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Review of the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities at the national, regional and international levels during the period 2012–2018

Progress in the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities at the national, regional and international levels during the period 2012–2018

Note by the secretariat

Introduction

1. The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, adopted through the Washington Declaration in 1995, is a long-standing multilateral environmental mechanism aimed at preventing the degradation of the marine environment from land-based activities by facilitating the realization of the duty of States to preserve and protect the marine environment. The United Nations Environment Programme (UNEP) provides the secretariat through the Global Programme of Action Coordination Office.

2. The Global Programme of Action is unique in the sense that it is the only global environment initiative that directly addresses the connectivity between terrestrial, freshwater, coastal and marine ecosystems. It is broad in its scope, addressing pollution from sewage, persistent organic pollutants, radioactive substances, heavy metals, oils (hydrocarbons), nutrients, sediment mobilization, litter and the physical alteration and destruction of habitat. In its resolution 51/189 of 16 December 1996, the United Nations General Assembly stressed the need for States to take action for the formal endorsement by each competent international organization of those parts of the Global Programme of Action relevant to their mandates, and to accord appropriate priority to the implementation of the Global Programme of Action in the work programme of each organization.

3. At a time when estimates suggest that up to 80 per cent of all marine pollution comes from land-based human activities, the Global Programme of Action is designed to assist national and regional authorities in reaching the goal of "sustainable seas". During the reporting period, Governments and regional and international organizations used the Programme as a framework for

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cooperating at the regional and global levels to support national action aimed at protecting the marine environment. The global community continued to acknowledge the relevance and importance of the Global Programme of Action for the enhancement of human well-being and development and reiterated its commitment, as reflected in the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States; in the outcome document of the United Nations Conference on Sustainable Development (held in Rio de Janeiro, Brazil, from 20 to 22 June 2012), entitled "The future we want"; in the SIDS Accelerated Modalities of Action (SAMOA) Pathway, adopted in 2014 at the third International Conference on Small Island Developing States; and in several General Assembly resolutions, including resolution 70/1, entitled "Transforming our world: the 2030 Agenda for Sustainable Development", adopted by world leaders in New York on 25 September 2015.

4. Every five years, Governments convene in an intergovernmental review meeting to assess progress in the implementation of the Global Programme of Action and to renew their commitments, as reflected in the 2001 Montreal Declaration on the Protection of the Marine Environment from Land-based Activities; the 2006 Beijing Declaration on Furthering the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities; and the 2012 Manila Declaration on Furthering the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities.

5. Through the intergovernmental review meetings, the Coordination Office, acting as the secretariat of the Programme, receives policy guidance to assist States and intergovernmental organizations in the implementation of the Global Programme of Action as a means of fulfilling their commitment to protecting the marine environment from land-based sources of pollution. At the third session of the Intergovernmental Review Meeting, held in Manila on 25 and 26 January 2012, Governments decided that, over the period 2012–2016, the Coordination Office should focus its work on nutrients, marine litter and wastewater as the three priority source categories using global multi-stakeholder partnerships, and requested the Coordination Office to develop its activity plan on the basis of those strategic directions.

6. During the reporting period, the Coordination Office comprised one Coordinator (P-5/D-1), three P-4 Programme Officers, focusing on nutrients, wastewater and marine litter, and one G-4 Programme Assistant. The Coordination Office also had one Junior Professional Officer co-financed by Norway (December 2015 onwards), who provided communications support; two Junior Professional Officers co-financed by Finland (April 2015–June 2016 and August 2016 onwards) and one co-financed by Japan (June 2017 onwards) focusing on marine litter; and one Junior Professional Officer co-financed by Italy (from January 2018 onwards) focusing on wastewater. Three United Nations Volunteers and several interns also contributed to the implementation of the work programme.

7. The present report provides a summary overview of the implementation of the Global Programme of Action since the third session of the Intergovernmental Review Meeting with the assistance of the Coordination Office and other actors. The report also highlights the relevance of the Programme as articulated in the outcome documents of several global meetings, including the United Nations Conference on Sustainable Development; the third United Nations Conference on Small Island Developing States, held in Apia, from 1 to 4 September 2014; and the first, second and third sessions of the United Nations Environment Assembly of the United Nations Environment Programme, held in Nairobi from 23 to 27 June 2014, from 23 to 27 May 2016 and from 4 to 6 December 2017 respectively, as well as in the 2030 Agenda for Sustainable Development and in General Assembly resolutions 69/245 of 29 December 2014,70/235 of 23 December 2015 and 72/73 of 5 December 2017 on oceans and the law of the sea.

I. Key achievements

8. Pursuant to the mandate of the Manila Declaration, the Coordination Office focused its resources on engaging strategically with Governments and other relevant stakeholders to address the three priority source categories (nutrients, marine litter and wastewater) through global voluntary multi-stakeholder partnerships of Governments, intergovernmental agencies, academia, the private sector and civil society. Dedicated efforts were made to strengthen cooperation between the Global Programme of Action and the UNEP regional seas programmes and to develop strategic partnerships with the Global Environment Facility (GEF), in particular with the GEF-supported international waters focal area and other relevant regional initiatives. The accomplishments achieved and the remaining challenges with respect to each of the priority action areas are described in the sections below.

9. During the reporting period, an ad-hoc intersessional meeting of the Global Programme of Action, hosted by the Government of the Philippines, was held in Nairobi in February 2013. During the implementation period, the Programme generated several briefings and reports that were submitted to the Committee of Permanent Representatives to UNEP.

10. The secretariat organized the second Global Conference on Land-Ocean Connections, held in Montego Bay, Jamaica, from 2 to 4 October 2013. The conference brought together 230 scientists, experts, policymakers and representatives of non-governmental organizations from 55 countries to discuss current and emerging environmental management challenges resulting from land-based activities, with a priority focus on the management of marine litter, wastewater and nutrients. The conference also considered the identification of solutions and opportunities for improved management of those issues at the national, regional and global levels to further the implementation of the Manila Declaration. It also served as a platform for partnership forums on marine litter and nutrients and the establishment of the wastewater partnership.

11. The Global Programme of Action marked its twentieth anniversary in Washington, D.C. with a commemorative event held on 17 November 2015 and co-hosted by the UNEP Regional Office for North America. Participants from collaborating Governments and international development partners engaged in activities that included a publications launch as well as presentations and panel discussions on the achievements of the Programme and the challenges that remain to be addressed.

12. A voluntary survey report on the implementation of national activities to combat land-based pollution over the reporting period was carried out in preparation for the fourth session of the Intergovernmental Review Meeting (see UNEP/GPA/IGR.4/INF/4).

A. Addressing key land-based sources of pollution

13. The following section provides a review of the progress made in addressing key land-based sources of pollution pursuant to the Manila Declaration, agreed to by Governments at the third session of the Intergovernmental Review Meeting, which mandated the Programme to focus on nutrients, wastewater and marine litter.

1. Nutrient discharges

14. With respect to knowledge generation, the emphasis has been on developing a global knowledge base on policy experience, adapting such experience to specific national circumstances and making the information derived therefrom available online to stakeholders. The Coordination Office, through the Global Partnership on Nutrient Management, published two key documents: the report *Our Nutrient World: The Challenge to Produce More Food and Energy with Less Pollution* (2013)[1] and the technical paper "Nitrogen Use Efficiency and Nutrient Performance Indicators" (2015).[2] The report, which was produced by a group of 50 scientists representing 15 nationalities working for various institutions, including the fertilizer industry, provides a concise overview of the state of knowledge of the nutrient challenge. The report emphasizes the key threats of unsustainable use of nutrients and shows how such use crosses global change challenges, threatening water, air and soil quality, climate balance, stratospheric ozone and biodiversity. It argues that improved nutrient use efficiency would provide the foundation for a "greener economy" to produce more food and energy while reducing environmental pollution.

15. The technical paper sets out the technical basis for using nitrogen use efficiency as a performance indicator to improve global food production and control the potentially harmful environmental impacts of excess nitrogen-based compounds from manufactured and animal waste fertilizers. The report is a response to the decision made by Governments at the third session of the Intergovernmental Review Meeting and set out in the Manila Declaration to step up efforts to develop guidance, strategies or policies on the sustainable use of nutrients so as to improve nutrient use efficiency with its attendant economic benefits for all stakeholders, including farmers, and to mitigate negative environmental impacts.

16. The issue of nutrients also featured as the first emerging issue in the UNEP 2014 Yearbook,[3] which is a clear sign that it is being recognized globally as an issue that warrants attention. The 2014 Yearbook also highlighted the changes in the global nitrogen cycle and the implications of excess nitrogen in the environment, including the increase in the number of areas of coastal "dead zones" and

[1] http://staging.unep.org/gpa/documents/publications/ONW.pdf.

[2] http://staging.unep.org/gpa/documents/publications/NUEandNPIGPNM2015.pdf.

[3] http://wedocs.unep.org/bitstream/handle/20.500.11822/18068/UNEP_YearBook_2014.pdf?sequence=1&isAllowed=y.

the impact on climate change. The report summarizes the steps being taken to reduce excess nitrogen releases and what still needs to be done to promote integrated nitrogen management.

17. The Coordination Office, through the GEF-supported Global Nutrient Cycle project, developed quantitative modelling approaches to coastal nutrient enrichment, and reached consensus with a number of agencies and institutions with regard to sharing data and reassessing the nutrient load data of the Global Nutrient Export from Watersheds working group. It then made the data available online to support modelling efforts and the scenario evaluation of land-use and best management practice. As a follow-up, the Coordination Office, in partnership with members of the Global Partnership on Nutrient Management, successfully analysed data over a period of 100 years (1900–2000) and produced an interactive slide showing nitrogen concentrations around the world, including the changes that had taken place over five-year intervals. The Office also published articles in peer-reviewed journals and produced information documents.[4]

18. To provide extension and technical services to various stakeholders, the Coordination Office, through the GEF-supported Global Nutrient Cycle project, developed a global nutrient management toolbox based on resources compiled from 334 practices in 60 countries to aid in capacity-building. Validation of the toolbox functionality was carried out with stakeholders during a training session with the participation of agricultural advisory professionals and farmers at the Chilika Lake demonstration site in Odisha, India, in July 2015. The session was followed by a familiarization exercise and nutrient round-table workshop organized during the eighth GEF Biennial International Waters Conference, held in Negombo, Sri Lanka, from 9 to 13 May 2016, which was attended by participants from 20 countries.[5] The nutrient management toolbox is hosted on the Global Partnership on Nutrient Management web portal.[6]

19. At the national level, the Coordination Office facilitated the development of watershed-based nutrient flux modelling for the Manila Bay watershed in the Philippines to evaluate land-use practices and impacts of nitrogen and phosphorus discharge to the bay. The work informed and contributed to the development of a nutrient reduction strategy and investment plan for the Manila Bay watershed. In addition, through the development of ecosystem health report cards for Chilika Lake in Odisha, India, and Laguna de Bay in the Philippines, the Coordination Office contributed to raising awareness of and drawing policy attention to the integration of nutrient contributions as a key parameter of the Chilika Lake and Laguna de Bay management plans and the additional allocation of resources for implementation of the plans.

20. The Global Programme of Action, in association with partners that are working together to address the impact of reactive nitrogen on the environment, contributed to the development of the GEF-funded project entitled “Towards the Establishment of an International Nitrogen Management System”. The four-year project, launched at the end of 2016, is implemented by UNEP and executed by the Centre for Ecology and Hydrology and the International Nitrogen Initiative. The project is supported by a $6 million grant from GEF with partnership engagements valued at an estimated $56 million though joint research efforts. The Global Programme of Action and the Global Partnership on Nutrient Management will contribute to the project through regional and global policy efforts in addressing the reduction of excess reactive nitrogen in the environment.

21. The Coordination Office, in recognition of the emphasis of the Manila Declaration on the importance of multi-stakeholder partnerships, continued its efforts to bring together State and non-State actors and their institutional capabilities and human resources in the form of skills, experiences and ideas to agree on a joint plan of action to tackle the nutrient challenge. That led to the creation by the Global Partnership on Nutrient Management of regional platforms in Asia and the Caribbean.[7] The Coordination Office is working to embed the regional nutrient platforms within the regional seas programmes and discussions are under way on modalities with the Coordinating Body on the Seas of East Asia, the South Asia Cooperative Environment Programme, the Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region (Northwest Pacific Action Plan) and the Caribbean Environment Programme of the

[4] http://www.nutrientchallenge.org.

[5] The following countries attended the nutrient round table at the eighth GEF Biennial International Waters Conference in Sri Lanka: Botswana, Cabo Verde, Comoros, India, Maldives, Philippines, Romania, Sao Tome and Principe, Seychelles and Sri Lanka.

[6] http://www.nutrientchallenge.org/toolbox2/.

[7] Countries engaged in platform meetings and dialogues to date include the following: Asia platform: Bangladesh, Cambodia, China, India, Indonesia, Japan, Malaysia, Philippines, Republic of Korea, Sri Lanka, Thailand, Viet Nam; Caribbean platform: Antigua and Barbuda, Belize, Colombia, Costa Rica, Cuba, Dominican Republic, Guatemala, Guyana, Haiti, Jamaica, Panama, Trinidad and Tobago, United States of America.

Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention).

22. The Coordination Office, under the scope of the Global Partnership on Nutrient Management, is supporting the secretariats of the Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region (Abidjan Convention) and the Cartagena Convention in harmonizing institutional responses in addressing the recent proliferation of sargassum seaweed in the central Atlantic Ocean, which has been severely affecting coastal fisheries and the tourism sectors in West Africa and the Caribbean. The phenomenon is being linked to nutrient loading (among other climate-change-induced factors) from land-based activities, and scientific cooperation is strengthened through the work of the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection.

23. A massive open online course (MOOC) on nutrients and wastewater was delivered in collaboration with Concordia University of Montreal, Canada, to 1,084 participants during the September 2017–April 2018 academic year. Given that significant nutrient flows to the environment emanate from wastewater discharges, the course is designed to complement the Global Wastewater Initiative and draws from its resource materials. It has been designed to extend the reach of the Global Programme of Action in its capacity-building efforts, targeting technical and policy support personnel at the national level to better deliver knowledge to relevant stakeholders. The course delivery will be extended through academic institutions to widen reach at the global scale. The course drew on the lessons learned in the recent development of a MOOC on marine litter designed in association with the Open University of the Netherlands.[8]

24. A methodology for decision makers on the evaluation of the environmental and economic costs and benefits of nutrient management was developed. The example used was an agricultural region in Rondonópolis municipality in the upper Pantanal region of Brazil. The methodology, which included a policy brief, was the first of its kind for use in a developing-country region. The lead collaborators were the country's National Institute for Space Research and the Federal University of Mato Grosso. UNEP, in conjunction with the Global Partnership on Nutrient Management, will replicate the approach in other countries facing environmental degradation as a result of unsustainable nutrient management.

25. The Global Programme of Action is collaborating with the South Asia Cooperative Environment Programme to implement an initiative on mitigating the effects of nutrient pollution from agricultural and wastewater flows on sensitive coral reef ecosystems in the coastal areas of eastern Sri Lanka. The project aims to build the capacity of local support agencies and stakeholders to implement improved practices. This initiative contributes to the implementation of United Nations Environment Assembly resolution 2/12 on sustainable coral reefs management and activities commemorating the 2018 International Year of the Reef.[9].

2. Marine litter and microplastics

26. The Coordination Office launched the Global Partnership on Marine Litter during the United Nations Conference on Sustainable Development. The first Partnership Forum was convened in 2013.

27. The Global Partnership on Marine Litter took cognizance of the Honolulu Strategy[10] as a framework for a comprehensive global effort to reduce the ecological, human health and economic impact of marine debris globally and agreed to promote the Partnership as a common frame of reference for collaboration and sharing of best practice and lessons learned. It was also agreed that the Partnership should aim to work with all stakeholders to reduce the amount and impact of marine debris from both land-based and sea-based sources. With that goal in mind, Partnership activities also feed into and contribute to the work plan of the Global Partnership on Waste Management to ensure that goals and strategies related to marine debris are tied to global efforts to reduce and manage waste. The Global Partnership on Marine Litter, in addition to acting as an international cooperation and coordinating mechanism that brings together stakeholders to collaborate in finding solutions to the problem of marine litter and microplastics, also identifies gaps and emerging issues and creates the awareness required for behavioural change. It contributes significantly to the 2030 Agenda for

[8] Marinelittermooc.org.

[9] http://wedocs.unep.org/bitstream/handle/20.500.11822/11187/K1607234_UNEPEA2_RES12E.pdf?sequence=1&isAllowed=y.

[10] http://wedocs.unep.org/handle/20.500.11822/10670.

Sustainable Development, in particular target 14.1, "By 2025, prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution". The framework document was revised in 2018 (see UNEP/GPA/IGR.4/INF/25).

28. The Global Partnership on Marine Litter also aims to facilitate information sharing and collaboration through regular webinars and other activities. To enhance the capacity of stakeholders, a series of workshops and training courses was organized and on-the-ground activities were supported through demonstration projects. Among others, capacity-building activities included a microplastics analysis workshop for the South-East Pacific[11] and the MOOC on marine litter, which consisted of a leadership track and a track for experts and practitioners.

29. The first MOOC, attended by 6,456 participants from 54 countries, was completed in 2015 with input from Global Partnership on Marine Litter partners. Participants expressed a high level of satisfaction in their evaluation of the course, and student involvement was extensive from the outset. Based on feedback from participants and an evaluation report, a revised version of the course was launched on 22 May 2017. In 2018, the entire course was also available in Spanish, and the first two weeks of the course (the leadership track) in five of the six official languages of the United Nations and in Portuguese. Efforts are under way to identify relevant subject experts and case studies from various regions for inclusion in the other language versions of the course and to increase the number of language versions in collaboration with interested member States and partners. To date, about 12,000 participants have registered for the courses.

30. The Coordination Office also supported a variety of activities ranging from capacity-building and awareness-raising to the development of municipal action plans in Chile, Colombia, Ecuador, Panama and Peru. In partnership with the Permanent Commission for the South Pacific, 600 people were trained across the region during the period 2013–2015. Twelve capacity-building workshops targeting local fishing communities were organized, which contributed to mobilizing local stakeholders under the auspices of municipal authorities to search for solutions to combat the negative impact of marine litter on coastal and marine ecosystems. Subsequently, five municipalities developed and implemented local action plans for the management of marine litter with the participation of coastal communities in the South-East Pacific.

31. Technical support was extended to the Government of Samoa through the Secretariat of the Pacific Regional Environment Programme to demonstrate best practice measures for effective waste management and minimization of marine debris. The private sector and local communities were engaged in the implementation of the project, which had four components: community and media awareness; improved waste management in the ports of entry into Samoa, in particular the Samoa port and airport; waste disposal facilities available within the venue of the third International Conference on Small Island Developing States and accommodation providers; and community work to improve waste practices in Apia.

32. Within the framework of the pilot project, and with the participation of local communities, clean-up operations were carried out on the country's beaches and Mulivai and Vaisigano rivers, with bins being installed on the beaches and litter booms being deployed in major contributory rivers. Additionally, workshops developing skills in crafting waste items were organized to train women's groups in the re-use of rubbish for making sought-after consumer products. The project has been extended throughout the region and aspects of it have been replicated in the Solomon Islands.

33. The work of the Coordination Office on marine litter contributed to raising global awareness of the issue and resulted in the adoption of three resolutions on marine plastic debris and microplastics by the United Nations Environment Assembly. In its resolution 1/6,[12] the Environment Assembly recognized the need to take urgent action to address the challenges posed by marine plastic debris and microplastics, and welcomed the establishment of the Global Partnership on Marine Litter. In paragraphs 11 and 14 of that resolution, Governments requested the Executive Director of UNEP to support the development and implementation of regional and national action plans to reduce marine litter and to undertake a study on marine plastic debris and microplastics. The resolution signalled a firm commitment by Governments to address marine litter and created a significant impetus for the Global Partnership on Marine Litter.

34. Together with partners and members of the Global Partnership on Marine Litter, UNEP continues to commit resources and share expertise to meet the request made by Governments in resolution 1/6. In that regard, an advisory group was established within the framework of the Global

[11] Amigos-del-mar.net.

[12] http://wedocs.unep.org/bitstream/handle/20.500.11822/17285/K1402364.pdf?sequence=3&isAllowed=y.

Partnership on Marine Litter, including 29 experts nominated by Governments and major groups and stakeholders, to articulate the needs and interests of decision makers and ensure that all components were policy-relevant. A detailed study entitled *Marine Plastic Debris and Microplastics: Global Lessons and Research to Inspire Action and Guide Policy Change*[13] was produced and presented at the second session of the United Nations Environment Assembly, in May 2016. In line with resolution 1/6, the study proposed a set of policy recommendations to guide decision makers towards the implementation of urgent actions that could be adapted to local, national, regional and global contexts, and identified areas warranting further research, including key impacts on the environment and human health.

35. The following related reports have been co-published by UNEP: *Valuing Plastic: The Business Case for Measuring and Disclosing Plastic Use in the Consumer Goods Industry* (in collaboration with the Norwegian Ministry of Foreign Affairs);[14] *Plastics in Cosmetics* (in collaboration with the Institute for Environmental Studies of Vrije Universiteit in Amsterdam);[15] *Biodegradable Plastics and Marine Litter: Misconceptions, Concerns and Impacts on Marine Environments*;[16] a training package on MARPOL Annex V, on prevention of pollution by garbage from ships (in collaboration with the International Maritime Organization); *Abandoned, Lost or Otherwise Discarded Gillnets and Trammel Nets: Methods to Estimate Ghost Fishing Mortality, and the Status of Regional Monitoring and Management* (in collaboration with the Food and Agriculture Organization of the United Nations (FAO);[17] *Microplastics in Fisheries and Aquaculture: Status of Knowledge on Their Occurrence and Implications for Aquatic Organisms and Food Safety*;[18] *Marine Litter Socio-economic Study* (in collaboration with the Institute for European Environmental Policy);[19] *Review of the Current State of Knowledge Regarding Marine Litter in Wastes Dumped at Sea, under the London Convention and Protocol* (in collaboration with the International Maritime Organization);[20] *Marine Litter Vital Graphics*;[21] *Marine Litter Legislation: A Toolkit for Policymakers* (in collaboration with the Environment Law Institute);[22] and *Exploring the Potential for Adopting Alternative Materials to Reduce Marine Plastic Litter.*[23] Support was also provided for the development of the Global Ghost Gear Initiative, now established as a cross-sectoral alliance for tackling the problem of lost and abandoned fishing gear worldwide. *Beat the Microbead* and *My Little Plastic Footprint* are online applications developed to generate awareness.[24]

36. At its summit, held in June 2015, the Group of Seven welcomed resolution 1/6, gave marine litter a high priority and recognized the work of UNEP and in particular the role of the Programme in that field. In its summit communiqué, the Group of Seven leaders committed to the development of an action plan to combat marine litter and to use existing platforms and tools for cooperation to reduce duplication and take advantage of progress made, including the Global Programme of Action, the Global Partnership on Marine Litter and the regional seas conventions and action plans, and therefore to support their use. They also called on GEF to support marine litter projects, which resulted in a commitment by GEF to provide $2 million for a medium-sized project for the biennium 2017–2018, with UNEP as the implementing organization.

[13] https://papersmart.unon.org/resolution/uploads/unep_aheg_2018_1_inf_4_unea2_edited.pdf.

[14] https://wedocs.unep.org/bitstream/handle/20.500.11822/9238/-Valuing%20plastic:%20the%20business%20case%20for%20measuring,%20managing%20and%20disclosing%20plastic%20use%20in%20the%20consumer%20goods%20industry-2014Valuing%20plasticsF.pdf?sequence=8&isAllowed=y.

[15] https://wedocs.unep.org/bitstream/handle/20.500.11822/9664/-Plastic_in_cosmetics_Are_we_polluting_the_environment_through_our_personal_care_-2015Plas.pdf?sequence=3&isAllowed=y.

[16] https://wedocs.unep.org/bitstream/handle/20.500.11822/7468/-Biodegradable_Plastics_and_Marine_Litter_Misconceptions,_concerns_and_impacts_on_marine_environments-2015BiodegradablePlasticsAndMarineLitter.pdf.pdf?sequence=3&isAllowed=y.

[17] http://www.fao.org/3/a-i5051e.pdf.

[18] http://www.fao.org/3/a-i7677e.pdf.

[19] https://wedocs.unep.org/bitstream/handle/20.500.11822/26014/Marinelitter_socioeco_study.pdf?sequence=1&isAllowed=y.

[20] www.imo.org/en/OurWork/Environment/LCLP/newandemergingissues/Documents/Marine%20litter%20review%20for%20publication%20April%202016_final_ebook_version.pdf.

[21] https://www.eli.org/sites/default/files/eli-pubs/marine-litter-legislation-toolkit-policymakers.pdf.

[22] http://apps.unep.org/publications/index.php?option=com_pub&task=download&file=012253_en.

[23] https://papersmart.unon.org/resolution/uploads/unep-aheg-2018-1-inf-6_alternatives_material_rev1.pdf.

[24] https://play.google.com/store/apps/details?id=com.plasticsoupfoundation.MyLittlePlasticFootprint&hl=en

37. Pursuant to resolution 1/6, the Executive Director of UNEP presented a report on marine plastic debris and microplastics to the Environment Assembly at its second session (see UNEP/EA.2/5), which informed the development and subsequent adoption of resolution 2/11, on marine plastic litter and microplastics. In its resolution 2/11, recalling the Manila Declaration and the outcome document of the United Nations Conference on Sustainable Development, the Environment Assembly in paragraph 21 requested the Executive Director of UNEP to undertake an assessment of the effectiveness of relevant subregional, regional and international governance strategies and approaches to combat marine plastic litter and microplastics, taking into consideration the relevant subregional, regional and international regulatory frameworks and identifying possible gaps and options for addressing them, including through regional cooperation and coordination, and to present the assessment to the Environment Assembly at its next session, within resources available for that purpose.

38. The Coordination Office, with guidance from an assessment advisory group consisting of 34 experts nominated by Governments and major groups and stakeholders, produced the assessment "Combating marine plastic litter and microplastics: an assessment of the effectiveness of relevant international, regional and subregional governance strategies and approaches" (UNEP/AHEG/2018/1/INF/3).[25] The assessment was presented to the United Nations Environment Assembly at its third session, in December 2017, and will inform discussions at the fourth session of the Intergovernmental Review Meeting and the fourth session of the Environment Assembly. The Assembly in its resolution 3/7 on marine litter and microplastics decided to convene, subject to the availability of resources, meetings of an ad hoc open-ended group of experts to further examine the barriers to and options for combating marine plastic litter and microplastics from all sources, especially land-based sources, and requested the Executive Director of UNEP to provide secretariat support for that work. The expert group was to identify options for continued work for consideration by the Environment Assembly at its fourth session, in 2019. The first meeting of the expert group, in May 2018, was attended by 266 participants representing 72 member States, 3 non-member States, 9 intergovernmental organizations and 28 observers representing accredited major groups and stakeholders.[26] The second meeting will be held from 3 to 7 December 2018 in Geneva, Switzerland.

39. The Coordination Office also provided support to the development and implementation of national and regional action plans on marine litter in partnership with the secretariats of the regional seas programmes, including the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention), the Convention on the Protection of the Black Sea against Pollution (Bucharest Convention), the Cartagena Convention, the Abidjan Convention, the Northwest Pacific Action Plan, the Permanent Commission for the South Pacific, the Secretariat of the Pacific Regional Environment Programme, the South Asia Cooperative Environment Programme and the Coordinating Body on the Seas of East Asia.

40. Regional platforms for the Global Partnership on Marine Litter have been established in the north-west Pacific, co-hosted by the Northwest Pacific Region Environmental Cooperation Centre and the Northwest Pacific Action Plan secretariat, and the Wider Caribbean Region, hosted by the Gulf and Caribbean Fisheries Institute and the Cartagena Convention secretariat. Two additional regional platforms are being established, one in the Mediterranean and the other in the South Pacific. The regional platforms are mandated to identify stakeholders, define priority areas and coordinate with the Coordination Office to better address marine litter within the region through regionally appropriate approaches and to provide information on regional priorities while implementing regional action plans on marine litter.

41. The Coordination Office continued to implement awareness-raising activities, such as the five-year Clean Seas campaign, launched in February 2017. The campaign promotes improved plastics management through a drastic reduction in the use of single-use plastics and a global phasing-out of microplastics in personal care and cosmetics products. By June 2018, more than 50 Governments had joined the campaign and made substantial commitments in that regard. For example, the Government of Indonesia set an ambitious target of reducing marine litter generated by that country by 70 per cent by 2025.[27] The Government of India commemorated World Environment Day on 5 of June 2018 under the theme "Beat plastic pollution!".

42. Nearly 200 universities participated in an innovation challenge launched by UNEP and Think Beyond Plastic in June 2017 to engage academia in identifying solutions to marine litter. The winners

[25] https://papersmart.unon.org/resolution/uploads/unep_aheg_2018_inf3_full_assessment_en.pdf.

[26] https://papersmart.unon.org/resolution/uploads/k1801471.pdf.

[27] www.cleanseas.org.

were announced at the Sixth International Marine Debris Conference, co-organized by the United States National Oceanographic and Atmospheric Administration and UNEP in March 2018 with 750 participants from more than 50 countries. The conference featured more than 74 technical sessions with more than 400 oral presentations and 170 poster presentations. It provided a valuable opportunity for knowledge exchange, networking and coordination of activities.[28]

3. Wastewater

43. Pursuant to the decision adopted by Governments at the third session of the Intergovernmental Review Meeting, the Coordination Office in October 2013 launched the Global Wastewater Initiative. The Initiative is a global multiple stakeholder platform comprised of Governments, United Nations agencies, international organizations, scientists, the private sector and major groups and stakeholders and aimed at providing a foundation for partnerships to initiate comprehensive, effective and sustained programmes for sustainable wastewater management.

44. The Initiative aims to mobilize stakeholders to address unregulated and illegal discharges of untreated wastewater into the natural environment. It encourages wastewater reuse and recovery and aims to change the paradigm from perceiving wastewater as a waste to considering it a valuable resource for preventing pollution and enhancing water security. It also encourages policy and institutional reforms in support of new investment in wastewater management. Managing wastewater sustainably can have many other benefits: it can create jobs, support livelihoods, enhance human well-being and improve the health of ecosystems.[29] The Initiative also focuses on capacity development and training, the promotion of best practices, effective technologies and successful policies, awareness-raising and communication, and addressing data gaps, trends and generating knowledge.

45. The Initiative continues to build on the success of the Strategic Action Plan on Municipal Wastewater of the Global Programme of Action in further developing guidance to strengthen the normative basis for managing and monitoring the impact of wastewater on the coastal and marine environment. Bearing in mind that sustainable wastewater management entails the adoption of supportive policies, tailored technologies and innovative financial mechanisms, the Coordination Office, through the Global Wastewater Initiative, assisted in carrying out a comparative review of policies and legislation regulating wastewater treatment and examples of management from developed and developing countries to provide a better understanding of good practice in addressing the global wastewater challenge.

46. An economic valuation of wastewater was conducted in the framework of the Initiative to demonstrate the loss of coastal and marine ecosystem services owing to the discharge of untreated wastewater. The report provides a comprehensive picture of the cost of inaction as opposed to the benefits of effective wastewater management from both a social and economic perspective. The following publications were also issued: *Wastewater Management: A UN-Water Analytical Brief*, which provides the baseline for the development of the targets and indicators for Sustainable Development Goal 6 (ensure availability and sustainable management of water and sanitation for all); *Sanitation, Wastewater Management and Sustainability: From Waste Disposal to Resource Recovery*, which offers a new conceptual framework for planning and investing in sustainable wastewater management systems and centres for resource recovery and reuse; and *Harnessing Opportunity: Wastewater as a Managed Resource*, which showcases some innovative approaches being used and guides communities in purposefully reusing their wastewater as reclaimed water for the benefit of all. Those publications will assist Governments and other stakeholders in designing policies and making investment decisions in addressing the wastewater challenge. In addition, the Initiative produced a wastewater technology matrix that could be used as a decision-making tool for the selection of an appropriate wastewater management system.[30]

47. The United Nations designated 2017 the Year of Wastewater and, in that context and under the auspices of UN-Water, the Coordination Office collaborated in the production of *United Nations World Water Development Report 2017 – Wastewater: The Untapped Resource*, which highlights the fact that improved wastewater management is as much about the reduction of pollution at the source as it is about the removal of contaminants from wastewater flows, reuse of reclaimed water and recovery of useful by-products. The celebration of the Year of Wastewater culminated with the launch of the report, the wastewater campaign and several regional events. Evidence of the increasing prominence

[28] http://internationalmarinedebrisconference.org/wp-content/uploads/2018/03/Sixth_International_Marine_Debris_Conference_Final_Program.pdf.

[29] http://staging.unep.org/gpa/documents/gwi/GWIFactsheet.pdf.

[30] http://staging.unep.org/gpa/Documents/Publications/Wastewater%20Technology%20Matrix%201803.zip.

of wastewater on the international agenda is visible in the Sustainable Development Goals, in particular indicator 6.3.1 (proportion of wastewater safely treated) and in various international water events such as World Water Week in Stockholm and Africa Water Week, which reveals the interest and commitment of Governments and other actors to engage with the issue.

48. The Coordination Office in support of the Global Wastewater Initiative is working with local and national governments and the secretariats of the regional seas programmes in undertaking an assessment of the status of national programmes of action and defining issues for priority action. The assessment, carried out in cooperation with the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) of the Regional Convention for the Conservation of the Environment of the Red Sea and Gulf of Aden (Jeddah Convention), has led to the development and adoption of regional guidelines on wastewater management in coastal cities of the member States of the Organization and a manual for monitoring the impact of wastewater on coral reefs. The documents are available in Arabic, English and French.

49. At the national level, technical and financial support was provided to the Governments of Djibouti, Egypt and the Sudan to organize national workshops for the development of monitoring indicators to assess the impact of wastewater on coral reefs. This activity supported the implementation of regional guidelines for wastewater management, prepared under the auspices of PERSGA. The workshops served as an effective platform for the exchange of views and expertise on the subject, and shed light on the challenges faced by monitoring programmes in the region and the need to improve those programmes, including the importance of community involvement and dissemination of knowledge on pollution and the ways in which it can be reduced.

50. Technical support was given to the Regional Organization for the Protection of the Marine Environment of the Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution to review and update its current municipal wastewater management guidelines and develop a wastewater management strategy.

51. Technical support was also provided to the Abidjan Convention secretariat in the implementation of the Canary Current Large Marine Ecosystem project to enhance knowledge and capacity development and to strengthen the policy regime for the transboundary assessment and management of biodiversity, habitat and water quality that is critical to fisheries. The countries covered by the programme were Cabo Verde, the Gambia, Guinea, Guinea-Bissau, Mauritania, Morocco and Senegal. The programme has led to a regional assessment of pollution sources and the development of a regional action plan.

52. Under the Safe Use of Wastewater in Agriculture initiative, several awareness-raising and capacity development workshops were organized by the Coordination Office and its partners FAO, the International Water Management Institute, the United Nations University Institute for Integrated Management of Material Fluxes and of Resources, the United Nations University Institute for Water, Environment and Health, the UN-Water Decade Programme on Capacity Development and the World Health Organization. During the period 2012–2013, the programme brought together 160 participants from 73 countries in Africa, Asia and Latin America. Building on its success, the Global Wastewater Initiative is working with its partners to launch a new programme to promote the use of treated wastewater for non-agricultural purposes, such as the watering of urban greens and golf course irrigation. The programme is expected to generate revenue and help to alleviate pressure on limited freshwater resources.

53. The Global Wastewater Initiative is also supporting the implementation of demonstration projects in piloting wastewater treatment technologies and innovative management practices, with technical and financial support provided to Antigua and Barbuda, Benin, Egypt, Ethiopia, Georgia, Ghana, Morocco and the United Republic of Tanzania.

54. In Georgia, a project aimed at reducing pollution in the Black Sea by introducing sustainable wastewater and nutrient management in Khobi Municipality succeeded in involving women in implementation activities. The project outcomes have been used to develop guidelines and a checklist on gender mainstreaming in wastewater management entitled “Wastewater Management Meets Gender Mainstreaming. Why and How to Achieve Gender Equality in the Sanitation and Wastewater Sector: Global Guidelines and Checklist”. The purpose of the checklist is to support project designers in ensuring gender equality, empowerment and the inclusion of women and girls in water and sanitation activities and interventions in support of Sustainable Development Goal 5 (achieve gender equality and empower all women and girls).

55. Demonstration projects in Benin, Egypt, Ethiopia, Ghana and Morocco are aimed at the reversal of desertification by means of afforestation or reforestation through the use of treated

wastewater and the restoration of degraded wetlands. Under the projects, degraded land areas have been delineated to create green belt zones through plantations to conserve biodiversity and combat climate change by reducing emissions of carbon gases into the atmosphere. The planted trees are expected to provide fodder, control pollution and improve air quality and population health. The Ouarzazate Green Belt project in Morocco attracted wide public and media attention and was selected by the Government as a showcase during the twenty-second session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, held in Marrakech, Morocco, from 7 to 18 November 2016. The project was a clear example of a direct contribution to Sustainable Development Goals 7 (ensure access to affordable, reliable, sustainable and modern energy for all), 13 (take urgent action to combat climate change and its impacts) and 15 (protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss). The project also involves the construction of North Africa's largest solar energy plant, to be completed by 2019. The Noor-Ouarzazate solar power plant will contribute 18 per cent of Morocco's annual electricity generation, saving the country one million tonnes of oil equivalent and preventing the emission of 3.7 million tonnes of CO_2.

56. In the United Republic of Tanzania, a demonstration project was designed to improve the regulatory framework and technical standards for proper wastewater treatment in the country through the construction of a decentralized wastewater management system. The outputs of this project served as an integrated concept for sustainable human settlement development in emerging housing schemes in areas not served by sewers of Dar es Salaam. In Antigua and Barbuda, a project was launched to train stakeholders in techniques for efficient water use and for the reuse of treated wastewater in small-scale agriculture production.

57. The secretariat of the Global Wastewater Initiative facilitated the creation of regional platforms aimed at articulating regional priorities and integrating them within the overall objectives of the Initiative and its operational framework. To date, regional platforms for Asia and the Caribbean have been established, hosted respectively by the China Beijing Environmental Exchange and the Caribbean Water and Wastewater Association.

58. The Global Programme of Action has, through the Global Coral Reef Partnership and the Global Wastewater Initiative, developed a science-to-policy brief, *Wastewater Pollution on Coral Reefs,*[31] on managing wastewater to support the health and resilience of coral reefs. The brief highlights the linkage between land-based pollution and coral reefs.

59. Since January 2018, the Global Wastewater Initiative has been organizing webinars on wastewater-related issues. The goal is to enhance the recognition of wastewater as a resource and advance knowledge generation, awareness-raising and outreach in the field of sustainable wastewater management. The webinars enable members of the Initiative to share their expertise and experiences.

60. A sanitation and wastewater "story map" has been developed under a joint project on wastewater management and sanitation provision in Africa between UNEP, the Global Programme of Action, the African Development Bank and GRID-Arendal. The story map illustrates challenges associated with the inadequate infrastructure for sanitation provision and wastewater management in Africa at a time when population growth and the expansion of industry and agriculture are producing ever more wastewater.[32]

61. In 2017–2018, a MOOC on wastewater and nutrients management developed by the Global Wastewater Initiative and the Global Partnership on Nutrient Management was designed and delivered by Concordia University. (See para. 23 above.)

62. Resolution UNEP/EA.3/Res.10[33] of the United Nations Environment Assembly, on addressing water pollution to protect and restore water-related ecosystems, adopted in December 2017, invites member States to take a variety of actions to address water pollution and requests UNEP to take various steps to support those actions.

[31] http://wedocs.unep.org/bitstream/handle/20.500.11822/25519/UNEPNairobi_WastewaterPollution_WEBforapproval2805.pdf?sequence=18&isAllowed=y.

[32] The story map can be found at https://grid-arendal.maps.arcgis.com/apps/Cascade/index.html?appid=caf411c40c3442b782406de631bddb2f and https://www.esri.com/en-us/arcgis/products/esri-story-maps/contest/winners-gallery/2018-winners.

[33] Available at https://papersmart.unon.org/resolution/uploads/k1800216.english.pdf.

B. Implementation of the Global Programme of Action by national Governments

63. The Global Programme of Action is intended to provide guidance on developing a process for management actions to promote sustainable use of coastal and marine resources. The Programme has argued that the effective development and implementation of national programmes of action should focus on sustainable, pragmatic and integrated environmental management approaches and processes, such as integrated coastal area management, harmonized, as appropriate, with river basin management and land-use plans (see UNEP(OCA)/LBA/IG.2/7, para. 19). The process encourages Governments to develop national programmes of action to reduce marine pollution from land-based sources in a comprehensive and integrated manner. National programmes, underpinned by national action plans, have not been regarded as final overall "prescriptive documentation", but rather as an "integrated framing" of various processes that facilitate the implementation of a range of related regional and global obligations to which Governments are committed. Existing national and regional strategies and action plans may often cover the objectives of a national programme of action; hence the Programme does not recommend the formulation of stand-alone national programmes of action. However, governance reforms to strengthen policies and legislation, as well as institutional arrangements for coordinated actions, are considered of crucial importance to expedite implementation of the Global Programme of Action.

64. Since the inception of the Global Programme of Action, over 90 countries have established framework national programmes of action, with many incorporating priority issues into their existing planning processes. The Coordination Office recently carried out a desktop review of national programmes of action and national action plans, and analyses of available web-based data from 107 countries revealed that in just over 76 per cent of countries, the implementation of national programmes of action and national action plans to address land-based sources of marine pollution was slow and/or being hampered owing to a lack of financial resources. Other barriers to non-implementation of national programmes of action and national action plans are a low level of awareness reported by 60 per cent of countries, inadequate policy regimes and a lack of political support, which appears to be the case for some 57 per cent of countries, followed by weak institutional capacity in 50 per cent of countries and limited private-sector engagement in 47 per cent of countries.[34]

65. In preparation for the fourth session of the Intergovernmental Review Meeting, the Coordination Office initiated an online survey in May 2016 to gauge the development and implementation status of national programmes of action, and to date 33 countries have responded. Analyses of the information generated through the survey show that in most countries (72 per cent of respondents), national programmes of action are under implementation and 36 per cent of countries have revised or updated them since their adoption. It is worth noting that in 94 per cent of countries responding, the issues of land-based sources of marine pollution are mainstreamed into other national planning frameworks, such as integrated water resource management plans and integrated coastal zone management plans. Some 76 per cent of countries responding also reported that systematic monitoring programmes were in place to collect data on the quality of coastal water and levels of pollution. Responses showed that the priorities of the national programmes of action were closely aligned with the priorities of the Global Programme of Action; in accordance with national responses, all countries responding reported the management of untreated wastewater disposal as the top priority, while 88 per cent reported the management of nutrients and 85 per cent reported the management of marine litter to be priority concerns (see UNEP/GPA/IGR.4/INF/4).

66. Given the varying degrees of country dependence on coastal and marine resources for development and the nature of anthropogenic pressures that affect the health of the marine environment, countries often choose to make sectoral policy reforms or draw up comprehensive plans of action. For example, in September 2014, Indonesia adopted its National Ocean Policy,[35] which provides a legal framework for the management of coastal and marine resources and assists the national and local governments in working together to manage and develop coastal and marine resources. The policy also encourages community participation, particularly in coastal and marine governance, development and management, as well as input to programme evaluation and monitoring activities. The policy also emphasizes the importance of preserving traditional and cultural values related to the coasts and seas. Similarly, Viet Nam's Law of Natural Resources and Environment of Sea and Islands,[36] ratified in June 2015 during the thirteenth National Assembly, stresses the

[34] https://www.arcgis.com/home/webmap/viewer.html?webmap=70d57579a3f64ae9ad37b283a7020c8e.

[35] National Act No. 32/2014 on marine affairs.

[36] Law No. 82/2015/QH13.

importance of an integrated approach towards the management of its coastal and ocean resources. The law aims to synchronize national coastal management by establishing an inter-agency coordinating mechanism, led by the Ministry of Natural Resources and Environment, which is tasked with addressing the development of economic sectors associated with seas and islands through an integrated management approach.

67. Protection of coastal and marine resources through sectoral policymaking is also well illustrated by policy decisions adopted by the Government of Jamaica, which enacted new environmental regulations to protect its coastal waters, triggered by concerns raised over permissible levels of phosphates in detergents, which had been observed at high levels in wastewater discharges from industrial, commercial, agricultural and domestic sources. The matter had been identified as one of the main drivers for prolific algal growth in closed waterways. With a view to protecting the aquatic environment, the Government decided in 2013 to eliminate phosphate-containing detergents in the market by amending Jamaican Standard 73, concerning commodity standard phosphate in synthetic laundry detergent. The same year, the Government introduced the Natural Resources Conservation (Wastewater and Sludge) Regulations, 2013, which was aimed at bolstering the authority of the National Environment and Planning Agency to demand greater accountability from owners and operators of wastewater treatment plants in ensuring that the prescribed discharge standards were met. Under the regulations, operators of facilities that generate sludge and discharge treated (sewage) effluent will require new licences under three possible categories: (i) construction of a new wastewater treatment plant or reconstruction (rehabilitation and/or upgrade) of an existing treatment plant; (ii) operation of a wastewater treatment plant; and (iii) discharge of treated sewage and trade effluent into the environment.[37]

C. Implementation of the Global Programme of Action through the regional seas programme and other regional initiatives

68. To facilitate implementation of the Global Programme of Action, the role and importance of regional organizations and the UNEP regional seas programmes were acknowledged by participants at the intergovernmental conference held in Washington in November 1995 during the adoption of the Global Programme of Action. In paragraph 74 of the Programme, UNEP was requested, among other things, to promote and facilitate implementation of the Global Programme of Action at the regional and subregional levels through, in particular, a revitalization of the regional seas programmes.

69. At the third session of the intergovernmental review meeting, Governments decided to strengthen and promote the implementation of the 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 Global Programme of Action.

70. In the Regional Seas Strategic Directions (2013–2016), UNEP made a commitment to contributing to the implementation of the Manila Declaration, in particular the partnerships on wastewater management, nutrients and marine litter.

71. The regional seas conventions and action plans have continued to act as an effective vehicle for expediting implementation of the Global Programme of Action, facilitating the adoption and ratification of protocols on land-based pollution from land-based sources and activities and integrated coastal zone management, as well as capacity-building workshops and training courses on initiating legal and policy reforms to expedite implementation of those protocols. Several convention secretariats have also developed robust monitoring programmes to assess member States' compliance in terms of achieving the objectives of the protocols, as well as implementing regional projects, developing guidelines and producing scientific reports aimed at mobilizing actions in support of the priority source categories of the Global Programme of Action.

72. At their meeting held in Grand-Bassam, Côte d'Ivoire, in June 2012, parties to the Abidjan Convention adopted the Additional Protocol to the Abidjan Convention Concerning Cooperation in the Protection and Development of the Marine and Coastal Environment from Land-based Sources and Activities in the Western, Central and Southern African Region. The objective of the Protocol was to prevent, reduce, mitigate and control pollution from land-based sources and activities on their territories or emanating from any other land-based source, including through the atmosphere, to protect and sustain the marine and coastal environment of the Protocol area. The Abidjan Convention secretariat also initiated national consultations to develop environmental norms and standards, as well as additional protocols, including on integrated coastal zone management and sustainable management

[37] http://go-jamaica.com/pressrelease/item.php?id=2806.

of mangroves. The Government of Liberia hosted such a consultative meeting in August 2016, in cooperation with the Abidjan Convention secretariat and the West Africa Biodiversity and Climate Change Programme.

73. Marine pollution has been a key focus of the Barcelona Convention since its establishment in 1976. The Strategic Action Programme to Address Pollution from Land-based Activities in the Mediterranean Region identifies priority target categories of polluting substances and activities to be eliminated or controlled by Mediterranean countries according to a planned timetable (2000–2025) in line with concrete obligations of the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities. There are 21 national action plans under the Protocol to address land-based pollution.

74. In an effort to coordinate the assessment and control of regional marine pollution, the Barcelona Convention secretariat carried out an evaluation of the national implementation of the Strategic Action Programme in 2012. The evaluation concluded that all member States had achieved significant progress, particularly in terms of policy and regulatory aspects supported by monitoring programmes and reporting, as well as the elimination of hotspots. However, the report also noted that given the increasing pressure on the marine and coastal environment, there was a need to enhance the financial sustainability of the national action plans and ensure more effective and streamlined reporting.

75. At its seventeenth ordinary meeting, held in Paris from 8 to 10 February 2012, the contracting parties to the Barcelona Convention adopted the Action Plan for the Implementation of the Integrated Coastal Zone Management Protocol for the Mediterranean (2012–2019); regional plans in the framework of article 15 of the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities; standards for bathing water quality with reference to article 7 of the Protocol; and a strategic framework for marine litter management. At its eighteenth meeting, held in Istanbul, Turkey, from 3 to 6 December 2013, the contracting parties adopted the Regional Plan on Marine Litter Management in the Mediterranean. As a result, a legally binding decision was adopted and came into force in July 2014, in which the contracting parties agreed to act in a coherent manner in order to achieve respective targets on marine litter and integration of marine litter measures into the national action plans on land-based sources, and development and implementation of appropriate policy and legal instruments, and institutional arrangements to prevent and reduce marine litter.

76. The Caribbean Environment Programme continues to provide guidance to member States on the introduction of policy and institutional reforms to ensure compliance with the Protocol Concerning Pollution from Land-Based Sources and Activities to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region. Under its assessment and management of the environmental pollution programme, the secretariat is collecting data on nitrogen and phosphorus discharge into the coastal waters of the region from industrial and domestic sources, as well as giving technical and financial support to strengthen countries' laboratory capacities to monitor parameters of land-based sources. The secretariat facilitated the launch of Caribbean hubs for the three partnerships of the Global Programme of Action, namely the Global Partnership on Nutrient Management, the Global Partnership on Marine Litter and the Global Wastewater Initiative, by hosting regional meetings.

77. The Caribbean Environment Programme is implementing several regional projects aimed at addressing land-based sources of pollution. For example, the GEF-supported Caribbean Regional Fund for Wastewater Management assisted Governments in the region that are also parties to the Cartagena Convention's Protocol Concerning Pollution from Land-based Sources and Activities in introducing policy reforms and implementing initiatives for the effective management of wastewater through measures such as improved collection, transport, treatment, re-use and safe disposal of domestic wastewater. The Caribbean Regional Fund for Wastewater Management project also developed regional guidelines for developing, reviewing and updating national wastewater management plans. The project complemented the efforts of Governments to fulfil their obligations in addressing land-based sources of pollution. The secretariat also mobilized GEF resources to implement a regional project on integrating water, land and ecosystem management in Caribbean small island developing States to demonstrate integrated approaches to water, land and ecosystems services management, supported by policy, institutional and legislative reforms, and putting into practice marine pollution reduction technologies.

78. At the Ministerial Meeting of the Baltic Marine Environment Protection Commission held in Copenhagen on 3 October 2013, ministers of the environment reviewed progress in the implementation of the Baltic Sea Action Plan for the period 2007–2021 and reiterated its

commitments, among others, to contribute towards global efforts for healthy and productive oceans and seas, especially in the framework of the Global Programme of Action, and called for action to preserve biodiversity, further improvements in municipal wastewater treatment and prevention of pollution from agriculture, as well as prevention of emissions and discharges of hazardous substances, with a view to achieving the targets for a healthy Baltic Sea environment, including nutrient reduction targets. Ministers also decided to further pursue the coordinated national implementation of the Baltic Sea Action Plan and committed to strive for the development and application of sustainable agricultural practices with the least environmental impact on the Baltic Sea, underpinned by technical, economic and regulatory measures to improve farm nutrient management, especially manure nutrient recycling, including calculation of nutrient surplus in fertilization practices, and nutrient accounting at the farm level.

79. The Amended Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean (Amended Nairobi Convention) secretariat continued its work in assisting member States to ratify the Protocol for the Protection of the Marine and Coastal Environment of the Western Indian Ocean from Land-Based Sources and Activities, adopted in 2010. The secretariat also produced the Regional State of the Coast Report for the Western Indian Ocean in 2015, which highlighted the enormous economic potential and development needs of countries around the Western Indian Ocean. It also pointed out the growing natural and anthropogenic pressures imposed on the region's coastal and marine environment, and the opportunities to avoid serious degradation in one of the world's most unique and highly biodiverse oceans. The report presented exploratory scenarios and policy analysis to better inform planning and management of coastal and marine resources.

80. At the eighth meeting of the Conference of the Parties to the Nairobi Convention, held in the Seychelles from 22 to 24 June 2015, member States agreed to develop an integrated coastal zone management protocol, which is now under review by contracting parties and partners. The secretariat, in collaboration with the World Wide Fund for Nature, Madagascar, and the Indian Ocean Commission, organized the third negotiations meeting on the Integrated Coastal Zone Management Protocol for the Nairobi Convention, held in Zanzibar, United Republic of Tanzania, from 21 to 24 November 2016. The Protocol is being finalized for presentation to the Conference of the Parties.

81. Following the successful implementation of the regional demonstration project of the Global Programme of Action on addressing land-based activities in the Western Indian Ocean, States parties to the Nairobi Convention endorsed the Strategic Action Programme for the Protection of the coastal and marine environment of the Western Indian Ocean from Land-based Sources and Activities. GEF then approved a new project to implement the Strategic Action Programme and provided $10.86 million of resources. The aim of the project is to reduce impact from land-based sources and activities and manage critical coastal riverine ecosystems.

82. The Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region is currently working on two focal areas of the Global Programme of Action: nutrients and marine litter. Under the nutrients programme, taking into account the conclusions and recommendations of the integrated eutrophication assessment in the selected area of the Northwest Pacific Action Plan region, adopted in 2011, the secretariat developed a common procedure for harmonizing assessment data and their reference values, conducted more case studies, expanded the assessment area to include the open sea, and developed regional ecological quality objectives where nutrient input could an indicator or target. In the area of marine litter, Northwest Pacific Action Plan member countries have been addressing the problem of marine litter collectively through the formulation and implementation of the Regional Action Plan on Marine Litter. In 2013, the secretariat published a report entitled "Best Practices of Marine Litter Management in Fisheries, Aquaculture and Shipping Sectors in the Northwest Pacific Action Plan Region" to facilitate knowledge exchange and support member States in their efforts to reduce the generation of marine litter.

83. The Convention for the Protection of the Marine Environment of the North-East Atlantic (the OSPAR Convention) adopted a Regional Action Plan on Marine Litter in 2014. The Regional Action Plan aims to reduce marine litter from sea-based and land-based sources, and remove 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 Marine Strategy Framework Directive of the European Union.

84. The Commission of the OSPAR Convention also adopted guidelines for coordinated monitoring for eutrophication within the framework of the Coordinated Environmental Monitoring Programme to enable contracting parties to assess eutrophication status and trends, in particular

through the application of the OSPAR Common Procedure; to assess pressures on the marine environment; and to evaluate the effectiveness of measures in relation to the objectives of the eutrophication strategy. Under the programme, pressures principally from inputs of nitrogen and phosphorus are monitored for all relevant parts of the Convention area.

85. The South Asia Cooperative Environment Programme, in partnership with GEF and FAO, supported the Bay of Bengal Large Marine Ecosystem Project, under which a review study was conducted on controlling nutrient loading and eutrophication of coastal waters of the South Asian seas. The study identified the sources of nutrients that end up in coastal waters and suggested measures for the development of a regional action plan, as well as the establishment of a regional policy forum to monitor progress in the implementation of the action plan. Members of the Global Partnership on Nutrient Management Asia Platform carried out the study, while the secretariat of the Global Partnership on Nutrient Management provided advisory services to the South Asia Cooperative Environment Programme to ensure scientific integrity of the study. At the Ministerial Meeting of the South Asia Cooperative Environment Programme of 2014, member States welcomed the report and requested the secretariat to mobilize resources to address the recommendations contained therein.

86. The Coordinating Body on the Seas of East Asia, in partnership with the Coordination Office of the Global Programme of Action, developed the Regional Action Plan on Marine Litter in 2008. In the light of recent findings that the East Asian region is a major source of marine litter, efforts are being undertaken to strengthen the implementation of the action plan.

87. In collaboration with Partnerships in Environmental Management for the Seas of East Asia, the Coordination Office has participated in several activities, including joint project execution, sharing models of good practices through case studies, release of joint publications, collaboration in the implementation of the Sustainable Development Strategy for the Seas of East Asia[38] by the Partnerships' member States[39] through national projects, periodic review of the Strategy and its revision, and the convening of the East Asia Summit Congress and the East Asia Summit Ministerial Forum once every three years. The Coordination Office is also a member of the East Asia Summit Partnership Council.

88. As of June 2015, 10 of the 12 countries implementing the Sustainable Development Strategy for the Seas of East Asia have developed and implemented national policies, strategies, action plans and programmes in coastal and ocean management and river basin management. In addition, 9 of the 12 countries have established national inter-agency and intersectoral coordination mechanisms for coastal and ocean management and river basin management. Cambodia, China, the Democratic People's Republic of Korea, Indonesia, the Lao People's Democratic Republic, the Philippines, Thailand, Timor-Leste and Viet Nam have prepared country-specific strategy implementation plans. At the national level, significant progress has been made in terms of policy development and implementation of on-the-ground projects to protect and preserve the coastal and marine environment, details of which are reported by national Governments under the Global Programme of Action.

D. Resource mobilization in support of the implementation of the Global Programme of Action through global and regional projects

89. Over the period, staff costs amounted to just under $5.6 million. Of that amount, $4.3 million was contributed from the UNEP Environment Fund, while just over $1.2 million was contributed from the regular budget. Extrabudgetary resources allocated to activity implementation by thematic area totalled $10.5 million. This included donor contributions from partnership and earmarked funds and the Global Environment Facility.

90. The Coordination Office, in collaboration with Global Partnership on Nutrient Management partners, secured a GEF grant of $1.7 million for the GEF project "Global Foundations for Reducing Nutrient Enrichment and Oxygen Depletion from Land-Based Pollution in Support of the Global Nutrient Cycle". The project has partner co-financing commitments of $4.1 million from direct and associated work of the Global Partnership and other partners. The project, which has run since 2013 and is winding down, is being executed by the Global Programme of Action. The key anticipated outcomes include a global partnership of stakeholders actively involved in addressing nutrient over-enrichment in coastal waters. Stakeholders have enhanced access to tools and methods for developing estimates of exports of nutrients to coastal zones, and decision makers have informed and

[38] The Sustainable Development Strategy for the Seas of East Asia was first adopted by Governments through a ministerial declaration signed in Putrajaya, Malaysia, in 2003.

[39] The Governments of Cambodia, China, the Democratic People's Republic of Korea, Indonesia, Japan, the Lao People's Democratic Republic, the Philippines, the Republic of Korea, Singapore, Timor-Leste and Viet Nam are members of the Partnerships in Environmental Management for the Seas of East Asia.

interactive access to tools and approaches for developing and implementing nutrient reduction strategies in coastal areas.

91. The Coordination Office, in association with the Global Partnership on Marine Litter, has developed the project "Addressing Marine Plastics: A Systemic Approach" with the help of a $2 million GEF grant. The project aims to develop a set of global protocols and guidelines on the redesign of materials, formats, use and after-use systems to inform the "new plastics economy" through a global alliance of producers, users and disposers of plastics, for advancing innovative solutions and strengthening public-private partnerships with national and regional policymakers. Under the project, several demonstration projects will also be implemented in several Asia-Pacific Economic Cooperation countries including Indonesia, the Philippines and Viet Nam.

92. The Coordination Office, through the Global Wastewater Initiative, is implementing the project "State of Wastewater Management and Sanitation in Africa: An Opportunity for Private and Public Investment". The project, to run through 2018, is funded by the African Development Bank (€500,000) and implemented by GRID-Arendal. It will profile the state of, and trends in, wastewater management and sanitation delivery in Africa and generate a range of communication and outreach products for catalysing the provision of appropriate guidance for policy- and decision-making; reducing the time lag from policymaking to service delivery; and ensuring that Africa reaps the social, economic and environmental dividends of improved wastewater management and better access to sanitation services.

Resources committed to the Global Programme of Action over the implementation period 2012–2018 [a]

Staff cost (est. over 5 years)

Source	*Total*
Global Programme of Action Trust Fund	0
UNEP Environment Fund	4 352 727
UN regular budget[b]	1 258 150
Total[c]	**5 610 877**

Extrabudgetary resources allocated to activity implementation by thematic area (est. over 5 years)

Donor	***Thematic area***			***Total***
	Nutrients	*Wastewater*	*Marine litter*	
France			500 000	500 000
Netherlands			300 000	300 000
Norway	381 000	456 789	4 120 608	4 958 397
(Republic of) Korea Forest Service		854 000		854 000
Sweden	80 371	340 878	1 080 900	1 502 149
Nordic Council			60 000	60 000
African Development Bank		550 000		550 000
UN-Water		75 500		75 500
Global Environment Facility (GPA executed)	1 718 182			1 718 182
Total	**2 179 553**	**2 277 167**	**6 061 508**	**10 518 228**

[a] All amounts shown are in United States dollars.
[b] The contribution from the regular budget does not constitute contributions from UNEP.
[c] Co-funding from countries for Junior Professional Officer positions is not accounted for in the estimates.

E. Outreach and advocacy by the Global Programme of Action Coordination Office to forge partnerships and build consensus for mainstreaming the Global Programme of Action into the development agenda

93. Since the third session of the Intergovernmental Review Meeting, the Coordination Office has enhanced its outreach efforts in terms of communicating through web-based technologies and production of materials such as flyers, factsheets, videos, policy briefs, research reports and scientific papers in various languages. Standard presentations and videos with key messages for various audiences have also been uploaded to the website. A video by the Global Programme of Action on

nutrient pollution won the international 2014 BLUE Carpet Film Award.[40] Press releases, media advisories, press conferences and public service announcements have also been used to enhance the visibility of the Global Programme of Action and its three partnerships to create awareness of challenges and opportunities in promoting better management of nutrients, marine litter and wastewater, and to show how such actions contribute to sustainable development.

94. The Programme also ensured its presence in major global and regional meetings and conferences through workshops, seminars, poster sessions and exhibits. Programme officials have also participated in events organized by partners as resource persons and keynote speakers.

95. Outreach and advocacy activities contributed to securing commitments from partners to the Global Programme of Action and its three partnerships, and influenced the regional and global agenda on marine pollution.

F. The Global Programme of Action mainstreamed into the programme of work of the United Nations Environment Programme

96. The Global Programme of Action and its priority action areas – nutrients, marine litter and wastewater – have been gradually embedded into the programme of work of UNEP. In the UNEP programme of work for the biennium 2018–2019 (approved by the United Nations Environment Assembly at its second session, held in May 2016), one of the outputs under expected accomplishments of the chemicals and waste subprogramme was "Policies and legal and institutional and fiscal strategies and mechanisms for waste prevention and sound management developed or implemented in countries within the framework of relevant multilateral environmental agreements", which gives effect to the work of the Global Programme of Action.

97. The UNEP programme of work for the biennium 2018–2019 under the ecosystem management subprogramme defined the promotion of the "appropriate management of coasts and marine systems to ensure that ecosystem services are maintained" as one of its outputs, with the indicator of achievement as an "increase in the number of countries using the ecosystem approach to sustain ecosystem services from coastal and marine systems, with the assistance of UNEP".

98. The Global Programme of Action, through the Marine and Coastal Ecosystems Branch and the Science Division of the United Nations Environment Programme, is collaborating with the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the development of the indicators under Sustainable Development Goal 14, on marine pollution. The work will be underpinned by the existing wider research cooperation of partners associated with the Global Partnership on Nutrient Management and the Global Partnership on Marine Litter. In addition, under the coordination of UN-Water and with financial support from the Swiss Agency for Development Cooperation, the Programme has worked with seven United Nations agencies (UNEP, the United Nations Human Settlements Programme, the World Health Organization, FAO, UNESCO, the United Nations Children's Fund and the World Meteorological Organization) to develop the targets and indicators for Sustainable Development Goal 6 and a Global Enhanced Monitoring Initiative for wastewater, water quality and water resource management. The initiative is an important cornerstone and is expected to deliver capacity-building, both in terms of assistance to countries to help them in monitoring and reporting, and assistance to countries to help them to attain the Sustainable Development Goals and targets.

II. Lessons learned and the way forward

99. Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities during the period 2012–2018, as well as the role played by the Coordination Office as the secretariat, points to a number of useful lessons and clearly demonstrates that the Global Programme of Action retains its relevance in international development discussions. The Programme is still recognized as a valuable international cooperative programme to guide national and regional actions for maintaining the integrity of the coastal and marine environment and the services they provide for enhancing human well-being and sustainable development. The three partnerships (the Global Partnership on Nutrient Management, the Global Partnership on Marine Litter and the Global Wastewater Initiative), facilitated by the Coordination Office pursuant to the decision of the third session of the Intergovernmental Review Meeting, mobilized Governments, academia and the scientific community, industry, civil society organizations and international organizations, including United Nations agencies to create common platforms for dialogue and define the global agenda for actions to contain human activities within the "safe operating space of the planet". The

[40] http://unep.org/gpa/resources/Videos.asp.

third session of the United Nations Environment Assembly, held in December 2017 with a focus on tackling pollution, saw renewed commitments by countries to reducing pollution of freshwaters and the marine environment from land-based activities, and provided policy and strategic directions for the Global Programme of Action.

Annex

Overview of the implementation of the Global Programme of Action at the national, regional and global levels for the period 2012–2018

National level		Regional level		Global level	
Targets	**Progress**	**Targets**	**Progress**	**Targets**	**Progress**
Overall programme					
Improved water quality and ecosystem functions in at least 10 countries as a result of implementation of ecosystem-based national programmes of action and other policy frameworks applying ecosystem service valuations.	**Target partially achieved:** 76 per cent of countries reported that systematic monitoring programmes were in place to collect data on the quality of coastal water and levels of pollution. All countries reported managing disposal of untreated wastewater as their top priority; 88 per cent reported management of nutrients and 85 per cent reported management of marine litter were their priority concerns.			At least two intersessional meetings held.	**Target partially achieved:** One intersessional meeting was held in Kenya in November/December 2015. The second Global Conference on Land-Ocean Connections was held in Jamaica in October 2013.
At least four tools and guidance documents used by at least 20 countries for the revision and implementation of ecosystem-based national programmes of action and other policy frameworks.	**Target partially achieved:** 72 per cent of countries are implementing national programmes of action and 36 per cent of countries have revised their national programmes of action to take into account emerging priorities.			At least five key emerging issues identified and at least five intergovernmental targets set.	**Target partially achieved:** The main emerging issues identified include micro-plastics, endocrine disrupting compounds, mine tailing discharges and sargassum seaweed (in West Africa and the Caribbean). No intergovernmental targets have been agreed upon and the matter remains as work in progress with the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection.

National level		Regional level		Global level	
Targets	**Progress**	**Targets**	**Progress**	**Targets**	**Progress**
Nutrient management					
At least 20 national reviews used for decision-making at the national level.	**Target partially achieved:** The Global Environment Facility Global Nutrient Cycling (GEF Global Nutrient Cycle) project has contributed to decision-making processes in India and the Philippines in relation to the development of ecosystem health scorecard tools. There have also been contributions to the strengthening of pollution control measures using modelling tools for Manila Bay in the Philippines. Work started in late 2016 to conduct a nutrient management environmental and economic review in the Pantanal region in Brazil.	At least five regional reviews used for decision-making at the regional level.	**Target partially achieved:** The Global Partnership on Nutrient Management, in cooperation with the Bay of Bengal Large Marine Ecosystem project and the South Asia Cooperative Environment Programme, completed a review study on controlling nutrient loading and eutrophication of coastal waters of the South Asian seas. Work under the GEF International Nitrogen Management System project will evaluate national policy within relevant sectors under component 3 of the project. The following regions will be assessed: South Asia, East Asia, Latin America, East Africa and East Europe.	At least 100 Governments, organizations, agencies and institutions join the Global Partnership on Nutrient Management.	**Target partially achieved:** Work has focused on engaging countries through regional platforms. In platform dialogues in Asia and the Caribbean, 26 countries have participated. The mechanism for joining the Global Partnership on Nutrient Management is being developed in consultation with the regional seas programmes.
				Effective and functional international steering committee established and at least one committee meeting organized every year.	**Target achieved:** 16 agencies are represented in the global steering committee of the Global Partnership on Nutrient Management. Meetings have been convened on a quarterly basis. The charter for the Global Partnership on Nutrient Management, which regulates operational procedures, has been strengthened.
At least 20 per cent improvement in nitrogen use efficiency in 20 national pilot activities through the development and implementation of nitrogen use efficiency plans (in cooperation with the regional seas programmes).	**Target not achieved:** A project on nutrient management and wastewater is to commence in Costa Rica and Jamaica, supported by a grant secured from the United States of America in mid-2016. A nutrient use efficiency assessment will be included as part of an on-ground component.			Web-based information platform for nutrients operational and at least 30,000 hits recorded per month.	**Target achieved:** The Nutrient Challenge web portal was developed and is now operational.
At least 20 national consultations to mobilize support to tackle the nutrient challenge and help Governments to develop nitrogen use	**Target partially achieved:** Most of the work has been under the auspices of the GEF-Global Nutrient Cycle project, which has supported work in Manila	At least 20 per cent improvement in nitrogen use efficiency in five regional pilot activities through the development and implementation of	**Target not achieved:** Work needs to be further advanced at the national level before it can be scaled up to the regional level.	At least one global review used for decision-making at the global level.	**Target achieved:** The publication *Our Nutrient World: The Challenge to Produce More Food and Energy with Less Pollution*

National level		Regional level		Global level	
Targets	**Progress**	**Targets**	**Progress**	**Targets**	**Progress**
efficiency plans or strategies and introduce policy reforms.	Bay and Laguna de Bay in the Philippines and at Chilika Lake in India. At both project locations there have been several consultations at both technical and policy levels.	nitrogen use efficiency plans (in cooperation with the regional seas programmes).			(2013) is the definitive global review on the status of the nutrient challenge.
		At least 10 regional meetings to mobilize support in tackling the nutrient challenge and help Governments to develop nitrogen use efficiency plans or strategies and introduce policy reforms.	**Target partially achieved:** Global Partnership on Nutrient Management regional platform meetings have been convened in Asia (2015) and the Caribbean (2016). The following countries participated: Asia: Bangladesh, Cambodia, China, India, Indonesia, Japan, Republic of Korea, Malaysia, Philippines, Sri Lanka, Thailand, Viet Nam; Caribbean: Antigua and Barbuda, Belize, Colombia, Costa Rica, Cuba, Dominican Republic, Guatemala, Guyana, Haiti, Jamaica, Panama, Trinidad and Tobago, United States of America.	Global, regional and national baselines on nutrient use efficiency established.	**Target not achieved:** This work will begin under the GEF International Nitrogen Management System project.
Joint action by partners to support 20 national initiatives facilitating policy changes and dealing with hot spots.	**Target partially achieved:** This is ongoing work, mainly in the areas around Manila Bay and Laguna de Bay in the Philippines and Chilika Lake in India.			Four policy toolboxes (agriculture, animal husbandry, aquaculture, wastewater) applied to improve nitrogen use efficiency. Publication by Global Partnership on Nutrient Management of four policy briefs on agriculture, animal husbandry, aquaculture and wastewater, together with toolboxes and	**Target achieved:** The Global Nutrient Management Toolbox was developed under the GEF Global Nutrient Cycling project. The toolbox contains policy and field best management practices.
Monitoring programme rendered operational by 20 national Governments using established indicators.	**Target not achieved:** This is still under development and is linked to modelling work in the Manila Bay watershed and the global modelling work on the index of coastal eutrophication potential. Training of trainers on these tools took place in the				

National level		Regional level		Global level	
Targets	**Progress**	**Targets**	**Progress**	**Targets**	**Progress**
	Philippines in April 2017 and was attended by representatives from the following countries: Bangladesh, China, Colombia, Egypt, India, Kenya, Namibia, Philippines, Senegal, Sri Lanka.			guidance documents to improve nitrogen use efficiency**.**	
				At least four global meetings to mobilize support in tackling the nutrient challenge and help Governments to develop nitrogen use efficiency plans or strategies and introduce policy reforms.	**Target achieved:** The Global Partnership on Nutrient Management and other stakeholders have participated in several major global meetings, including the GEF Biennial International Waters Conference in Barbados (2013) and Sri Lanka (2016); the International Nitrogen Initiative Conference in Uganda (2013) and Australia (2016); and the second Global Conference on Land-Ocean Connections in Jamaica (2013).
At least 20 projects designed and implemented in cooperation with various stakeholders to introduce policy change and action on the ground to improve nitrogen use efficiency against a defined baseline.	**Target partially achieved:** The GEF Global Nutrient Cycling project has supported work in Manila Bay and Laguna de Bay in the Philippines and at Chilika Lake in India that is contributing to policy change for improved nutrient management. A project on nutrient management and wastewater is to commence			Operational nutrient monitoring programme using nitrogen use	**Target partially achieved**: A methodological approach for quantifying nitrogen use

National level		Regional level		Global level	
Targets	**Progress**	**Targets**	**Progress**	**Targets**	**Progress**
	in Costa Rica and Jamaica, supported by a grant secured from the United States of America in mid-2016. The GEF-funded International Nitrogen Management System project has been designed for regional-level demonstrations in the following regions: East Africa, East Asia, East Europe, Latin America and South Asia.			efficiency and ecosystem health as indicators.	efficiency has been published by the Global Partnership on Nutrient Management nitrogen use efficiency task team (2015) for use as a basis for encouraging countries to implement monitoring programmes. In collaboration with the Intergovernmental Oceanographic Commission of UNESCO, initial planning is under way for the uptake of the index of coastal eutrophication potential as one of the indices for marine pollution under target 14.1 of the Sustainable Development Goals.

National level		Regional level		Global level	
Targets	**Progress**	**Targets**	**Progress**	**Targets**	**Progress**
Marine litter					
				At least 100 Governments, organizations, agencies and institutions join the Global Partnership on Marine Litter. Effective and functional international steering committee established and at least one committee meeting organized every year. Global partnership meeting held to review implementation of the Honolulu Strategy. Web-based information platform or forum for marine litter operational, with at least 5,000 members and 50,000 hits recorded per month. At least 500,000 people sign up to the Honolulu Commitment.	**Target achieved.** **Target achieved.** **Target revised:** Global Partnership on Marine Litter meeting held in 2013 to review the framework document. **Target revised and partially achieved:** The online marine litter network (www.marinelitternetwork.com) was established in 2012/3, but was subsequently modified to better meet information needs. The Clean Seas website (http://cleanseas.org/) was also launched in 2017, providing an additional platform for mobilization to action, rather than signing up to the Honolulu Commitment.
Development of 10 national policy instruments aligned with the Honolulu Strategy.	**Target achieved:** Countries include Canada (microbeads), Chile, Colombia, Ecuador,	Five regional policy instruments aligned with the Honolulu Strategy; discussions regarding	**Target achieved:** Marine Litter Action Plans developed for the OSPAR Convention,		

National level		Regional level		Global level	
Targets	**Progress**	**Targets**	**Progress**	**Targets**	**Progress**
	Nigeria, Panama, Peru and United States of America (microbeads).	decision-making at the regional level.	Mediterranean Action Plan, Baltic Marine Environment Protection Commission, Commission on the Protection of the Black Sea Against Pollution (draft), the Cartagena Convention (revised); South Pacific and the South Asia Seas, revision of the action plan for the Coordinating Body on the Seas of East Asia.[41]		
Plastic bag ban in at least five countries (a total ban or a ban on certain types of plastic bag since 2012). Reduction of influx of solid waste to the marine environment in 10 demonstration sites through the demonstration of good policy and on-the-ground practices and technologies.	**Target achieved:** Antigua and Barbuda; examples from Africa, including Cameroon, Kenya, Malawi, Mali, Mauritania, Morocco, Mozambique, Nigeria and Senegal; and other countries, including France and Estonia. **Target partially achieved**: To date, only one demonstration project has been implemented.	At least 20 per cent reduction in solid waste reaching the marine environment and 50 per cent increase in recycling rates of certain wastes in demonstration sites through the introduction of new policies and market-based instruments.	**Target not achieved**: To date, only one demonstration project has been funded.	At least 15 per cent reduction in the use of raw materials in demonstration projects selected in collaboration with industry. At least 20 Governments and private-sector organizations agree to use best practices developed through the demonstration projects.	**Target not achieved**: To date, only one demonstration project has been funded. **Target partially achieved:** Through the Clean Seas Campaign and other commitments although not from demonstration projects as there was only one funded by UNEP. Instead a compilation of best practices was developed and shared on marinelitternetwork.com.
Wastewater					
Improved pro-poor wastewater management in demonstration sites through innovative approaches and technologies, incorporating higher	**Target achieved:** A wastewater project has been developed to improve sustainable wastewater management. The term pro-poor was found to be	At least 10 Governments and private-sector organizations agree to make use of best practices developed through the demonstration projects	**Target partially achieved:** There is no formal agreement for Governments or private-sector organizations to use such tools and guidelines, even if they	At least 50 Governments, organizations, agencies and institutions join the Global Partnership on Waste Management (Global Wastewater Initiative).	**Target achieved:** The Global Wastewater Initiative was launched in October 2013 and currently has 59 members.

[41] Including the revision of previously adopted action plans on marine litter.

National level		Regional level		Global level	
Targets	**Progress**	**Targets**	**Progress**	**Targets**	**Progress**
resource efficiency and lower carbon footprint. At least 10 demonstration projects designed and implemented in cooperation with various stakeholders to introduce policy change and action on the ground to improve wastewater management.	controversial, however, and has been abandoned. **Target achieved:** Projects developed: 14; projects completed: 6; projects under implementation: 6; projects not yet funded: 2. The above projects are for wastewater management in the area covered by the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden; EcoSan in Georgia; wastewater technology transfer in China; wastewater reuse in the Caribbean; and decentralized wastewater management and reuse in Benin, Cabo Verde, Egypt, Ethiopia, Ghana, Morocco and United Republic of Tanzania.	and capacity-building activities. At least 80 per cent nutrient removal and 70 per cent nutrient recycling rates verified in selected demonstration sites.	request them once they have been developed. Countries and organizations that have expressed an interest in using such tools and guidelines include the following: experts from Cameroon; experts from China; Nairobi Water and Sewerage Company (Kenya); Ministry of Environment (Maldives); KWR Water Cycle Research Institute (Netherlands); International Water Management Institute (South Africa); Fundación Centro de las Nuevas Tecnologías del Agua (Spain); Caribbean Water and Wastewater Association (Trinidad and Tobago); SEM Energy (United Kingdom); Krueger/Veolia – United States of America; Participants in the Global Wastewater Initiative. This target was not monitored in selected demonstration sites.	Effective and functional international steering committee established and at least one committee meeting organized annually. Online information management system operationalized for wastewater management, facilitating exchange of intersectoral information, lessons learned, best practice, and available and acceptable technologies between Governments and other stakeholders. At least 20,000 hits per month recorded after the first year. Wastewater integrated into the post-2015 Sustainable Development Goals. (Baseline: 0; target: 1.) Technology matrix developed for wastewater-related technologies; guidance document agreed upon for the re-use of wastewater by United Nations agencies.	**Target achieved:** The Global Wastewater Initiative has held its steering committee meetings twice a year since its inception. **Target achieved:** A website was developed and has been updated regularly to feature the latest information and publications. **This target has not been monitored.** **Target achieved:** Sustainable Development Goal Target 6.3. **Target achieved:** A technology matrix, which serves as a decision-making tool, has been developed and shared with all countries.