development goals. Mainstreaming recognises that health, well-being and income opportunities are central in the development goals of all nations. The longer term results of mainstreaming can be improvements in water quality, ecosystem health and in the income and livelihoods of people who depend on natural resources.

26. Oceans and coasts provide services such as food, tourism, shipping, shoreline protection, climate regulation, carbon storage and sequestration. Services such as these are at risk since 80% of marine pollution originates from land-based activities. Pollutants include nutrients, sediments and chemicals, with often far reaching effects. These pollutants can harm or even destroy marine and coastal habitats that support livelihoods, human health, economic growth, biodiversity and other cultural and spiritual benefits. The effects of coastal degradation and a loss of these services are felt inland and often a long way from the coast. At the 2nd Inter-governmental Review of the GPA, Governments requested that GPA implementation from 2007-2011 would focus on mainstreaming the GPA into national development plans, policies and budgets.

27. In 2007, the GPA Coordination Office in partnership with the Stockholm Environment Institute produced a guidance document "Making Mainstreaming Work: An Analytical Framework, Guidelines and Checklist for the Mainstreaming of Marine and Coastal Issues into National Planning and Budgetary Processes". Subsequently a series of regional training workshops were organised to familiarize national governments with the concept and key steps of mainstreaming coastal and marine issues into national planning, policies and budgets. Workshops took place in Asia (November 2007) east Africa (May 2008), the Caribbean (July 2008) and the South Pacific (September 2009). Key outputs from these workshops included an outline for a national mainstreaming strategy for each participating country which describes the steps needed to initiate mainstreaming processes in light of their respective national circumstances. This has helped to create awareness in governments on opportunities created by mainstreaming as well as providing officials with a 'how-to' document which guides the implementation of mainstreaming.

28. In 2009, the GPA Coordination Office in cooperation with the joint UNDP-UNEP Poverty Environment Initiative launched mainstreaming projects in DR Congo and Viet Nam. The aim of these projects is to integrate marine and coastal environmental concerns into local and national development strategies and the promulgation of laws or decrees for enhanced marine and coastal management. The results of these projects have been the development of National Programmes Action, and in Viet Nam, a rapid assessment of land based sources of marine pollution and economic case study focusing on Ha Long Bay.

29. A number of countries have embarked on the integrating the protection and sustainable use of marine and coastal resources into development plans and policies. One example is Barbados which has developed limits on voluntary recreational fresh and marine water quality standards; discharge standards for sewage, oils, nutrients and sediments; adopted water quality standards; finalised its coastal zone strategy and action plan Barbados has also ratified the Land based Sources Protocol (under the Cartagena Convention for the Caribbean). Given the wide cross-sectoral nature of the LBS protocol and pollutants entering the marine environment, efforts are now being made to mainstream components of the NPA into the work programme and policies of other government departments and ministries.

30. The Vietnamese government is increasingly recognising the importance of its coastal seas and islands in their contribution to the marine economy and to national development. As a result in 2008, the government re-organised itself to better capitalise on its marine economy by creating the Viet Nam Administration for Seas and Islands (VASI). This represents an institutional change that reflects the new vision of the Vietnamese government: "Viet Nam must be stronger and richer, by the sea". VASI's remit is to integrate and unify the state's management on seas and islands and to carry out public services in this area. VASI can now develop marine policies and laws which has helped to integrate these issues into the mainstream of government thinking and planning, monitor and survey the marine environment; develop early warning and emergency responses systems; and promote integrated coastal, marine and island use planning and management.

31. In 2009, South Africa designated the Prince Edward Islands as Marine Protected Areas. Located in the southern ocean between South Africa and Antarctica, at 180,000 square kilometers, it is the largest marine protected area (MPA) in the Antarctic region and the sixth largest MPA in the world. South Africa now has 20 MPAs protecting approximately 20% of its coastline which is enshrined in the Marine Living Resources Act (1998). South Africa has increased the coverage of MPAs to include marine, wetlands, terrestrial, estuarine

and riverine ecosystems. This coverage extends up to 88kms inshore and by doing so implements a cornerstone of the GPA which is connecting the land and ocean communities.

32. In the 1950s the River Thames was in a significantly biologically degraded state. The UK government's Environment Agency led a remarkable recovery of the river by implementing an approach that integrated river and watershed users with programmes of restoration, best practice in pollution control and flood alleviation. Now the Thames has regained its species diversity: There have been 125 species of fish including salmon and sea trout recorded and more than 400 species of invertebrates. Birds have returned including ducks, waders, sea birds and even seals, dolphins and otters are now regularly spotted. It has taken thousands of people many decades to restore The Thames to this point. It has included tighter regulation of polluting industries, working with farmers, businesses and water companies to reduce pollution and improve water quality. For example, since 2005, 393 habitat enhancement projects have been completed and nearly 70 km of the river has been restored or enhanced. These results have been achieved by mainstreaming watershed and marine issues across sectors and thereby achieving significant positive impacts for habitats and biodiversity.

Summary from the voluntary reporting exercise

33. Between August and November 2011, countries were invited to participate in a voluntary reporting exercise on progress made in the implementation of the GPA at the national level. This section provides a summary and highlights the most salient aspects of the 20 reports which were submitted to the UNEP/GPA Co-ordination Officet in connection with the exercise. The aim of the exercise is to share lessons learned among countries engaged in implementing the GPA.

34. This section presents information provided by the following countries up to 30 November 2011: Bangladesh, Barbados, Belize, Brazil, Canada, Colombia, Cuba, Democratic Republic of Congo, Haiti, Japan, Kenya, Finland, Germany, Ivory Coast, Madagascar, Malaysia, Mexico, Saint Lucia, USA and Yemen. All countries used a questionnaire that was distributed by the UNEP/GPA Coordination Office. The following sections present a summary of findings which have been extracted from the questionnaire provided.

GPA Implementation

35. Out of the 20 countries that reported in the voluntary reporting exercise, 14 countries have completed National Programmes of Action (Brazil and Mexico have completed regional NPAs). Outlined below are some examples of actions by countries who participated in the voluntary reporting exercise, which are aimed at tackling land based sources of marine and coastal pollution:

36. Bangladesh has in place environmental control policies and acts for industrial waste, sewage, solid waste, agrochemicals (including POPs) and forestry/land management. Barbados has developed limits on voluntary recreational fresh and marine water quality standards for sewage, oils, nutrients and sediments and also ratified a regional LBS Protocol. Belize has developed a Marine Pollution Control Act in 1998 and is participating in regional initiatives to tackle land based sources of marine pollution. In addition to a NPA which was developed in 2000 and revised in 2008, Canada also has in place an Oceans Act & Strategy, Integrated Oceans Management Policy, Arctic Water Pollution prevention Act as well as Environment Assessment and Protection Acts. Cote d'Ivoire has developed a range of environmental management measures including Environmental Impact Assessments, Audits and inspections to help control discharges from land based sources. Cuba has a National Programme for Pollution Prevention as well as plans for POPs, Hazardous Waste, Resource Efficiency and Biodiversity Protection. Finland has a system of environmental permits that set national limits on discharges for effluents and for water contamination risk as well as a broader Water Protection Policy 2011. European countries have developed national laws and action plans to implement EU Directives such as the Water Framework Directive and the Marine Strategy Framework Directive. Japan has a number of environmental decrees and a foundation Environment Act of 1993. Kenya has a broad Environmental Management Act as well as an Integrated Coastal Zone Management Action Plan. Madagascar has a National Policy on ICZM. Malaysia implements integrated river management through a 'One State One River programme' and Yemen has a national strategy for the management of hazardous waste as well as many environmental decrees, plans, strategies. The USA has many GPA-related initiatives including programs for National Estuaries, Chesapeake Bay and the Gulf of Mexico. Furthermore under its Coastal Zone Management Act, voluntary partnerships have been developed between the Federal Government, states and territories.

Constraints in GPA Implementation

37. Countries were asked to report on constraints when attempting to implement GPA-related activities. Beginning with the most common, these include: a lack of human and financial resources; limited technical and technological support; insufffient political will and low awareness from decision makers to support implementation; lack of enforcement of environmental legislation, and where legislation does not exist, a lack of willingness on the part of polluting enterprises to reduce their pollution load or to tackle effluent discharges; ;arranging the institutional and legal framework carefully to avoid duplication; balancing the differing opinions of various stakeholders; and finally, given the cross sectoral nature of land based pollution, a further constraint identified is the need to integrate components of the NPA into the work programme and policies of other government departments and ministries. One country stated it is difficult to measure the 'value added' of an NPA – through for example facilitating, enabling and partnership building. Furthermore, it is difficult to measure the contributions of programmes carried out by different levels of government, across different regions within a country, which meet the objectives of an NPA but are difficult to attribute to a NPA.

Recommendations from the voluntary survey

38. With regards to NPA implementation, two areas where countries commonly ask for guidance are Technical Assistance and Technology Transfer. In the voluntary reporting exercise, countries were asked to comment and provide recommendations on these two aspects. From the information in the returned questionnaires, developing countries stated that technical knowledge was limited and called for strengthening country level capacity for NPA implementation. Furthermore, developing countries started that technology was limited and unaffordable. The sections below outline recommendations countries made through the voluntary reporting exercise to address Technical Assistance and Technology Transfer.

39. Regarding improvements for technical assistance, countries called for: the use of educational exchanges and fellowships to train and build in-country capacity for technical knowledge; specific technical assistance for implementing specific components of an NPA. For example, technical assistance is needed in the area of Information Technology in order to develop and manage data for pollution hot spots and water quality; technical assistance needs to be delivered according to the needs of each country. For example, national standards and monitoring programmes need to be developed to control and assess effluent discharge according to size and type of sources and type of receiving bodies. Technical assistance should be tailored to tackle this task rather than for developing generic standards and monitoring programmes; technical assistance is required with regards to training in international best practice for key GPA areas such as: water quality surveying, integrated water quality modelling, the effects of discharges, the management of data, cleaner production.

40. Regarding improvements in the area of technology transfer, countries called for: technology needs to be adapted to the specific country, for example, a developing country with limited resources with a tropical climate. Furthermore, technology should be adaptable to locally available products in terms of maintenance and availability of replacements; available technology in most developing countries does not allow the measurement of modern-day marine pollutants, especially those associated with newer industries such as energy, telecommunications and electronics. Developing countries would also benefit from low cost-low maintenance technology which would allow a sufficient degree of pollutant modelling from which a country could then draw-up its management plans from; Low cost technology is needed by developing countries to effectively determine pollution loads produced by different industries and their potential risk and impact on the marine environment. This could be associated to technology and equipment required for the analysis of certain GPA source category pollutants; developing countries need more technology which will assist in the mitigation of pollution and the treatment of wastes for key GPA source categories. 'At source' technology is also required by developing countries to reduce the impacts of those pollutants from industries that currently pollute the marine environment. Lastly, greater regional cooperation could accelerate technology transfer and couple it with opportunities for capacity building.

Lessons Learnt

41. Countries provided recommendations on the basis of lessons learnt during the development of their NPA and/or in the implementation of their GPA priority actions. Not all countries provided recommendations but those that were put forward are listed below.

42. Bangladesh stated that local people are much more supportive of natural resource management projects than before, and that linking this with income generation activities was critical to any success. It recognised that some institutions (an example from the solid waste management sector) might be unable to carry out their

functions and should be supported to do so. A good example was given from a neglected and marginalised group of poor fishermen who had been given a voice which led to better management of coastal resources for their livelihood.

43. Barbados suggested public awareness for an NPA in itself may not be very successful. However integrating training and public participation components in the development and implementation of an NPA was an effective way of raising public awareness. Furthermore policies need to be action orientated pertaining to institutional arrangements, regulatory frameworks, as well as monitoring and evaluation mechanisms. Lastly, issues such as sewage treatment need a government and private sector wide response in particular for a small island developing state with limited finances.

44. Canada suggested it has been difficult to measure the success of NPA-related programmes especially those carried out at Provincial/Territorial/Local levels which implement Canada's NPA but are not attributed to the NPA.

45. Colombia outlined how international cooperation and exchanges have significantly benefitted their country, especially in the area of technical and methodology knowledge for sampling marine contaminants and the introduction of new analytical methods for assessing marine environmental quality.

46. Germany stated that there remain gaps in knowledge which need further research such as the impacts and future risks of hazardous substances, nutrients, marine litter and noise.

47. Haiti recommended that the sensitisation of local population as well as decision makers is a key factor in developing an NPA. Haiti also called for specific and targeted laws for marine and coastal pollution, improved environmental laboratories and increased scientific cooperation between countries.

48. Kenya stated that public participation is an important factor where effective stakeholder communication is essential for success. Kenya added that support from decision makers is crucial.

49. Malaysia stressed the importance of cooperation and support of local authorities in developing a NPA and implementing GPA-related activities.

50. Mexico reported that because they have such a large coastal zone and limited financial resources, it is important to break down the coast into regions and work more at the regional level. Mexico added that this approach requires strengthening the capacity at the sub-national (regional) level for more effective implementation.

51. The USA stressed that a NPA programme must be well coordinated and transparent with Federal, state, and local authorities, foreign governments and international organizations, business interests, nongovernmental organizations and the public. Through the example of their National Oceans Policy, national programs of actions should be developed to: establish regional approaches that protect the oceans, coasts, and watersheds while seeking to decrease user conflicts, improve planning and regulatory efficiencies, decrease costs and delays in actions, and preserve critical ecosystem services; create a comprehensive alternative to sector-by-sector and statute-by-statute decision-making; establish regional planning bodies, bringing Federal, state, tribal and local partners together to jointly plan for the future of the oceans, coasts, and watersheds; ensure science-based information is at the heart of decision-making; and Emphasise stakeholder and public participation.

Annex 1

Summary table of the status of National Programmes of Action

AFRICA

Country	NPA Developed	NPA Under Development	NPA Under Revision	Comparable Policies
Algeria	Completed (MAP)			
Angola	Completed			
Benin	Completed			
Cameroon	Completed			
Cote d'Ivoire	Completed		Yes	
Congo		Under development (GCLME)		
DR Congo				
Egypt	Completed (PERSGA, MAP)			
Equatorial Guinea	Completed			
Ghana	Completed			
Guinea	Completed			
Guinea Bissau	Completed			
Kenya	No NPA			Integrated Coastal Zone Management Policy
Liberia	Completed			
Libya	Completed (MAP)			
Madagascar	No NPA (WIO Lab)			National Plan for Integrated Coastal Zone Management
Mauritius	No NPA			ICZM Plan and national reports on the marine and coastal environment
Morocco	Completed (MAP)			
Mozambique	No NPA			State of the Coast and Marine Environments
Nigeria	Completed (GCLME)			
Sao Tome and Principe	Completed			
Seychelles	No NPA			Seychelles Environmental Management Plan
South Africa	Completed (Nairobi			

	Convention, Abidjan Convention, CCAMLR)			
Tanzania	Completed (EAF)			
Togo	Completed			
Tunisia	Completed (MAP)			

ASIA AND THE PACIFIC

Country	NPA Developed	NPA Under Development	NPA Under Revision	Comparable Policies
Australia	Completed (SPREP)			
Bangladesh	Completed (SACEP)			
Cambodia	No NPA			National Sustainable Development Strategy with marine/coastal components
China	Completed (NOWPAP, COBSEA)			
India	Completed (SACEP)			
Indonesia	Completed (COBSEA)			
Iran (Islamic Republic of)		Under development (Tehran Convention for Caspian Sea area)		
Japan	No NPA			Environmental Pollution Control Act of 1967 and its amendments
Kiribati		Under development (SPREP)		
Korea (Republic of)	Completed (COBSEA)			
Malaysia	Completed (South China Sea)		Yes	
Maldives		Planned (SACEP)		
Nepal	Completed (SACEP)			
New Zealand	No NPA			Coastal Policy (in formulation)
Pakistan	Completed (SACEP)			
Palau		Under development (SPREP)		
Philippines	No NPA			Integrated Coastal Management, Oceans Policy
Solomon Islands		Under development (SPREP)		
Sri Lanka	Completed (SACEP)			

Tonga	Completed (SPREP)			
Vanuatu		Under development (SPREP)		

EUROPE

Country	NPA Developed	NPA Under Development	NPA Under Revision	Comparable Policies
Albania	Completed (MAP)		Yes	
Azerbaijan		Planned (Caspian Sea)		
Bosnia / Herzegovina	Completed (MAP)		Yes	
Croatia	Completed (MAP)		Yes	
Cyprus	Completed (MAP)			
Denmark	No NPA			Marine & Water Directives, Nutrients Management Policies
Finland	Completed (Baltic Sea)			
France (Mediterranean)	Completed (MAP)			
Germany	No NPA			National Strategy for Sustainable use and Protection of the Sea
Greece	Completed (MAP)			
Iceland	Completed (OSPAR, PAME)			
Ireland	Completed (OSPAR)			
Israel	Completed (MAP)			
Italy	Completed (MAP)			
Kazakhstan	Completed			
Malta	Completed (MAP)			
Monaco	Completed (MAP)			
Netherlands	No NPA			Implementing EU Marine Strategy Framework Directive
Norway	No NPA			National law and international obligations
Serbia & Montenegro	Completed (MAP)		Yes	
Slovenia	Completed (MAP)			
Spain	Completed (MAP)			

Russian Federation	Completed (Caspian and Arctic)			
Turkey	Completed (MAP)		Yes	
Turkmenistan	Completed			
UK	No NPA			Marine and Coastal Areas Access Act

LATIN AMERICA & THE CARIBBEAN

Country	NPA Developed	NPA Under Development	NPA Under Revision	Comparable Policies
Bahamas	Completed			
Barbados	Completed			
Belize	Completed (Wider Caribbean)			
Brazil	Completed (Upper South West Atlantic)			
British Virgin Islands		Under development		
Chile	Completed (Valparaiso and Quintero Bays)			
Colombia	Completed (CPPS)			
Costa Rica	Completed			
Cuba	Completed (Wider Caribbean)			Coastal Zone Management Plans established
Dominican Republic	Completed (Wider Caribbean)			Coastal Zone Management Plans established
Ecuador		Under development (CPPS)		National development plan, National Biodiversity Strategy, National environmental policies, Environmental management law
Guatemala		Under development		Plan of Action for two watersheds
Guyana	Completed - local NPA (Wider Caribbean)			Plan of Action specific to Linden
Haiti	No NPA			

Honduras		Under development (Wider Caribbean, NEP)		
Jamaica	Completed (CEP)			
Mexico	Completed (Caribbean)		Yes	
Panama	Completed			
Peru	Completed			
Saint Lucia	Completed (Wider Caribbean)			
Suriname		Under development (Wider Caribbean)		
Trinidad & Tobago	Completed (Wider Caribbean)			Local NPAs being implemented

NORTH AMERICA

Country	NPA Developed	NPA Under Development	NPA Under Revision	Comparable Policies
Canada	Completed		Revised 2008	Oceans Policy & Strategy, Integrated Oceans Management Policy and Operational Framework
USA	No NPA			Clean Water Act, Oceans Policy

WEST ASIA

Country/Authority	NPA Developed	NPA Under Development	NPA Under Revision	Comparable Policies
Jordan	Completed (PERSGA)			
Lebanon	Completed			
Palestinian Authority	Completed (MAP)			
Syria	Completed (MAP)			
Yemen	Completed (PERSGA)			

Annex 2

Mainstreaming Case Studies

Saint Lucia

Summary of what was achieved and how

Through the development of coastal zone management policies and actions, Saint Lucia has been successful in promoting marine & coastal environmental protection through key sectors within Saint Lucia's economy, mainly through a strong coordination function with these key sectors. Saint Lucia is now developing innovative ideas for financing improved coastal zone management. Challenges however remain……

Saint Lucia adopted the Global Programme of Action in November 1995. Saint Lucia's 'Coastal Zone Management (CZM) Policy, Guidelines and Selected Projects' were approved and adopted by the Cabinet of Ministers in 2004. The country's Coastal Zone Management Strategy seeks to improve the management of the island's coastal and marine resources to ensure that economic growth is balanced with the sound management and use of coastal and marine resources. The Strategy recognizes that the management of the coastal and marine resources of the island is complex and can only occur through inter-agency collaborative approaches that integrate the management of the coastal zone into all other sector-based management programmes. A Strategy and Action Plan for Integrated CZM is being developed to implement St Lucia's CZM Policy.

Saint Lucia is a party to the Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region. At a regional level, in January 2008, Saint Lucia acceded to the Land-Based Sources of Marine Pollution (LBS) Protocol[2]. The LBS Protocol seeks to respond to the protection of the marine environment from land-based point and non-point sources of marine pollution.

At the vanguard of Saint Lucia's ICZM Action Plan is the island's Coastal Zone Management Unit. This Unit has established inter-sectoral committees which coordinate and integrate the island's institutional framework for environmental management. A good result of this collaborative work has been the development of Voluntary Recreational Water Quality Standards which are cross-sectoral in nature and have been supported by different sectors (agricultural, light industry, tourism).

On a broader note, the Coastal Zone Management Unit is driving an attempt to mainstream coastal and marine issues into the country's wider development planning process. Saint Lucia's ICZM programme is not restricted to one agency but is instead diffused into the work programmes of a number of agencies such as the Ministry of Communications and Works, the Ministry of Physical Development and the Department of Fisheries. The Coastal Zone Management Unit acts as a coordinating arm responsible for integrating the work programmes of key agencies within Saint Lucia's coastal and marine protection mandates. A result of this work is evidenced by a shift in how the work programmes of these other line agencies are now being defined with marine/coastal concerns in mind.

One interesting area of work is in the development of innovative financing mechanisms for ICZM. The development of these mechanisms has in a large part been 'devolved' to specific line ministries. For example: improved licensing and registration by the Department of Fisheries for marine users; The introduction of fines by various agencies; The development of user fees in the Soufriere Marine Management Area for yachts and SCUBA divers; and the introduction of an Environmental Levy which supports Saint Lucia's Solid Waste Management Authority. The ICZM Strategy also sets out options for

[2] One of the three Protocols under the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartagena Convention) which entered into force in 1986.

Saint Lucia to generate revenue for environment financing such as the establishment of trust funds, levies and surcharges on certain goods and services.

UNEP has supported these processes in Saint Lucia through the publication of guidelines to assist countries to produce their own ICZM policies and plans. UNEP also supported Saint Lucia in monitoring marine pollution and lately, in the development of St Lucia's National Programme of Action for the protection of the marine environment from land based activities.

Sediment from the land causes discoloration of water at Fond d'Or Beach

Lesson Learnt

- The need to incorporate training and participation into public awareness activities as a foundation for changing attitudes. For example, policy exercises should comprise a clear policy statement as well as a strategy and action plan. These plans should include specific actions to be carried out in the short, medium and long term and should clearly detail how these actions are to be implemented.
- It is frequently expected that issues such as inadequate sewage treatment should be addressed by Government agencies. However, establishing systems which involve all interest groups would be more effective.
- There is a strong need to integrate implementation of the GPA with other priority programme areas such as health, poverty reduction and food security.
- The need for new low maintenance technologies to address sewage treatment.

Challenges

One of the key challenges is increasing government budgetary allocations for environment programmes. There are a number of reasons behind this: Firstly, the Ministry of Finance is not represented on the main inter-sectoral committee set up to implement the ICZM Strategy. The non-inclusion of the Ministry of Finance is recognised as an oversight as the support of this Ministry is critical to the mainstreaming process. So the challenge is to get the Ministry of Finance engaged.

The Coastal Zone Management Unit, in cooperation with the other agencies is working towards placing coastal and marine issues higher on the agenda of the Ministry of Finance. The approach is to let other agencies incorporate marine and coastal issues into their own work programme, not as environmental issues, but instead as national development and human health-related issues. As such, the Coastal Zone Management Unit is working very closely with the Ministries of National Development, Health, Physical Development and Tourism and the National Emergency Management Office to achieve this goal.

Environment programmes however continue to be under-funded. A challenge has been to find convincing arguments to help fund environmental programmes since a perception persists that these activities do not generate revenue, or contribute to human development (where the emphasis is more on education, health, agriculture, tourism). In light of this, it is evident that the link between a healthy and productive marine and coastal environment and a healthy and a productive population has not been successfully established within key decision makers within government.

There are two other issues which challenge the mainstreaming process: Environmental Departments in Saint Lucia have in the past been successful in mobilising funds from donors and funding agencies to implement a number of projects. Therefore, the perception of the Ministry of Finance is that there is no need to make any budgetary allocations for the environment.

An integrated, coordinated and collective effort is vital to the successful implementation of the Saint Lucia's ICZM Strategy and wider regional/international commitments like the LBS Protocol. So the second issue is trying to achieve a 'Collective Effort': Recognizing that key government agencies are an indispensable component of the ICZM, a champion is required to ensure coordination and integration of agencies towards the necessary annual budgetary requests/allocations to support ICZM interventions. Getting this collective approach, to make sure all the activities of the jigsaw are 'budgeted for' is a big coordination task and requires a great deal of time and resources from the Coastal Zone Management Unit.

The Mediterranean background and Montenegro's experience

Summary of what was achieved and how

A strongly based regional effort to combat land based sources of pollution -is underway in the Mediterranean Sea in the framework of the Strategic Action Programme under the 'Land Based Sources of Marine Pollution' Protocol of the Barcelona Convention. The starting point was for countries to analyse their pollution sources, loads and impacts, as well as budget for combating land based pollution. The result was a mixture of 'hard' (legally based) and 'soft' actions to clean up The Mediterranean Sea.

Montenegro, with the assistance of the Programme for the Assessment and Control of Pollution in the Mediterranean Region (MEDPOL) of the Mediterranean Action Plan, prepared a National Action Plan (NAP) which identifies environmental priority actions for pollution control at its coastal regions. The country is implementing the NAP by constructing sewerage systems and wastewater treatment plants for coastal municipalities with national and international funds and is planning to better control industrial pollution and manage solid wastes in coastal regions. Montenegro's Ministry of Sustainable Development and Tourism is a key actor in these achievements and is coordinating the different actors in the country as well as liaising with international and regional bodies.

The Mediterranean

In 1996, the signature of the amended Protocol to combat Land Based Sources (LBS) of marine pollution was the policy catalyst which underpinned progress in this area for many of the Mediterranean countries. The Protocol helped the region to achieve integration between the socio-economic and environmental aspects of action needed to combat land-based pollution of the Mediterranean Sea. A Strategic Action Programme (SAP) to Address Pollution from Land-based Activities was launched in 2000 and is the operational instrument of the LBS Protocol. The SAP describes the main regional land-based pollution problems, identifies possible control measures with an estimate of their cost, and sets targets and deadlines for their achievement. At a transboundary level, key targets that address environmental issues include the reduction of pollutants discharges into the marine environment from municipal and industrial sources.

First countries prepared National Diagnostic Analyses analyzing the environmental characteristics of their coastal areas, and highlighting the major pollution threats which could affect the quality of marine & coastal ecosystems. The legal and institutional framework of each country was also assessed, along with the identification of existing gaps. The final National Diagnostic Analysis Reports therefore represent not only the countries' perception for the environmental priorities in the coastal area, but also an initial assessment of capacity building needs and priorities.

Then National Baseline Budgets were established, a quantitative evaluation of estimated pollutant emissions from land based sources in all Mediterranean countries. These evaluations gave for the first time a comparative regional estimation on the loads of pollutants that are discharged into the Mediterranean Sea. This is critical information because it made assessments possible on the relative significance of pollution at sectoral (industrial), national and regional levels especially for planning pollutant emissions reduction for the Mediterranean Sea as a whole.

Finally, based on the National Diagnostic Analyses and the National Baseline Budgets, countries presented specific actions to reduce pollution from designated sources, up to 2010 and 2025. Actions included concrete actions for example, construction of waste treatment plants as well as 'soft' actions, for example, the improvement of institutions, particularly because many countries acknowledged they had gaps and shortcomings on legal, institutional, financial and technical means to successfully implement the National Action Plans.

During the whole process, the reports were prepared with the active participation of national stakeholders from public and private sectors, enhancing the national ownership in the prioritization of the major environmental issues in each country, as well as, the necessary actions to combat land based pollution.

The National Action Plans are going to be updated and revised with the help of a Programme for the Assessment and Control of Pollution in the Mediterranean Region (MEDPOL). The revision exercise was launched by MEDPOL in 2010 and countries have been reporting on the current implementation status of their NAPs.

Montenegro

Montenegro National Actions are being coordinated and implemented through its Ministry of Sustainable Development and Tourism.

For combating discharges of municipal wastewater, all six of Montenegro's coastal municipalities have ongoing actions which includes the construction of wastewater treatment facilities. Some key actions include:

- Hercegovini
- : Construction of a Waste Water Treatment Plant (WWTP) to begin operations at end of 2011. This is financed through municipal funds and the German Development Fund 'KfW'.
- Tivat: A sewerage system is under construction funded by the municipality although additional funding is required for its completion.
- The construction of a sewerage network for the eastern part of the old town of Kotor.
- A sewerage network and wastewater treatment plant for Morinj is under construction.
- The reconstruction of a sewerage system for Morinj's industrial zone
- The construction of sewerage network and wastewater treatment plant for Orahovac.
- The construction of a WWTP to begin end of 2011, financed by Municipal funds and KfW.
- The Environmental Impact Assessment for the construction of a WWTP in Ulcinj has been prepared.
- Project documents for WWTPs have been developed for Perest and Kisan (small coastal settlements on Morin Bay).
- Budva: A WWTP project is under negotiation

Regarding solid waste management, sanitary landfills are planned for municipal waste in Bar, Ulcinj, Kotor and Hercegovini, financed by the European Investment Bank. Additional investments are planned up to 2014 for regional landfills and for hazardous waste treatment plants. For industrial pollution, assessments have been undertaken which revealed substantial pollution entering the Adriatic Sea from the estuary of the Bojana River, mainly from the oil terminal, shipyard and port of Bar. Consequently Montenegro is planning priority action on:

1. To address diffuse industrial sources upstream in the Bojana River which is a trans boundary river so regional cooperation will be essential.
2. The cleanup of toxic sludge in the Bijela Shipyard.

Furthermore, Montenegro is strengthening its existing national environmental inspection systems by reviewing existing legislation and setting objectives/policy planning. This is being carried out alongside improvements for its environmental permitting system for better compliance control. The Ministry of Sustainable Development and Tourism is planning to organise national training courses on these issues, with the assistance of UNEP/Mediterranean Action Plan.

Mainstreaming water resources management in Guinea through the Senegal river basin water and environmental management project

What was achieved and how?

A more inclusive institutional structure for river Basin management regionally and nationally was established so that Guinean representation now spans all levels of institutional structure of OMVS (Senegal River Development Organisation known by the acronym OVMS - 'Organisation pour la mise en valeur du fleuve Senegal').

The national legislation of Guinea is in the process of being fully aligned with the OMVS's Water Charter (superseding national legislation), knowledge gaps on the upstream portion of the Senegal River Basin have been filled, and Guinea's hydrology network has been fully integrated into the existing OMVS network.

The project played an important role in mainstreaming environmental aspects at all levels: from a policy/planning perspective to an institutional perspective (e.g. new institutional capacities, new staffing additions related to environment and civil society participation, improved knowledge and data networks). Sustainable land and water management principles are now expected to be mainstreamed in the overall Senegal River Basin Master Plan.

The objective of the Senegal River Basin Water and Environmental Management project was to provide a framework for the environmentally sustainable development of the Senegal River Basin and to develop Basin-wide cooperation for transboundary land-water management.

The OMVS and Guinea are in the process of harmonising their water legislation in accordance with the existing legislation in the other riparian countries to improve the management of land and water resources across the basin. A result of this work is that OMVS's Water Charter has been ratified by the Guinean Parliament. As the Water Charter supercedes national legislation, the legal framework of Guinea was reviewed and necessary adjustments were agreed upon in order align national legislation with the OMVS Water Charter. This forms the future of regional environmental legislation in the riparian countries. This has accelerated Guinea's full integration into OMVS – a crucial factor for the alignment of the national legislation and for better land and water resources management across the Basin. Through a ministerial byelaw Guinea, set up and endorsed a national working group to oversee the alignment and harmonization process, which is well underway with all revisions and improvements agreed upon in multi-sectoral national stakeholder meetings.

A comprehensive Transboundary Diagnostic Analysis (TDA) was completed, validated and printed in 2006 and formed basis of development of Strategic Action Plan for the region. Multidisciplinary teams at national and regional levels were strengthened and linkages to academic entities in the region established and improved. As a result of the project, a fully completed TDA has been published and widely disseminated with detailed maps showing environmental conditions throughout the Senegal River Basin. The Strategic Action Plan was reviewed and approved by Guinean Ministerial Council in August 2008 signalling high political commitment. The document was then published and disseminated on a wide scale.

Guinea's hydrology network in the upstream portion was upgraded and fully integrated into the existing OMVS hydrology network. Prior to the project, there was one operational hydrology monitoring station in the upstream Guinea Basin. There are now 8 fully rehabilitated hydrological stations in Guinea and an additional 11 stations were upgraded and equipped throughout the overall Basin. As a result of the project, the Senegal River Basin is now equipped with water quality measurement installations and an early warning system in the upper Basin is now fully functional.

Sri Lanka

Summary of what was achieved and how

With the help of UNEP, and as part of the development of Sri Lanka's environmental management capacity, an Environmental Conservation Levy was established. This Levy aimed at reflecting the real environmental costs of specific goods and services. Even though the Levy helped key sectors of the economy to better understand and assess their environmental externalities, the Levy was challenged in the courts….

Sri Lanka is an island in the Indian Ocean with a land area of approximately 65,000 km^2. The country's coastal area is 25% of its land area which is also where 65% of the urban population live and 70% of its industrial facilities are located. Sri Lanka has high biodiversity from mountain forest to coral reefs, lagoons and mangroves. Sri Lanka's coastal areas contribute significantly to its economy where tourism makes up 11.2% of the country's total exports and employs 1 out of every 16 Sri Lankans.

Sri Lanka's constitution mandates the State to protect, preserve and improve the environment and enshrines the duty of every Sri Lankan to protect nature and conserve its riches. Sri Lanka's National Environmental Policy was adopted in 2003. Legal instruments supporting the implementation of the National Environmental Policy have also been adopted including the National Environmental Act (1980) as well as the introduction of environmental management tools such as the EIA in 1993. n terms of putting in place integrated approaches to managing its marine environment Sri Lanka can be seen as a world leader - it was the first tropical country to have a centrally managed integrated coastal zone management in 1990.

Through the GPA Co-ordination Office, UNEP assisted Sri Lanka to develop a National Programme of Action (NPA) which was published in December 2003. UNEP also supported Sri Lanka in holding a regional (south Asia) NPA training workshop. Following these interventions, the government requested UNEP to help implement the NPA with a focus on policy and fiscal reform with the aim of mobilising funds so the NPA can be implemented. An output of this work was the preparation of a Briefing Note for the Cabinet to discuss market based options to raise financing, which then led to a decision and the Minister of Finance announcing an Environment Levy in his budget speech. The Environment Levy was then widely discussed in Parliament.

Sri Lanka's Environmental Conservation Levy was established in 2008 and provides for the imposition of a levy on specific items and services that are likely to have harmful impacts on the environment. The revenue accumulating from this levy can be directly utilized for taking corrective action to eliminate or alleviate the hazard. The Environment Ministry remains in command of using the funds from the Levy.

Ms. Padmini Batuwitage, who was the then Additional (Under) Secretary for the Ministry of Environment & Natural Resources shared the country's experiences on the establishment of Environment Conservation Levy, "The Act is implemented by the Minister of Finance. Items, services and amount of the levy are determined by the Minister in charge of environment and published in the government gazette as an Order made under the Environment Conservation Levy Act. The Order comes into effect on the date specified in the Order. According to the provisions of the Act, every Order made under the Act has to be approved by a resolution of Parliament….".

Some of the items identified under the Levy included motor cars and motorcycles, electric bulbs over 40 watts, services supplied by cellular phone operators, users of broadcasting and transmission towers.

The introduction of the levy did raise environmental awareness in Sri Lanka, particularly in the area of reflecting true environmental costs. But this was not without some opposition - the Levy was the subject of a petition filed at the Supreme Court on the basis that it could constitute an infringement of people's fundamental rights guaranteed under the Constitution of Sri Lanka. The Supreme Court then took a judgement which nullified the levies on motor vehicles, electric bulbs and transmission towers but upheld the levies for cellular phones. Importantly the judgement stated that, "The imposition of further levies

would be considered by the executive in consultation with the respective parties", so, more items and services liable for the environment levy have been envisaged.

In any case, one result of the levy is that the government is taking steps to utilise revenue collected through electronic waste, where a waste mobile phone collection network has been established with the help and participation of private sector.