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**Progress in implementation of the Global Programme of Action for the  
Protection of the Marine Environment from Land-Based Activities (GPA) and  
specifically the Manila Declaration**

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# United Nations Environment Programme

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ПРОГРАММА ОРГАНИЗАЦИИ ОБЪЕДИНЕННЫХ НАЦИЙ ПО ОКРУЖАЮЩЕЙ СРЕДЕ

**Progress in implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA) and specifically the Manila Declaration**  
*Prepared for 17th Annual Regional Seas Meeting*  
**20-22 October 2015, Istanbul, Turkey**

*Implementation of the GPA in partnership with the Regional Seas Conventions and Action Plans*

**I. Introduction**

The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) was adopted by 108 governments and the European Commission in an intergovernmental conference held in Washington D.C., USA, on November 3, 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 impacts of land-based activities. The GPA framework calls for comprehensive, continuing and adaptive actions and 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 in accordance with international law to preserve and protect the marine environment from sewage, physical alterations and destruction of habitats, nutrients, sediment mobilisation, persistent organic pollutants, oils, litter, heavy metals and radioactive substances.

As secretariat for the GPA, the UNEP/GPA Coordination Office, which is an integral part of UNEP's Marine and Coastal Ecosystems Branch of the Division of Environmental Policy Implementation, assists States and intergovernmental organizations in the implementation of the GPA, inter alia, through the preparation of guidance material, assessments and manuals as well as the provision of technical assistance and capacity-building. It works closely with the Regional Seas Programme, which has spearheaded implementation efforts at the regional level. Since the move of the GPA Coordination Office from The Hague to Nairobi in 2008, the GPA related activities have been largely embedded into UNEP's programme of work across all UNEP Divisions and sub-programmes. This in turn has led to broadened support from UNEP to the fulfilment of the functions of the GPA Coordination Office.

This report serves as documentation on the success stories and provides a summary and overview of the implementation of the GPA by countries in the past 20 years, along with the assistance provided in so

doing by UNEP as the Secretariat through the UNEP/GPA Co-ordination Office and other multiple actors. UNEP as the Secretariat of the GPA is tasked with facilitating and promoting the implementation of the GPA through international, regional and national action.

A number of important considerations should be borne in mind with regard to the compilation of this report. Firstly, the primary responsibility for implementing the GPA lies with governments. However, governments and stakeholders are able to implement the GPA in a variety of ways and under different initiatives. For example, action on persistent organic pollutants (POPs), a major source category under the GPA, is now taken forward at a multilateral scale under the Stockholm Convention, adopted in 2001. Similarly, countries now adopt analogous approaches to the GPA, such as integrated coastal zone management and/or integrated water resources management plans. For these reasons it is very difficult to capture the full extent, and, in a systematic way, detail how countries are taking forward the implementation of GPA-related activities. This report therefore is just a summary and overview, though additional information on national actions is required for a complete picture. In addition, given the very important role of Regional Seas Conventions and Action Plans in implementing the GPA within respective regions, information on their work is also provided.

## **II. Key Achievements of the GPA**

Paragraph 144 of the United Nations General Assembly Resolution 65/37 recognises “that most of the pollution load of the oceans emanates from land-based activities and affects the most productive areas of the marine environment”, and calls upon “States as a matter of priority to implement the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities and to take all appropriate measures to fulfil the commitments of the international community embodied in the Beijing Declaration on Furthering the implementation of the Global Programme of Action”.

There have been three inter-governmental reviews (IGR) 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; and the third in Manila, Philippines, in 2012 (which resulted in the Manila Declaration). . A number of activities in the GPA Coordination Office Programme of Work were successfully implemented since the establishment of the GPA. The progress outlined in this report seeks to capture findings from those reviews and demonstrates the political determination on the part of governments to undertake tangible action to address the underlying causes of marine degradation resulting from land-based activities. In many countries, governments have taken actions to integrate the implementation of the GPA across sectors and ministries and into national budgets, development plans and strategies. Efforts at strengthening the UNEP Regional Seas Programme and developing strategic partnerships with the GEF, and more specifically the GEF supported International Waters projects and the various Regional Seas Conventions and Action Plans, have been instrumental in bringing about these results. Notwithstanding the above, as outlined in this report, much remains to be done to protect the marine environment from land-based activities.

### **National Programmes of Action (NPA)**

A National Programme of Action (NPA) is the policy framework envisaged in the GPA to facilitate implementation and mainstreaming of the GPA at the national level. Implementation of NPAs has been through policy measures and pilot projects to address priority issues. Pilot projects implemented by countries have aimed at demonstrating sustainable management approaches, testing of new technology (e.g. use of constructed wetlands for wastewater management), stimulating multi-agency cooperation and developing partnership between State and non-State actors to address land-based sources of coastal and marine pollution. The partnerships with non-State actors (e.g. Major Groups, non-governmental organizations and private sector institutions) are an important contribution to the development of new institutional arrangements for coastal resources management and to addressing land-based sources of marine pollution through the application of appropriate technology and management systems suited to local circumstances. As detailed later on, partnerships have grown significantly, at the global level, through the GPA.

Many Governments have developed NPAs or their equivalents. Many governments have also included GPA issues in wider environmental and/or coastal and marine policies since many GPA-related priority actions addressing key coastal issues and priority source categories such as wastewater, nutrients and marine litter (and solid wastes) can easily be included in either an Integrated Coastal Management (ICM) or Integrated Water Resources Management (IWRM) programme and therefore mainstreamed through these programmes at national and local levels depending on the evolution of responsibility for coastal management in each country. Indeed, the GPA recognizes the benefits of linking its implementation with integrated coastal management (ICM) initiatives. In fact paragraph 19, chapter II, of the GPA states that, "[T]he effective development and implementation of national programmes of action should focus on sustainable, pragmatic, integrated environmental management approaches and processes, such as integrated coastal zone management....".

Recent reviews by the GPA Coordination Office suggest that trying to embed the GPA in national development planning and budgeting mechanisms may sometimes face difficulties. The ICM and IWRM frameworks may be better approaches since many countries have or are developing these plans and policies, with subsequent commitments to implementation.

From 1995-2001 progress was reported by participating countries in developing regional and national action plans, as well as increasing the use of integrated coastal area management and environmental impact assessment approaches, and identifying problems and policy needs. However, at the First IGR (in 2001), 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. By the Second IGR (in 2006), many of the goals set by the international community for the further implementation of the GPA were considered to have been met. The strategic direction set at the First IGR in 2001, was to facilitate the process of moving from planning to action at all levels. This was considered to have been achieved in large measure by 2006.

In 2006, the number of NPAs stood at just over 60. Jumping ahead to 2015, over 80 countries had established framework NPAs since the inception of the GPA. Others have embarked on the development

of NPAs and/or revised their NPAs and many of them have successfully integrated coastal and marine environmental management and pollution reduction measures into national sustainable development plans/strategies and budgetary mechanisms.

### **Mainstreaming & Outreach**

Pursuant to the decisions taken by the IGR-2 in Beijing, the UNEP/GPA Coordination Office in partnership with the Stockholm Environment Institute (SEI) 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”. Following the finalization of this guidance document, the UNEP/GPA Coordination Office organized a series of regional training workshops, in partnership with the governments, Regional Seas Programmes and others, to familiarize national governments and key stakeholders with the concept of mainstreaming and the key steps that would entail to mainstream coastal and marine issues into national planning and budgetary processes leading to integrated planning. These workshops enhanced the opportunities for many policy makers to recognise the contribution of the coastal and marine resources to national gross domestic product and the livelihoods of coastal population.

The participants reached the conclusion that to move the mainstreaming process it would be important to set priorities that have wide and high level support and good prospects for success, and articulate these priorities based on an economic analysis that demonstrates the full value of the sustainable management of marine and coastal resources to national development. Valuation of resources has now come into greater focus by the UNEP/GPA Coordination Office, through recent efforts related to marine litter and wastewater.

An effort of UNEP/GPA Coordination Office to facilitate mainstreaming, by supporting a study in Sri Lanka, led to introduction of policy reforms at the Ministry of Environment and Natural Resources and the establishment of an environmental conservation levy exclusively for environmental conservation. The GPA and its NPA and mainstreaming approaches have helped catalyse broader approaches to integrated coastal management. In China, the development of an NPA and associated coastal pollution control programmes was embedded in their 12<sup>th</sup> five-year plan (2011-2015). The government of Seychelles, while revising its Environment Management Plan for the period 2011-2020, set out that the Plan represents a national environmental strategy for Seychelles. Other countries such as Kenya and Japan have also finalized or enacted integrated coastal zone management plans, intended to protect the marine environment from land-based activities.

A Clearing House Mechanism for information sharing has been proposed in the GPA. The GPA Coordination Office has been instrumental in the development of information sharing platforms through the GPA website, which was recently upgraded (see [www.unep.org/gpa](http://www.unep.org/gpa)). Due to a lack of resources, the GPA Coordination Office had difficulties in maintaining and expanding such a mechanism, so that Governments and other stakeholders can take full advantage of the information in the system. Further, there has been no official mechanism enabling reporting by Governments on progress in implementing the GPA and National Programmes of Action (NPAs). Coupled with the limited success in the clearing

house mechanism, this has made analysis of progress at national level difficult despite a commitment by countries in Beijing in 2006 to improve monitoring. Under the resource constraints UNEP faces, in order to facilitate information mobilization, the existing global and existing and proposed regional partnerships are expected to play key roles in the information sharing and mobilization. The online marine litter network and the tools being developed by the GPNM are excellent examples. These are described in more detail below.

Outreach efforts have significantly increased within the GPA in recent times. Outreach material, such as flyers, awareness videos, upgraded website with regular articles of topical interest, and production and translation of training and other material (e.g. in Spanish & Chinese), have all contributed to raising the profile of the GPA. Some of these videos have actually won international awards (e.g. Jim Toomey video on nutrients; see: <http://unep.org/gpa/resources/Videos.asp> ).

Starting from the IGR-3, the GPA Coordination Office has used the First and Second Global Land-Ocean Connections Conferences (GLOC-1 in Manila, 2012; GLOC-2 in Montego Bay, 2013), to highlight the issues relevant to the GPA among global audiences. These GLOCs were two to three-day gatherings of scientists, experts, policy makers and NGOs who made recommendations towards the implementation of the Manila Declaration on Furthering the Implementation of the GPA. The objective of these conferences was to discuss current and emerging issues in the marine and coastal sector with a focus on the three priority source categories of the GPA for 2012-2016, namely marine litter, nutrients and wastewater. The overall purpose of the GLOC is to emphasize the interconnectedness of activities on land and how they impact on the oceans, with a focus on pollution, while proposing ways to address these impacts through international cooperation. The GLOC-2 served as a Partnership Forum for the three Global Partnerships on marine litter, nutrients and wastewater, and showcased the success of the GPA in addressing land-based sources of pollution, as well as the contribution of Regional Seas Programmes to the implementation of the Manila Declaration.

Another way in which the GPA Coordination Office has increased visibility is through publications and representation at strategic regional and global events. Key recent publications (or in press) include:

- Economic Valuation of Wastewater
- Wastewater laws, norms and regulations
- Technology matrix of (innovative) Wastewater related treatment technologies (and a guidance document)
- UN-Water Analytical Brief on Wastewater
- Plastics in Cosmetics
- Valuing Plastics
- Biodegradable Plastics

Important or key meetings for which the GPA has been involved include:

- World Water Forums (including Korea, April 12-17, 2015)
- World Water Congresses (including Edinburgh, May 2015)
- Stockholm World Water Weeks (including August 23-28, 2015)
- GEF International Waters Conferences
- East Asian Seas Congresses
- Annual meetings and IGMs of Regional Seas
- Annual LME meetings
- Africa Marine Litter Summits, Cape Town, South Africa (including June 3-5, 2015)

The GPA will celebrate its 20<sup>th</sup> Anniversary on November 3, 2015. As Secretariat for the GPA Coordination Office, UNEP plans a number of activities to raise awareness on the successes of the GPA, its impacts, and future role. The main goal of the communication activities for the 20<sup>th</sup> Anniversary would be to engage governments in order to gain political support for the GPA and its next Intergovernmental Review (IGR-4), possibly in 2017. The Anniversary activities will start formally in November 2015 and carry on until November 2016. A second goal would be to improve understanding and gain internal support for the GPA within UNEP as well as deciding on a UNEP positioning for the GPA (i.e. what UNEP wants out of it).

A formal presentation to the Committee of Permanent Representatives took place in September 2015 and again in October 2015. The GPA Coordination Office will prepare a formal document on the success stories for presentation to member states and possible publication. Activities would be focused around highlighting and distributing GPA success stories to governments and other relevant stakeholder. Other activities may include:

- Meetings with the UNEP Senior Management Team to highlight what UNEP can get out of the GPA and how UNEP can help gathering political support for the GPA (regional offices focal points, division directors, and executive office);
- Producing a GPA booklet gathering case studies and policy guidance to distribute to governments;
- Creating and distributing media by-products based on the success stories;
- A series of meetings, consultations and webinars with GPA focal points to gather political support and further distribute success stories.

The GPA also hopes to encourage a government to host World Environment Day in 2016 (e.g. Sweden; Japan), with a focus on marine pollution and plastics. 2016 presents opportunities for highlighting the GPA through UNEA-2 and possibly the Third Global Land-Ocean Connections Conference (GLOC-3). However preparations will start in 2015. If all goes well and Marine Pollution becomes a theme for

UNEA-2, GPA will play a major role in the development of the content. The next UNEA will also be a key event to gather political support in preparation for the IGR-4.

The next GLOC, if held, could also serve as another opportunity to highlight achievements and promote solutions while obtaining multi-stakeholder input to the IGR-4 and the partnerships. Costings and budget are under development but it is estimated that approximately US\$300K needs to be raised to host the conference. Since the GLOC does not fit into any of the GPA projects, special funding is needed.

### **Partnerships**

Partnership development has been encouraged by member states throughout the life of the GPA. During the review of the GPA in 2012, the anticipated level of partnerships development and their utility in the implementation of the GPA was recognized as not being fully achieved. Establishing and maintaining viable global partnerships was acknowledged to be a challenge due to limited financial resources, varied levels of commitments of the stakeholders, and changing global priorities. The partial success was, at that time, reflected in the limited expansion of partnerships and the viability of existing partnerships. New global partnerships had only emerged where there were clearly-targeted objectives and well-defined outcomes, with the examples of the Global Partnership on Nutrient Management, the Global Partnership on Waste Management, and the Global Partnership on Tourism, amongst others. It was therefore expected that such partnerships with clearly defined objectives and outcomes, with time-bound targets, and well-prepared financial and support resources could effectively contribute to the implementation of the GPA in the next five years (2012-16).

The Work Programme of the GPA Coordinating Office has placed priorities amongst the nine source categories, i.e., on nutrients, sewage, marine litter and physical alteration and habitat destruction. Concerning the nutrients, marine litter and sewage, the UNEP/GPA Coordination Unit, working with its partners, has responded to the diffuse and challenging nature of these problems by establishing global partnerships and initiatives on nutrients, wastewater, and marine litter. The existing Global Partnership on Nutrient Management (GPNM) and the newly established global partnerships on Marine Litter and on Wastewater in this document are relevant to the partnership approach as agreed in Beijing in 2006. Details are presented in the following sections.

### **The Manila Declaration**

The Manila Declaration, agreed upon in 2012, guides the current work of the GPA. It decided:

- To develop guidance, strategies or policies on the sustainable use of nutrients so as to improve nutrient use efficiency and to mitigate negative environmental impacts;
- That the GPA should focus its work (for 2012-2016) on nutrients, litter and wastewater as the three priority source categories for the GPA, using global multi-stakeholder partnerships;
- To support the further development of the Global Partnership on Nutrient Management;



- To work with all stakeholders concerned to find innovative solutions and initiatives to the marine litter problem;
- To support the further development of the global partnership on wastewater;
- To improve cooperation and coordination at all levels to deal with issues related to oceans, coasts, islands and their associated watersheds, by applying integrated management such as “ridge to reef” approaches; and
- To strengthen and promote the implementation of existing Regional Seas Conventions and Action Plans, and other relevant global and regional arrangements, agreements and programmes for the protection of the marine and coastal environment, with a view to further the implementation of the GPA.

Status of implementation of the Manila Declaration is addressed throughout the document.

### **Addressing Key Pollution Source Categories**

The GPA identifies a number of land-based sources of pollution including sewage, nutrients, sediment mobilisation, persistent organic pollutants, oils, litter, heavy metals and radioactive substances. Among the GPA source categories, progress has been made in the integration of the actions related to persistent organic pollutants in the GPA into the Stockholm Convention on Persistent Organic Pollutants (POPs). Mercury is addressed in the global partnership on mercury and the Minamata Convention. Coordinated action is also being looked at on cadmium and lead. The considerable progress made in these areas of pollutants further confirms the decision adopted in Beijing in 2006 for participating States to focus efforts on diffuse pollutant categories: nutrients, marine litter and sewage.

Over time therefore, and in line with the desire of governments agreed by the IGR-2 in Beijing and reinforced at the IGR-3 in Manila, the **UNEP/GPA Coordination Office** has focused on a few key areas in GPA source category implementation since 2006. These are nutrients, wastewater and marine litter.

#### ***Nutrients***

Nitrogen and phosphorous are the two key nutrients that play important roles in global and local sustainable development agendas alongside water, climate and land use issues. Inefficient use of fertilizers leads to the accumulation of nutrients in areas of intense agricultural activities and can cause serious environmental problems in these areas and beyond. In many parts of the world there is an ‘excess’ of nutrients in the environment as a result of industrial and agricultural activity that has profound impacts, from pollution of water supplies to the undermining of ecosystems (including coastal) and the services and livelihoods they support.

The UN General Assembly Resolution on Oceans and Law of the Sea (65/37) in 2010 expressed its concern “regarding the spreading of hypoxic dead zones in oceans as a result of eutrophication fueled by riverine run-off of fertilizers, sewage outfall and reactive nitrogen resulting from the burning of fossil fuels and resulting in serious consequences for ecosystem functioning” and called upon States to

enhance efforts to reduce eutrophication and, to this effect, to continue to cooperate within the framework of relevant international organizations, in particularly the Global Programme of Action". Effective action on addressing nutrients and wastewater, which are major contributors to eutrophication, has however proven challenging, especially in developing countries. Some 417 eutrophic and associated oxygen depleted areas were identified in 2007 worldwide. Given that the situation was deteriorating and these source categories continued to be priority issues, as requested by the General Assembly resolution, it was suggested in 2012, that in the implementation of the GPA in the coming years, further attention be given to address these diffuse sources of pollution.

While welcoming the continued work of the States, the United Nations Environment Programme and regional organizations in the implementation of the GPA, the UN General Assembly Resolution 65/37 (paragraph 148), encouraged "increased emphasis on the link between freshwater, the coastal zone and marine resources in the implementation of international development goals, including those contained in the United Nations Millennium Declaration and of the time-bound targets in the Plan of Implementation of the World Summit on Sustainable Development ("Johannesburg Plan of Implementation"), in particular the target on sanitation, and the Monterrey Consensus of the International Conference on Financing for Development". This also re-affirmed a need of enhanced effort to establish a policy link between coastal zone and watershed management. A number of pilot initiatives have resulted in practical ways to address these policy linkages such as Integrating Watershed and Coastal Area Management for the Caribbean Small Island Developing States, and support to the National Plan of Action for the Protection of Arctic Marine Environment in the Russian Federation, amongst others. It also highlights the further work needed to address nutrients and wastewater emanating from land-based activities in watersheds through management efforts to link watersheds and the coastal environment.

UNEP, through the GPA Coordination Office, has therefore sought to engage strategically with the key actors working in the area of nutrient management in order to control pollution from land-based activities, by taking a leadership role in the creation and management of a Global Partnership on Nutrient Management (GPNM). The GPNM was launched at the 17<sup>th</sup> session of the United Nations Commission on Sustainable Development (CSD) in May 2009 in order to bring together Government policymakers, scientists, the private sector, non-governmental organizations and United Nations agencies, with a view to communicating the nutrient management challenge and helping to build constituencies of interest and action on the issue. The GPNM is hosted by UNEP and aims to promote the sustainable consumption and use of nutrients, notably nitrogen and phosphorous, and to trigger high-level strategic interest and engagement among countries and stakeholders. Since its launch, GPNM has contributed to developments in science, policy, and public perception on nutrient management issues. Asia and Caribbean regional chapters for the GPNM have also been established.

Several actions have been undertaken by the GPNM including policy development, establishment of regional platforms, publication of scientific reports, development of 'on the ground projects', preparation of case studies and partner activities. GPNM is emerging on the global scene as a unique public-private partnership to address the economic, environmental, and social effects of intensifying food production.

Examples of regional work include the South Asia Co-operative Environment Programme (SACEP), who, with technical inputs from GPNM and financial support from BOBLME, has carried out a study on Nutrient over - enrichment and coastal eutrophication in South Asia in order to develop a regional action plan and establish a regional policy forum to monitor progress of action and define corrective actions to be pursued by member countries.

The report “Our Nutrient World” (Sutton et al, 2013), produced through the GPNM, provides a concise overview of the state of knowledge related to the Nutrient Challenge. This report draws attention to the multiple benefits and threats of human nutrient use. It highlights how nitrogen and phosphorus fertilizers are estimated to feed half the human population alive today, and how they will remain critical in the future, especially given increasing population and potential bioenergy needs. Yet high nutrient use has created a web of pollution affecting the environment and human health, while insufficient access to nutrients has led to soil degradation, causing food insecurity and exacerbating land use changes and related losses of biodiversity and emissions of greenhouse gases. The report shows how these problems cross all global change challenges, threatening water, air and soil quality, climate balance, stratospheric ozone and biodiversity. “Our Nutrient World (ONW)” was used by many agencies in formulating and /or influencing discussion on the post-2015 SDGs targets. For example, the Sustainable Development Solutions Network (SDSN), in its publication Solutions for Sustainable Agriculture and Food Systems, Technical report for the post-2015 Development Agenda (September 2013) used ONW data and analyses.

GEF-funded projects with a total budget of over US\$1 billion dollars currently address nutrient issues. These projects and other (inter)national activities that support the Manila Declaration provide significant input to effectively address the Nutrient Challenge. One project of note, being executed by UNEP, through the GPA, is titled “Global foundations for reducing nutrient enrichment and oxygen depletion from land based pollution, in support of Global Nutrient Cycle”. This GNC Project is working to develop and apply quantitative modeling approaches and will deliver a Policy Toolbox. The Policy Toolbox will integrate science and modeling outputs that decision makers can use and be based on the systematic analysis of available scientific, technological and policy options for managing nutrient over-enrichment impacts in the coastal zone from key nutrient source sectors such as agriculture, wastewater and aquaculture. The modeling approaches and Policy Toolbox are being tested and applied in different GPNM case studies such as the Manila Bay watershed in the Philippines and Chilika Lake in Odisha State, India.

Under the GNC Project, a decentralized platform that captures Best Management Practices (BMPs) is being developed. The key outputs include a draft BMP toolbox online, a draft synthesis online, inclusion of 25 cases online, an integrative approach/calculation tool online, and technical exchanges.

Thanks to the GPA, the issue of nutrients was recently featured as the first emerging issue in the UNEP 2014 Yearbook. The Yearbook speaks to:

- Excess Nitrogen in the Environment
- Changes in the global nitrogen cycle

- Increased coastal dead zones and climate change impacts
- What is being done to reduce excess nitrogen releases; and
- Towards integrated nitrogen management

The inclusion of nutrient management in the most significant UNEP publication is considered a clear signal that it is being recognized globally as an issue warranting attention. UNEP's Executive Director also highlighted the issue of nutrient management and the work of the GPA through the GPNM during a Keynote Address (delivered by video) to the International Fertilizer Industry Association (IFA) 82<sup>nd</sup> Annual Conference in Sydney, Australia, May 26th 2014. The video link is available at <http://youtu.be/8uMUQzN6N4Y>

### ***Wastewater***

Pollution of coastal and inland waters from discharge of untreated wastewater has negative impacts on human health and the environment. It is estimated that eighty percent of all wastewater is released untreated into the environment, often where poor people live and obtain their primary source of food, resulting in a decline in the quality of the living area and its productive capacity.

The UNEP/GPA wastewater programme takes into consideration that water supply and wastewater treatment are closely linked, and promotes low cost technologies, regional training courses and partnerships. UNEP, working with its partners, is deeply engaged in the effort to address the wastewater challenge. At the global and regional levels, UNEP generates knowledge by developing tools and guidance documents and sharing information to improve the management of wastewater. UNEP collects and documents good practices on wastewater treatment approaches and technologies for reuse, as well as supporting policies and financial instruments.

The GPA Coordination Office has trained municipal wastewater managers around the world, with emphasis on promoting community-based sanitation and wastewater management practices, and the safe reuse of wastewater, for agriculture, through training which will impart skills in building and maintaining water supply and sanitation infrastructure, and improve expertise in monitoring and quality assurance of the projects. Training has been based on the 'UNEP/WSSCC/WHO/UN-HABITAT Guidelines for Municipal Wastewater Management' and the UNEP/FAO/WHO/UNE-INWEH/ICID/IWMI partnership project on Safe Use of Wastewater in Agriculture, coordinated by UN-Water Decade Programme on Capacity Development.

UNEP, UN-Habitat, and the UN Secretary General's Advisory Board on Water and Sanitation (UNSGAB) - in partnership with the members of UN-Water - combined their collective experience and expertise in 2010 to highlight the challenges posed by excessive, illegal and unregulated discharge of wastewater, and published the report "Sick water - the central role of wastewater management in sustainable development". The "Sick Water" report recommended adoption of a multi-sectoral approach to wastewater management as a matter of urgency, and emphasized the need for innovative financing of design, construction, operation and maintenance of appropriate wastewater infrastructure.

Another significant publication is the UN-Water Analytical Brief on Wastewater, prepared in 2015 on behalf of the Task Force on Wastewater, co-Chaired by the UNEP/GPA Coordination Office, which was launched as a contribution to the discussions on a possible SDG for water and wastewater.

The UNEP/GPA Coordination Office has partnered with regional bodies to jointly mobilize resources for implementation of major projects related to wastewater. One example is the USD14M GEF project on “Integrating Watershed & Coastal Area Management in Caribbean SIDS” (IWCAM). The GEF funded this project (USD14M in grant funding) to support 13 Caribbean Small Island Developing States (Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, St. Kitts and Nevis, Saint Lucia, St. Vincent & the Grenadines and Trinidad & Tobago) to address issues related to the integrated management of watersheds and coastal areas. It supported national pilot demonstration activities to address priority issues with the potential for replication across the region and in other Small Island Developing State (SIDS) regions. Demonstrations included marina waste management, fish-processing waste management, waste oil management, small-bore sewerage technology application, and wastewater reuse.

Another is the Caribbean Regional Fund for the Management of Wastewater (CRew), designed to finance innovative projects addressing the collection, transport, treatment re-use and/or safe disposal of domestic wastewater. UNEP, with GEF support, is collaborating with the Inter-American Development Bank (IADB) to test innovative financial mechanisms in pilot countries supported by regional institutional, policy and legal reforms, forming the basis for improving wastewater management systems throughout the Wider Caribbean region and establishing a sustainable framework for wastewater management in the future (see below). The UNEP/GPA Coordination Office, through the CRew and other initiatives, such as the IWCAM project, has supported the ratification and implementation of the Caribbean Protocol on Land-Based Sources of Marine Pollution, which was adopted on October 6, 1999, and entered into force in August 2010. This protocol to the Cartagena Convention sets ambitious goals to govern domestic sewage discharges into the waters of the Wider Caribbean region.

The UNEP/GPA Coordination Office, in response to the Manila Declaration, established the Global Wastewater Initiative (GW<sup>2</sup>I) in 2013, as a multi-stakeholder partnership, aimed at sharing knowledge and enhancing collaboration among different players in the wastewater arena. Working with partners, UNEP has engaged in several demonstration projects on the ground. Joint initiatives have been developed to apply the knowledge generated in order to address wastewater challenges. These have included projects in the Black Sea (introducing sustainable wastewater and nutrient management in rural Georgian communities), in the Red Sea and Gulf of Aden (on wastewater management and pollution loads assessment in coastal cities; see below), in China (through an International Partnership on city wastewater technology transfer), and in Caribbean countries (through establishment of small scale water reuse and recycling pilot demonstrations for use in agriculture).

### ***Marine Litter***

UNEP’s global initiative on marine litter, in response to United Nations General Assembly Resolution 60/30, fosters the establishment of cooperation and the coordination of activities for the control and

sustainable management of marine litter. Significant attention has therefore been given to the problem of marine litter by the UNEP/GPA Coordination Office and under the broad auspices of the UNEP Regional Seas Programme. This culminated in the publication of a global review of the approaches taken to mitigate this issue, as well as guidelines on the survey and monitoring of marine litter and guidelines on the use of market-based instruments to address the problem of marine litter.

Since 2006 marine litter has emerged as a major global marine pollution issue, and was further confirmed at the 5<sup>th</sup> International Marine Debris Conference (IMDC) in 2011, and through the formation of a Marine Debris Task Team led by UNEP/GPA within UN Oceans in 2011. In fact, the UN General Assembly in its resolution 65/37 (paragraph 136), welcomed “the activities of the United Nations Environment Programme relating to marine debris carried out in cooperation with relevant United Nations bodies and organizations” and encouraged “States to further develop partnerships with industry and civil society to raise awareness of the extent of the impact of marine debris on the health and productivity of the marine environment and consequent economic loss”.

Most recently, the UNEP/GPA Coordination Office commissioned a publication on “Valuing Plastics”, which was launched during the First United Nations Environment Assembly (UNEA) and which noted that the overall natural capital cost of plastics use in the consumer goods sector each year is US\$75 billion—calculated as the negative financial impact of issues such as pollution of the marine environment or air pollution caused by incinerating plastics.

Considerable work has also been undertaken by the UNEP Regional Seas Programmes in association with the Food and Agriculture Organization of the United Nations (FAO) to examine the threat posed by ‘ghost fishing’ with an appraisal of abandoned, lost or otherwise discarded fishing gear. The FAO-UNEP 2009 joint publication outlined the impacts and causes of the problem, as well as possible preventive, mitigation and curative measures. Marine litter is viewed by the UNEP/GPA Coordination Office and Regional Seas Programmes as a key crosscutting issue. Therefore the development, by the Regional Seas Programmes, of Regional Marine Litter Action Plans has been promoted and supported to address this problem.

The 5<sup>th</sup> IMDC, organized in March 2011, in Honolulu, Hawaii by UNEP/GPA Coordination Office, in partnership with the US National Oceanic and Atmospheric Administration and others, refined and endorsed the Honolulu Commitment, which outlines 12 actions to reduce marine debris. The Honolulu Strategy, a global framework strategy for a comprehensive effort to reduce the ecological, human health, and economic impacts of marine debris globally was also revised as a result of that conference. The Honolulu Strategy later informed the establishment of the Global Partnership on Marine Litter (GPML).

The GPML, hosted by the GPA Coordination Office and formally launched at Rio+20 in June 2012, seeks to protect human health and the global environment by the reduction and management of marine litter as its main goal. It is a voluntary open-ended partnership for international agencies, governments, businesses, academia, local authorities, nongovernmental organizations and individuals. It provides a platform for increased collaboration and coordination amongst these groups, promoting a collaborative dialogue.

Marine Litter, and particularly the issue of plastics (& micro-plastics) management, featured prominently during the First United Nations Environment Assembly (UNEA) in 2014. Countries agreed to a Resolution which mandated UNEP, and by extension the GPA (through GPML), to undertake a study on marine micro-plastics, focusing on possible measures and best available techniques to prevent and reduce the level of micro-plastics in the marine environment. The UNEP/GPA Coordination Office is leading the preparation of this study, which will be presented to the Second UNEA in May 2016. Components of the study include:

- a. Core study focusing on strengthening the evidence base concerning microplastics (with the Joint Group of Experts for the Scientific Aspects of Marine Environmental Pollution, GESAMP)
- b. Impact of microplastics on fisheries and aquaculture (led by FAO)
- c. Compilation of Best Available Techniques
- d. Compilation of Best Environmental Practices (with American Chemistry Council)
- e. Modeling of marine debris (with the Commonwealth Scientific and Industrial Research Organisation, CSIRO)
- f. Socioeconomic aspects of marine litter (with the Institute for European Environmental Policy, IEEP).

An analysis of socio-economic aspects of marine litter at a global level, comprising of a scoping of current issues and research findings, identifying gaps in current knowledge and priority actions, and identifying the main costs of non-action and costs of action was prepared by IEEP, on behalf of UNEP, and delivered in time to provide input for the G7 Summit, 7/8 June, 2015 in Schloss Elmau, Germany. The G7 acknowledged UNEP's work and invited UNEP to address topics of priority concern to the Summit, including marine litter, where the G7 echoed to UNEA's decision and call to give this issue a high priority. The G7 recognised UNEP's work and in particular the role of the GPA. Leaders from the G7, in particular, recognized that the use of existing platforms and tools for cooperation such as the GPA and the GPML will reduce duplication and take advantage of progress, and therefore supported their use.

UNEP, through the GPA and the GPML, and in the lead up to the Samoa SIDS Conference, has implemented a project - "Pacific Islands Waste Management and Marine Debris Minimisation Best Practice - Samoa Demonstration Project" - in partnership with the Government of Samoa, the Secretariat of the Pacific Regional Environment Programme (SPREP) and the communities and private sector in Apia, which aims at reducing flux of marine litter into harbour and raising awareness on the issue of marine debris, while demonstrating effective waste management measures that can be implemented in Pacific island countries. The project included four main components: community and media awareness; improved waste management in the ports of entry into Samoa in particular the Samoa Port and Samoa Airport; waste disposal facilities within the UNSIDS venue and the accommodation providers; and working with the communities to improve waste practices. This also

included provision of litter booms in major contributory rivers and upscaling of waste through craft workshops (see <http://unep.org/gpa/gpml/SamoaDemoProject.asp>)

Through the GPML, an online Marine Litter network has been developed ([www.marinelitternetwork.org](http://www.marinelitternetwork.org)). The site contains a Resources Database, with documents and other resources submitted by Network members. UNEP has also developed in 2015 a Massive Open Online Course on Marine Litter (MOOC) with the Open Universiteit of the Netherlands. The MOOC on Marine Litter consists of a leadership track and an experts/practitioners track. It will start later this year.

The GPA Coordination Office has informed regional and national action and the future work of the Cartagena Convention/Caribbean Environment Programme by supporting revision of the Regional Plan on Marine Litter Management for the Wider Caribbean Region. Marine litter chapters of the Global Partnership on Marine Litter are also being supported in some regions (e.g. NOWPAP; Africa) and will soon be established in others (e.g. the Caribbean).

Support has also been provided to the CPPS for development of municipal action plans between municipalities and local stakeholders to reduce the impact of marine litter in coastal communities in Southeast Pacific countries. In NOWPAP countries, the GPA Coordination Office has enhanced knowledge on best practices in dealing with marine litter in fisheries, aquaculture and shipping, and prevention of marine litter inputs from land - based sources, including NGOs. The GPA Coordination Office also enabled adoption by Contracting Parties of the Barcelona Convention of a Regional Plan on Marine Litter Management in the Mediterranean Sea. Further details on specific activities in various regions are elaborated below.

### **III. Progress and Achievements in the implementation of the GPA, particularly in the period 2012-2015 -Activities of RSCAP**

At the regional level, GPA implementation has been facilitated through the development of protocols to Regional Seas Conventions, which specifically address the protection of the marine environment from land-based sources of pollution and activities (LBS/A). Geographically, protocols apply, for example, 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. A typical example of regional action is the development and implementation of the European Union (EU) Marine Strategy and Water Directives. The Regional Seas with EU components (Northeast Atlantic, Baltic Sea and Mediterranean) have stronger motivation along with financial and technical support to introduce the necessary mechanisms and to make the revisions to implement LBS/A related protocols. Indeed the LBS/A protocols provide a convenient platform for undertaking and coordinating these changes for the EU. The remaining areas to progress LBS/A Protocols are primarily developing countries that are in need of financial and technical support through partnerships, including innovative financing and donors especially for nutrient management and wastewater infrastructure.



## **Cartagena Convention**

During the 2013-2014 biennium, UNEP CAR/RCU and the LBS RACs collaborated with the GPA to launch a Caribbean Platform for sustainable nutrient management under the Global Partnership for Nutrient Management (GPNM). Additional details are provided later in the document.

## **COBSEA**

COBSEA at the moment has no activities being implemented related to the GPA due to financial constraints. The last activities were in 2008 which included the development and adoption of the Regional Action Plan on Marine Litter for the East Asian Seas (RAP-MALI); the provision of small grants to support three COBSEA member countries (Cambodia, Indonesia and Viet Nam) for pilot activities to increase awareness and strengthen capacities on marine litter at national level; and the organization of a regional awareness raising campaign and workshop on marine litter in Pattaya, Thailand. Another activity "Determination of Pollution Loading from Land-based Sources by Using Modeling and GIS" was also carried out in collaboration with a Thailand university which was completed in 2009. Follow up activities like workshops and clean up campaigns were postponed until funds could be made available.

## **HELCOM**

Since the last Global Meeting of the Regional Seas Conventions and Action Plans in 2014, HELCOM has continued to pursue its activities on marine litter, wastewater and nutrient management, as these three source categories have been mentioned as having particular focus of the GPA programme since the Manila Declaration.

In June 2015, the Regional Action Plan for Marine Litter was fully adopted by the Contracting Parties, with concrete regional actions to reduce the input and presence of marine litter including plastics and microplastics. The implementation has now started, while cooperation with other Regional Seas Conventions (e.g. OSPAR/North-East Atlantic, Barcelona and Bucharest Conventions) continues on common actions. Additionally, the implementation of the Litter Plan will benefit from the joint efforts with the Global Partnership on Marine Litter, specifically in the fields of microplastics and abandoned/lost fishing gear.

Waste water treatment plants have been steadily improving regionally. More specific recent activities concern new surveys on microplastics in wastewaters as well as igniting a regional HELCOM assessment on pharmaceuticals, due to be released in April 2016. Further, in February 2015, an overview report was published on cruise ships' sewage and its reception in ports.

Nutrient management and related improved measures have recently been targeted through, e.g., the work on nutrient accounting at farm level, by a thorough analysis of nutrients content in manure, in order to minimize the excessive use of nutrients and avoid financial losses for farmers while protecting the environment. Other recent actions include the preparations for new HELCOM Recommendations on sustainable aquaculture as well as sewage sludge.

The prevalence of hazardous substances as well as status of many species in the Baltic Sea, among others, will be measured much more precisely through the new generation of HELCOM core indicators, launched in the fall 2015. Core indicators are a main contributor to the HELCOM task of implementing the ecosystem approach - Baltic Sea Action Plan - by defining the targets to clarify what measures are needed the most.

The work has started in full for the Second Holistic Assessment of the Ecosystem Health of the Baltic Sea (HOLAS II), with release set for mid-2018, interlinking the ongoing work on HELCOM assessments. The assessment will investigate the distribution of main pressures and impacts, and also incorporate economic and social analyses to assess the effects of environmental degradation as well as actions to improve ecosystem health.

Last year, the HELCOM Recommendation on coastal and marine Baltic Sea protected areas (Rec 35-1) was adopted. Modernization of the database will be completed by the end of 2015. The area of HELCOM marine protected areas covers about 12% of the marine area of the Baltic Sea, exceeding the target of 10% spatial coverage set by the Convention on Biological Diversity.

The HELCOM working group on reduction of pressures from the Baltic Sea catchment area (Pressure) focuses on nutrient and hazardous substance inputs from diffuse sources and point sources on land, including the follow-up of the implementation of the HELCOM nutrient reduction scheme. The group ensures the necessary technical underpinning as well as develops solutions to the policy-relevant questions and needs. Marine litter and underwater noise are also coordinated by this group.

As a part of the overall HELCOM efforts to compile regional pollution data, started in 1994, the project in charge of the next HELCOM Pollution Load Compilation (PLC-6, years 2012-17) will prepare a comprehensive assessment of the water and airborne inputs and their sources to the Baltic Sea during 1994-2014, with a more detailed assessment concerning 2014. Interim assessments have already been conducted, for example, in preparations for the 2013 Ministerial Meeting. The assessment will include a quantification of waterborne point, diffuse and natural sources. More precise information is already

available on transboundary (riverine) inputs as well as nitrogen depositions via air. The results will also provide valuable information for assessing progress in reaching the HELCOM Baltic Sea Action Plan nutrient reduction targets. HELCOM has set up a scheme, based on meticulous calculations, to determine the maximum amount of nutrients per sea-basin and per coastal country that the Baltic Sea can take in order to restore the Good Environmental Status (GES) of the Baltic marine environment by 2021. The provisional figures on maximum allowable inputs per sea-basin and the country allocated reduction targets were first created in 2007 and updated in 2013 after a more in-depth scientific analysis.

As the agricultural sector still has major potential for environmental gains in relation to nutrient losses and thus the status of the Baltic marine environment, HELCOM continues efforts to make the use of nutrients more effective, mainly through the Group on Sustainable Agricultural Practices (Agri). To this end, a few key measures have been identified such as the development of standards for nutrient content in manure and the application of a nutrient accounting system at the farm level. Another key action is the recycling of nitrogen and phosphorus generated at farms, i.e. for fertilization, instead of nutrient input from external sources.

All the information on regionally coordinated monitoring of the Baltic marine environment has been collected under one online site - HELCOM Monitoring Manual - that was published in October 2014. It compiles information on what is monitored, where and when, enabling access to timely information on the state of the Baltic Sea, thus providing a basis for the informed decisions on environmental measures and policies. For the EU member states, the Manual has also served to support the reporting of monitoring programmes to the EU. Protection and preservation of the Baltic Sea marine environment is the primary goal of HELCOM that can succeed only by being built on regular joint monitoring and assessment of the marine environment.

The manual makes a link to HELCOM core indicators – and other indicators under development - that will be used to assess the progress towards Good Environmental Status. As HELCOM's mandate is to regularly assess the status of the Baltic Sea, monitoring both the state of and the pressures on the environment are all incorporated into the manual. Updated once a year, it also translates the general principles of the 2013 HELCOM Monitoring and Assessment Strategy into concrete specifications and requirements.

In 2015, HELCOM started the review and gradual integration of the existing technical guidelines for coordinated monitoring in the manual, including the Pollution Load Compilation guidelines (PLC-Air and PLC-Water); the COMBINE manual; the monitoring of radioactive substances (MORS); the surveillance of incidental and illegal oil spills; and guidelines for dredging and dredged material.

## **NOWPAP**

NOWPAP is working currently on two GPA focal areas: nutrients and marine litter. Wastewater is not a major issue for NOWPAP member states (China, Japan, Korea and Russia).

On nutrients, two activities are being implemented:

- Eutrophication assessment (with an ultimate aim to develop recommendations on reducing nutrients input).
- Developing regional Ecological Quality Objectives where nutrients input could be one of the indicators/targets.

In the area of marine litter, the NOWPAP Regional Action Plan on Marine Litter (RAP MALI) is being implemented since 2008, when it was adopted by member states. NOWPAP is also hosting the NW Pacific regional node of the Global Partnership on Marine Litter (GPML).

NOWPAP is also a member of the Global Partnership on Waste Management (GPWM), involved in its focal area of marine litter. NOWPAP is promoting the International Coastal Cleanup (ICC), thereby building close partnership relations with governments and NGOs in the region and beyond.

## **Oslo & Paris Convention (OSPAR)**

OSPAR has long standing programmes addressing both nutrient and contaminants inputs to the North East Atlantic from land (including deposition from aerial sources). These programmes have, over the years, achieved real reductions in levels of nutrient enrichment, radioactive substances, heavy metals, persistent organic pollutants, and discharges from offshore industry, amongst other pollutants. Additional measures by OSPAR Contracting Parties at national level and at EU level continue to strongly address these pollutants. At the same time OSPAR maintains its assessment and monitoring programme to address new risks and maintain standards.

A relatively new area for action is on marine litter, including micro-plastics. Here OSPAR has already established programmes of 'fishing for litter', beach litter monitoring, as well as monitoring plastics ingested by seabirds under its Ecological Quality Objectives. OSPAR's 2010 Ministerial statement noted that quantities of litter in many areas of the North-East Atlantic were unacceptable, and committed to continue to develop reduction measures and targets, taking into consideration an ambitious target for a reduction in 2020. OSPAR was an enthusiastic participant in the 2013 International Conference on Prevention and Management of Marine Litter in European Seas, organised by Germany and the

European Commission, following the Honolulu Commitment. This conference noted that in the North East Atlantic, unlike other sea basins in Europe, riverine and inland sources of marine litter may not be as significant as sources from the coast, such as tourism, or from the sea (from shipping or fisheries). The challenge was to identify key litter sources where cost effective action can have significant impact. Based on discussions at the conference, and a series of OSPAR workshops and meetings, OSPAR adopted a Regional Action Plan on Marine Litter in 2014.

In line with the objective to substantially reduce marine litter in the OSPAR maritime area to levels where properties and quantities do not cause harm to the marine environment, the Regional Action Plan on Marine Litter aims at the reduction of marine litter from sea-based sources and land-based sources, as well as the removal of existing litter from the marine environment. It also forms the basis for regional measures to deliver Good Environmental Status under the litter Descriptor of the EU's Marine Strategy Framework Directive. The Action Plan was adopted as a flexible tool providing a set of actions to address marine litter for collective activity within the framework of the OSPAR Commission (such as OSPAR Measures) as well as through adoption into national measures. Implementation of the plan is ongoing, with the 60 or so actions being addressed both collectively and nationally. The Marine Litter Regional Action Plan can be found at: [www.ospar.org/](http://www.ospar.org/)

## **PERSGA**

Activities conducted in the PERSGA region include:

- The Regional Protocol Concerning Protection of Marine Environment from land Based Activities in the Red Sea and Gulf of Aden (2005), has been ratified by most of the member states.
- A Regional Assessment of LBS of pollution was carried out, including identification of hotspots
- NPAs documents for member states were developed and completed since 2013.
- A Regional Monitoring Programme was established to support and promote national monitoring programs since 2006.
- Demonstration activities to support national monitoring programmes were implemented during the past 6 years, achieving the following:
  - Sustainable monitoring and data inputs from national programmes in two member states
  - Progress towards sustaining national sampling and analysis programmes in 4 member states
  - Installing of online monitoring buoys in the northern Red Sea (Gulf of Aqaba)

- Capacity building for monitoring heavy metals, organic pollution and POPs
- Capacity building for harmonization of monitoring data and quality assurance
- New initiative addressing marine litter, including the following
  - Assessment monitoring of marine litter in the coastal and priority sites: development of regional manual and training, framework of management action plan
  - Support for marine litter survey and assessment associated with clean up campaigns and awareness activities
- New initiative addressing wastewater management in collaboration with UNEP/GPA, including:
  - Capacity building on wastewater treatment and management
  - Assessment of policy and capacity gaps
  - Assessment of the impacts on key coastal habitats at hotspot areas
  - Demonstration activities on best practices for wastewater treatment and reuse

## **ROPME**

ROPME adopted Strategic Directions for Re-orientation of ROPME Programme Activities in line with the RSSDs in 2014 and has pursued the re-oriented programmes ever since the beginning of 2015. The Strategic Directions have led to the development of a Five-Year-Programme with assigned priorities for the protection and sustainable development of the marine environment of ROPME Sea Area.

ROPME programme activities on LBA are mainly focused on the implementation of the Manila Declaration particularly the partnerships on wastewater management, nutrients and marine litter. ROPME organized an Expert Meeting with the participation of UNEP-GPA in May 2015. The Meeting adopted a Workplan with timetable for the Survey of Municipal Wastewater in the Region to be completed by December 2015. The Survey Questionnaire with instructions were accommodated on ROPME website ([www.ropme.org](http://www.ropme.org)) for online submission of data and information.

## **SACEP**

A Regional Oil and Chemical Pollution Spill Contingency Plan and associated MoU were developed in association with the International Maritime Organization (IMO) for enhanced cooperation in the event of an Oil or Chemical spill in South Asian Seas region. Bangladesh, India, Maldives, Pakistan and Sri Lanka are the five member countries under South Asian Seas Programme. SACEP and IMO signed an MOU in

August 2013 for the implementation of a NORAD funded project titled 'Enhancing regional co-operation mechanisms on marine pollution preparedness and response in the SACEP region'. One of the specific projects under this IMO/NORAD Cooperation Programme is aimed at assisting the South Asian Seas (SAS) region to develop a regional cooperation mechanism for marine pollution preparedness and response. The long-term objective of the project is the effective implementation of the OPRC Convention and the OPRC-HNS Protocol in South Asia region. A National Oil and Chemical Spill Contingency plan of the five maritime countries and a Regional Oil and Chemical Oil Spill Contingency Plan are to be established in the South Asian Seas Region by SACEP in collaboration with IMO and NORAD. The regional plan will be finalized after the Regional Exercise and workshop which is scheduled to be held in Colombo from 2 - 6 November, 2015.

SACEP, together with UNEP-GPA and the Bay of Bengal Large Marine Ecosystem (BOBLME) Project implemented the project. The activities under this initiative include:

- An inventory of point/non- point sources of nutrients that end up in the coastal waters
- Estimating the impact of nutrient enrichment on coastal waters
- Developing and undertaking actions to reduce nutrient inputs to agriculture as well as remedial measures to over eutrophication/hypoxia conditions in identified sites.

The Scoping Study document has been finalized. SACEP will take necessary steps for the formulation of a regional action plan for controlling land based source of pollution. Development partners are however needed for implementation.

#### **IV. Regional/Country-specific planned activities**

Activities conducted to implement the Manila Declaration have confirmed the commitment of the various regions and member states to address reduction and control impacts of wastewater, marine litter and pollution by nutrients, and to continue collaboration with UNEP in the implementation of the GPA.

During the period 2016-2021, RSCAPs and the GPA Coordination Office intend to continue activities briefly described above in furtherance of the GPA implementation. These and other planned activities are elaborated below.

##### **Cartagena Convention (UNEP CAR/RCU - CEP)**

The UNEP CEP (Cartagena Convention Secretariat) will continue to promote the implementation of the updated Regional Action Plan for **Marine Litter** Management (RAPMaLi) for the Caribbean which was first endorsed at the 13<sup>th</sup> IGM. The Secretariat will use the RAPMaLi as the framework for supporting implementation of the Honolulu Strategy and the UNEP Global Partnerships on Waste and Marine Litter. The Secretariat will also explore in collaboration with the GPA the establishment of a Caribbean node for

the Global Partnership on Marine Litter, to assist with the implementation of the updated RAPMaLi for the Caribbean.

The main activities to be undertaken subject to funding availability include:

- (a) In collaboration with the UNEP GPA and other regional partners, support the development and implementation of national and regional pilot projects for improving marine litter management in the Wider Caribbean Region with particular focus on solid waste and plastic reduction, re-use and recycling opportunities; (USD 40,000–Unfunded)
- (b) Build on existing educational and outreach tools developed by UNEP CEP, such as the online interactive game, that facilitates continued implementation of the RAPMaLi and support the Global Partnership on Marine Litter; (USD 10,000)
- (c) Collaborate with UNEP-DTIE to support identification and implementation of pilot projects on solid waste management. This has no additional financial cost and will be done internally by the Secretariat using the Guidelines for Developing and Updating National Solid Waste Management Strategies which the Secretariat contributed to preparing.
- (d) Design and Launch a Caribbean Node for Marine Litter Management to be co-hosted by the Gulf and Caribbean Fisheries Institute (GCFI) and UNEP CEP (in kind resources);
- (e) Support the development of a Latin America Regional Solid Waste Outlook (in kind resources);
- (f) Develop a new Regional GEF PIF on Marine Litter/Plastics Management in the Wider Caribbean Region (in-kind resources).

Activities during the next biennium in the area of nutrient management will support the following strategic priorities of the GPNM:

- (a) Policy development, policy advocacy and support policy reform/development
- (b) Development of toolbox to support policy choices and investment decisions
- (c) Defining nutrient performance indicator and nutrient use efficiency, and
- (d) Strengthening of the partnership.

Efforts will also be made to further develop and implement the GPNM Caribbean regional platform and be responsible for its overall coordination. Activities will include the mobilizing of resources for pilot projects and partnering with U.S. NOAA (and potentially USDA) to implement country-specific and regional activities to reduce nutrient pollution. Dependent on the mobilization of additional financial



resources, UNEP CAR/RCU, in collaboration with interested Parties will implement specific projects and activities to assist in the control of non-point sources of marine pollution from agricultural and other priority sources.

The main activities to be undertaken in collaboration with GPA (and potentially U.S. NOAA) include:

- (a) Develop with LBS Parties at least three small-scale projects to pilot test innovative approaches and technologies for improving nutrients management including monitoring, nutrient recovery and nutrient use efficiency and to support required national policy and legal reforms; (USD 40,000 –Unfunded)
- (b) Support the continued development and implementation of NPAs within the framework of LBS Protocol implementation; (USD 10,000)
- (c) Support the review and update of NPAs in at least two LBS Parties; (USD 30,000 - Unfunded)
- (d) Conduct pilot assessments on the levels of nutrient loading from selected sources including domestic wastewater and agricultural run-off. (USD 30,000 – Unfunded)
- (e) Develop regional action plan for Nutrients Management (funded through CLME+ project)

The activities under the GEF CReW Project directly support the **Global Wastewater Initiative** of the GPA. The objective of CReW is to provide sustainable financing for the wastewater sector, support policy and legislative reform, and foster regional dialogue and knowledge sharing among key stakeholders in the Wider Caribbean Region. The project is divided into five different components as follows:

Component I: Investment and Sustainable Financing

Component II: Reforms for Wastewater Management

Component III: Communications, Outreach and Information Exchange

Component IV: Monitoring and Evaluation

Component V: Project Management

UNEP CEP, through the AMEP Secretariat is responsible for executing Components II and III. The AMEP Secretariat also supports and participates in meetings of the Inter-Agency Coordinating Group for the Project, Annual Project Steering Committee Meetings, monitoring and evaluation of project implementation, and periodic reporting to the Project's Inter-Agency Coordinating Group, Project Coordinating Unit, UNEP Headquarters and the GEF Secretariat.

UNEP CEP has collaborated directly with the GPA on two ongoing pilot projects under GEF CReW in Saint Vincent and the Grenadines and Antigua and Barbuda on the use of treated domestic wastewater as a resource.

UNEP CEP plans to further implement the GPA during the period 2016-2021 by virtue of the following:

- Support for work of the GPA is fully integrated into the 2015-2016 Work Plan and Budget with support to be provided directly from the following projects: GEF IWeco, GEF CLME+, GEF CReW and hopefully from new GEF Projects on Marine Litter and Wastewater (CReW +)
- Funds have been budgeted in the IWeco and CLME+ projects in particular to support national and regional activities on nutrients and marine litter/solid waste.

### **COBSEA**

New activities related to GPA will be conducted in 2016 through the implementation of the UNEP/GEF Project "Implementing the Strategic Action Programme for the South China Sea (SAP SCS)", particularly Component 2: Strengthening knowledge-based action planning for the management of coastal habitats and land-based pollution to reduce environmental degradation of the South China Sea. COBSEA will be the implementing agency for this project.

The activities of the UNEP/GEF SAP SCS Project will support and contribute to the implementation of the Manila Declaration. The combination of technical advances and improved public understanding that will be implemented by the project will help countries fulfil their GPA commitments to develop policies to reduce and control wastewater, marine litter and pollution from fertilizers through the development and implementation of national goals and plans. This includes the development and application of simple models of pollution impacts under different development scenarios for land-based activities; reviews of legislative and institutional frameworks for land-based pollution management including harmonization of national Standard Operating Procedures for land-based pollution control and management; revision of national/provincial policies; development, enactment and implementation of supporting regulations for land-based pollution; and the updating and adoption of National Investment Plans for land-based pollution management in the SCS.

Other GPA related activities will be further identified and included in the development of new COBSEA Strategic Direction.

## **HELCOM**

The Second Holistic Assessment of the Ecosystem Health of the Baltic Sea is expected to be ready in its final form in mid-2018. The large-scale assessment, which is a follow-up to the first one in 2010, will depict how the Baltic Sea is affected by individual and cumulative pressures, and how far and how fast we need to go to reach the common management goals set out in the HELCOM Baltic Sea Action Plan. The assessment will be developed so that it can be used in reporting on other international frameworks such as the EU Marine Strategy Framework Directive. Comprehensive assessments will be conducted every six years to ensure up-to-date information and a solid basis for decisions on policies and measures.

The next pan-regional Pollution Load Compilation (PLC), incorporating all national data on nitrogen and phosphorus inputs, will be launched in mid-2017. PLCs provide the basis for following up on the country-wise targets to reduce nutrients by 2021 for achieving Good Environmental Status in the Baltic Sea.

The processes for a regional guidance on manure nutrient contents and the introduction of annual nutrient accounting at farm level are presently estimated to be completed at the end of 2018. As per the HELCOM indicators, review of eutrophication targets is planned for every six years, with the next round in 2018. A new assessment on climate change is planned for 2018-19. Streamlining of environmental – or related – data is a growing focus area of HELCOM, expected to expand, post-2016.

A detailed plan – HELCOM Roadmap, updated regularly – can be viewed here ([link](#)).

## **PERSGA**

PERSGA intends to coordinate and enhance implementation of the national programmes of action in member states in order to:

- Achieve objectives of the regional initiatives for marine litter and wastewater management
- Enhance the Regional Monitoring Program, including extending the coverage of online monitoring to cover hotspots in the central and southern Red Sea and Gulf of Aden
- Mobilize partnerships with national, regional and international relevant bodies and stakeholders
- Mainstream Regional Protocol and Programmes of Action in coastal zone management plans and national legislations and policies

## **ROPME**

ROPME is planning to convene a brainstorming regional workshop on GPNM addressing HABs-Nutrients management for stakeholders of Member States in cooperation with UNEP-GPA. ROPME is also scheduled to hold a regional expert meeting on hazardous wastes monitoring and management in November 2015 in which an Agenda Item is fully dedicated to the assessment of microplastics. The

assessment of microplastics is to be introduced in the Regional Mussel Watch Programme as well as in the Regional Survey of POPs.

Additional activities planned include:

- Strengthening collaboration with UNEP-GPA.
- Pursuing the implementation of the Manila Declaration for the core partnership areas of wastewater, nutrients and marine litter in line with new global developments over time and on future needs.
- Carrying out Regional Surveys of Land-Based Sources of Pollution, sector by sector, in consultation with UNEP-GPA. A Regional Task Team for each major Sector of LBA will be designated to lead the Survey and prepare the Report. An Overview for each Sector of Land-Based Sources of Pollution will be prepared after the completion of the Regional Survey.
- Providing assistance to Member States to update and implement their National Programmes of Action for LBA in line with the Regional Programme of Action and the Global Programme of Action, periodically.
- Organization of Technical Workshops on AOA for the Regional Surveys of LBA.
- Preparation of Regional Regulations for Waste Discharge and/or degree of treatment for major Land-Based Sources of Pollution, in cooperation with UNEP-GPA.
- Preparation of Regional Marine Discharge Standards for Wastewater and for Wastewater Re-use.
- Preparation of Guidelines on Municipal Wastewater and on Industrial Wastewater Treatment, as well as on the Combined Effluent Treatment, as periodically updated.

#### **SACEP**

SACEP is planning the following activities related to the GPA and implementation of the Manila Declaration:

- Development of a regional programme for monitoring of marine pollution in the coastal waters of the South Asian Sea and the regular exchange of relevant data and information.
- Development of a regional programme to identify the special problems of the large coastal cities, each having a population of more than 10 million by the year 2015 and of the island states in the areas of (a) disposal of domestic effluents and (b) collection and disposal of solid wastes;
- Human resource development through regional centres of excellence
- Training of personnel involved in pilot projects on ICZM in all aspects of ICZM and for future CZM projects and predation of training manual.
- Analysis of natural systems and human and economic activities in the coastal areas which will address coastal ecosystem values and services
- Assessment of exposure to risk, e.g. sea-level rise. Natural hazards and preparation of resource atlas.
- Updating the south Asian marine pollution emergency plan
- Preparation of guidelines for Waste management
- Preparation of guidelines for mangroves and fisheries in the South Asian Seas Region

## **ANNEX I**

### **RSCAP Targets to evaluate the implementation of GPA work in 2021 & Anticipated Deliverables**

#### ***Cartagena Convention***

- Fully Operationalized and functioning Caribbean Platform for Nutrients Management with activities implemented in accordance with agreed country priorities
- Fully Operationalized and functioning Caribbean Node for Marine Litter Management with activities implemented in accordance with agreed country priorities
- Development and submission of regional Marine Litter/Plastics Project Proposal for submission to the GEF;
- Development and submission of follow up project to GEF CReW on domestic wastewater management (CReW +)
- Pilot Projects in the areas of waste/marine litter, nutrients and wastewater successfully implemented in selected countries as per agreed work plan of GEF IWeco project
- “Regional Strategy and Action Plan for the valuation, protection and/or restoration of key marine habitats in the CLME+” (funded by CLME+ project)
- “Regional Action Plan for the reduction of impacts from excess nutrient loads on marine ecosystems” (funded by CLME+ Project)
- A baseline and (pre-) feasibility assessment report on the needs and opportunities for investments for the enhanced protection and restoration of key habitats (funded by CLME+ project)
- A baseline and (pre-) feasibility assessment report on the needs and opportunities for investments to reduce the impacts of pollution on human well-being and to safeguard the goods & services delivered by marine ecosystems and associated living resources to human society (funded by CLME+ project)
  - An investment plan for large-scale action on habitat protection and restoration, with special attention to habitats of critical importance in terms of current and potential future provisions of ecosystem goods & services (“blue growth”), and contributions to Global Environmental Benefits (GEBs) (funded by CLME+ project)
- An investment plan that outlines and costs high-priority actions to reduce LBS pollution, with special attention to pollution sources known to cause substantial impacts on the provision of those ecosystem goods and services that are of critical importance for human well-being and sustained socio-economic development (funded by CLME+ project)

#### ***HELCOM***

- 1) Revision of part II of Annex III of the Helsinki Convention (2017)
- 2) Completion of the Second Holistic Assessment of the Ecosystem Health of the Baltic Sea (2018)
- 3) Assessment of the implementation of HELCOM Baltic Sea Action Plan 2007-2021

#### ***NOWPAP***

- Eutrophic and potentially eutrophic zones (areas) in the NOWPAP region are mapped with the recommendations for nutrients input reduction for highly eutrophic zones.
- Ecological Quality Objectives agreed upon for NOWPAP, with one of them linked to nutrients.
- Ecological Quality Objectives agreed upon for NOWPAP, with one of them linked to marine litter.

#### ***PERSGA***

- NPAs implemented and mainstreamed in national coastal management policies and plans
- Zero discharge strategy achieved for wastewater in coastal cities
- Effective monitoring of coastal water with data informing decision making process

- Policies and best practices for wastewater management and reuse in place
- Demonstrated progress in reduction and proper management of marine litter in the region, including effective recycling policies and systems

#### **ROPME**

- Progress in wastewater treatment (the quantity and the level of treatment)
- Progress in water quality of the receiving water (physical, chemical and biological)
- Progress in wastewater re-use as treated (ratio of re-used treated wastewater)

#### **SACEP**

- Development of a regional programme for monitoring of marine pollution in the coastal waters of the South Asian Sea and the regular exchange of relevant data and information.
- Analysis of natural systems and human and economic activities in the coastal areas which will address coastal ecosystem values and services
- Preparation of guidelines for mangroves and fisheries in the South Asian Seas Region

### **Anticipated Deliverables**

#### ***Cartagena Convention***

- Final Published Version of updated Regional Action Plan for Marine Litter Management
- Development of new follow up GEF PIF on Wastewater – CRew+
- Development of new GEF PIF on Marine Litter
- Regional Workshop on Caribbean Nutrients Platform in collaboration with UNEP GPA
- Regional Workshop to launch Caribbean Node on Marine Litter in collaboration with GCFI and UNEP GPA
- Regional Workshop to develop EBM pilot project under CLME+ which will involve pollution prevention and habitat restoration activities.
- Several regional capacity building workshops to facilitate activities in the area of Nutrients Management and Habitat Restoration are envisaged.

#### **HELCOM**

A selection:

- 1) Baltic Sea Environmental Fact Sheets (ongoing)
- 2) HELCOM Recommendation on sustainable aquaculture (2015)
- 3) HELCOM Recommendation on sustainable handling of sewage sludge (2015/16)
- 4) Simplified follow-up system of the Baltic Sea Action Plan - development & implementation (2015)
- 5) Further development of the follow-up system for HELCOM nutrient reduction scheme (2015-16)
- 6) Pollution Load User System database (2016)
- 7) Pollution Load Compilation 6 (PLC 6, 2017) - Essential data by the end of 2016
- 8) Assessment of ecological coherence of the HELCOM Coastal and marine protected areas (MPAs, 2016)
- 9) Assess the state of contamination from pharmaceuticals (2016)
- 10) Thematic assessment on radioactivity - period 2011-2015 (2017)
- 11) Assessment of submerged hazardous objects (2017)
- 12) Assessment of coastal fish status (2017)
- 13) Evaluation of impacts of recreational fisheries (2017)

- 14) Guidelines for management re. seafloor integrity and for fisheries within MPAs (2017)
- 15) Maritime assessment (2017)
- 16) Regionally promoting electronic aids for navigation for increased safety & Action Plan for ships' ballast water management & Enhancing the use of green technologies and alternative fuels for ships – meetings and workshops (ongoing)
- 17) Developing pressure indicators & operationalizing core indicators (2015-17)
- 18) Assessments of the risk of extinction of species and biotopes (RED LIST, 2019)
- 19) Assessment of climate change (2019/20)

**NOWPAP**

- Annual workshops on marine litter
- Report on eutrophication (2016).
- IGM document on Ecological Quality Objectives (2016 or 2017)

**PERSGA**

- Regional guidelines for management of wastewater in coastal cities of the Red Sea and Gulf of Aden
- Regional meetings of the Taskforce on Wastewater
- Regional and national workshops on wastewater management and reuse
- Regional and national workshops on marine litter assessment and management
- Regional assessment of the impacts of wastewater pollution on coral reefs
- Regional workshop on the impacts of wastewater pollution on coral reefs