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**Intergovernmental Review Meeting on the
Implementation of the Global Programme of Action
for the Protection of the Marine Environment
from Land-based Activities**

Fifth session

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Item 3 of the provisional agenda*

**Review of the implementation of the Global Programme
of Action for the Protection of the Marine Environment
from Land-based Activities at the international, regional
and national levels during the period 2019–2021**

**Progress in the implementation of the Global Programme of
Action for the Protection of the Marine Environment from
Land-based Activities at the international, regional and national
levels during the period 2019–2021****

Note by the secretariat

Introduction

1. The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), adopted through the Washington Declaration in 1995, is a multilateral environmental mechanism aimed at preventing degradation of the marine environment from land-based activities by assisting Governments to preserve and protect the marine environment. The United Nations Environment Programme (UNEP) provides secretariat services through the Global Programme of Action Coordination Office.
2. The Global Programme of Action is unique in that it is the only global environmental initiative that directly addresses the connectivity between terrestrial, freshwater, coastal and marine ecosystems. The Programme is broad in scope, addressing pollution from sewage, persistent organic pollutants, radioactive substances, heavy metals, hydrocarbons, nutrients, sediment mobilization, litter, and the physical alteration and destruction of habitats. In 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. 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

* UNEP/GPA/IGR.5/1.

** The present document is being issued without formal editing.

Programme of Action for the Protection of the Marine Environment from Land-based Activities; 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; and the 2018 Bali Declaration on the Protection of the Marine Environment from Land-based Activities.

4. At the third Intergovernmental Review Meeting, held in Manila on 25 and 26 January 2012, Governments decided that UNEP should focus its work on nutrients, marine litter and wastewater as the three priority source categories, using global multi-stakeholder partnerships.

5. During this reporting period the UNEP Coordination Office has comprised one Coordinator (P-5), three P-4 Programme Officers focusing on nutrients, wastewater and marine litter, and one G-4 Programme Assistant. The Coordination Office also benefited from the support of several Junior Professional Officers co-funded by China, Italy and Norway. Through fundraising, the Coordination Office also secured two Associate Programme Management Officers and a Programme Officer (P3) working on marine litter in 2021.

6. This report provides a summary overview of the implementation of the GPA since the fourth Intergovernmental Review Meeting in Bali. It highlights the relevance of the Programme and associated partnerships, as articulated in the outcome documents of several global meetings including the fourth session of the United Nations Environment Assembly of the United Nations Environment Programme, held in Nairobi on 13-19 March 2019, and in United Nations General Assembly resolutions on oceans and the law of the sea 73/124 of 31 December 2018, 74/19 of 20 December 2019, and 75/239 of 5 January 2021.

I. Key achievements

7. Pursuant to the mandate in the 2018 Bali Declaration, UNEP has focused its resources on engaging strategically with Governments and other stakeholders to address the three priority source categories (nutrients, marine litter and wastewater) through three global voluntary multi-stakeholder partnerships: the Global Partnership on Nutrient Management (GPNM), the Global Partnership on Marine Litter (GPML) and the Global Wastewater Initiative (GW²I). Efforts have been 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 the GEF International Waters focal area and relevant regional initiatives.

8. Through the three partnerships on marine litter, nutrients and wastewater a number of activities have been carried out and stakeholders have been convened throughout the reporting period. The three partnerships, which have steadily grown during the reporting period, bring together over 700 partners. Thousands of people have been reached through webinars and trainings related to marine litter, nutrients and wastewater, including through the Massive Open Online Courses (MOOCs) offered by the Global Programme of Action in the three source categories.

A. Addressing key land-based sources of pollution

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

1. Nutrient discharges

10. At the United Nations Commission on Sustainable Development on 6 May 2009, the Global Partnership on Nutrient Management (GPNM) was launched to promote effective nutrient management in order to achieve the goals of food security through increased productivity, and conservation of natural resources and the environment. The GPNM reflects the need for strategic, global advocacy to trigger governments and stakeholders to move towards lower nitrogen and phosphorus inputs by human activities. It provides a platform for governments, UN agencies, scientists and the private sector to forge a common agenda, mainstreaming best practices and integrated assessments.

11. The fourth session of the United Nations Environment Assembly (UNEA-4) on 11-15 March 2019 adopted the resolution on Sustainable Nitrogen Management¹, which recognizes that anthropogenic reactive nitrogen pollution has adverse impacts on terrestrial, freshwater and marine

¹ <https://wedocs.unep.org/bitstream/handle/20.500.11822/28478/English.pdf?sequence=3&isAllowed=y>

environments and that poor nutrient (nitrogen and phosphorus) management contributes to food insecurity.

12. A Nitrogen Working Group, in which 45 countries currently participate, supports implementation of the UNEA-4 resolution. Its first meeting took place in June 2020 with more than 160 delegates, representing over 50 countries and Conventions, participating online.
13. A UN Global Campaign on Sustainable Nitrogen Management, championed by the Government of Sri Lanka, was launched on 23-24 October 2019 in Colombo with the theme “Everywhere and Invisible; Halve Nitrogen Waste by 2030”. The outcome of the launch was the adoption of the Colombo Declaration, which calls on countries to consider developing national roadmaps for sustainable nitrogen management, conduct comprehensive assessments on qualitative and quantitative nitrogen cycling, and promote innovative technologies for nitrogen use and cycling, while carrying out capacity-building activities on sustainable agricultural practices, with the goal of halving nitrogen waste by 2030. As a follow-up, UNEP is finalising a communications roadmap on sustainable nitrogen management, which will be linked to UNEP’s #BeatPollution campaign and create further awareness on this complex topic.
14. The GPNM contributed to the 2018/19 edition of the UNEP Frontiers Report on emerging issues of environmental concern, which was launched on 4 March 2019 with a dedicated chapter on nitrogen “The Nitrogen Fix: From Nitrogen Cycle Pollution to Nitrogen Circular Economy”.
15. A GEF-funded Global Nutrient Cycle (GNC) project, which was supported by the Coordination Office, was completed in April 2019. The main outputs of the GNC project were the development of a global nutrient management toolbox to demonstrate the importance of leveraging diverse partners towards nutrients management from field to national scale; and the development of a nutrient flow model – and an application of the global NEWS model, scaling it down to Manila Bay. In addition, Ecosystem Health Report Cards designed to easily convey information to decision makers and stakeholders on the state of health of water and lake environments were developed through the GNC project and applied in the context of the Chilika Lake, India, and Laguna de Bay, Philippines.
16. China (Chongming island) and India (Pulicat lagoon) have now also developed Ecosystem Health Report Cards. The results from these assessments aim to inform policy and investment planning on the best management practices for improving the environmental quality of water bodies, and opportunities for further policy mainstreaming.
17. As a follow-up to the GNC project, 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 a GEF-funded project entitled “Towards the Establishment of an International Nitrogen Management System”. This project is implemented by UNEP and executed by the UK Centre for Ecology and Hydrology and the International Nitrogen Initiative.
18. UNEP, within the scope of the GPNM, supports 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 Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartagena Convention) in harmonizing institutional responses to address the recent proliferation of sargassum seaweed in the central Atlantic Ocean, which severely affects coastal fisheries and tourism sectors in both West Africa and the Caribbean. Scientific cooperation is being strengthened through the work of the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP).
19. Sargassum invasion affecting countries on both sides of Atlantic is attributed to increasing nutrient run-off, along with climate change and other factors. GPNM supported the Cartagena and Abidjan Regional Seas Conventions through several joint webinars, in collaboration with the International Oceanographic Commission (IOC) of UNESCO (IOC-UNESCO). This collaboration resulted in the launch of a UNEP Foresight Brief focusing on sargassum “From ‘brown tide’ hazard to a ‘golden jewel’ opportunity” in 2021.
20. Further collaboration with the Regional Seas Conventions, including Cartagena Convention and the Coordinating Body of the East Asian Seas (COBSEA), on nutrient management were carried out during 2020-21. A regional nutrients reduction strategy was jointly developed to support the implementation of the Cartagena Convention and the Land-Based Sources of Marine Pollution Protocol. For the COBSEA region, a joint desk study was completed on nutrient pollution as a regional and transboundary challenge in the East Asian Seas region, which was presented to the nine COBSEA participating countries through a joint webinar in January 2021.

21. UNEP and IOC-UNESCO are the custodian agencies for Sustainable Development Goal (SDG) target 14.1 marine pollution indicators. 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" is to be measured using indicator 14.1.1a (index of coastal eutrophication) and 14.1.1b (floating plastic debris density). UNEP has formed a global partnership with the Group on Earth Observations (GEO) Blue Planet initiative to operationalize a global product on chlorophyll-a concentrations. This activity was presented at the Global Ocean Observation Conference in September 2020 and reviewed by experts. UNEP, through the GPNM and IOC-UNESCO, is developing a global model for total nitrogen, total phosphorus and dissolved silica delivered at river mouth that will contribute to the calculation of the Index for Coastal Eutrophication Potential (ICEP) and to reporting of data under SDG indicator 14.1.1a.

22. During the Pre-Summit of the UN Food Systems Summit in 2021, GPNM organized in collaboration with the Food and Agriculture Organization of the United Nations (FAO) a webinar on sustainable nitrogen management for sustainable food systems. Furthermore, collaboration between GPNM, the GPML and GRID Arendal resulted in a working paper on agricultural plastics. A joint webinar was also convened with FAO on this topic in conjunction with World Soil Day on 7 December 2021.

2. Marine litter and plastic pollution

23. The Global Partnership on Marine Litter (GPML), one of the three global voluntary multi-stakeholder partnerships, brings together stakeholders to collaborate in finding solutions to marine litter and plastic pollution. It identifies gaps and emerging issues and creates the awareness required for behavioural change. It contributes to achieving the 2030 Agenda for Sustainable Development, in particular SDG target 14.1.

24. As requested in UNEA resolution 3/7, UNEP continues to strengthen support for the development and growth of the GPML, which currently has 460 members including governments, academia, civil society and the private sector. UNEP provides secretariat services for the GPML and convenes meetings of the GPML Steering Committee five times per year. The GPML reviewed and updated its Framework Document in 2020.² It continues to strengthen ties with its Regional Nodes: UNEP-MAP (Mediterranean), UNEP-CEP (Caribbean), NOWPAP (Northwest Pacific), SPREP (Pacific) and SACEP (South Asia).

25. The GPML has been developing five action tracks, with the aim of advancing in priority areas by connecting key stakeholders and facilitating collaboration and coordination. They are: *Science-policy*; *Action plans on marine litter and plastic pollution*; *Development of guidelines, standards, and harmonization*; *Sustainable innovative financing*; and *Access to all*. Implementation of these action tracks is supported by stakeholders including GESAMP, the University of Wollongong (Australia), the University of Georgia (United States), the International Maritime Organization (IMO), UNEP, FAO, GRID-Arendal, the Ocean Conservancy and the Global Ghost Gear Initiative, members of the Steering Committee of the GPML, and other experts.

26. The fourth iteration of the MOOC was launched in October 2020 in Arabic, Chinese, English, French, Indonesian, Portuguese, Russian, Spanish, Thai and Vietnamese. To date, about 30,000 participants have registered for the courses. "Master classes" on monitoring marine litter and on unnecessary, avoidable and problematic plastic products are currently under development for release in 2022.

27. The GPML has also focused on the application of tools and methodologies for strengthening capacity to use innovative monitoring and assessment approaches in developing countries. UNEP developed an approach for applying some of the methodologies identified in GESAMP's "Guidelines for the Monitoring and Assessment of Plastic Litter in the Ocean"³ and tested the approach through pilot projects. In 2019 a Training of Trainers workshop on monitoring and assessment of marine plastic litter and microplastics was arranged based on these guidelines for countries in East Africa and South-East Asia.⁴ The Training of Trainers is currently being revised to integrate elements from the UNEP report "Monitoring Plastics in Rivers and Lakes: Guidelines for the Harmonization of Methodologies". Applying these guidelines would allow data on plastic pollution in freshwater

² UNEP/GPA/IGR.4/INF/25

³ <http://www.gesamp.org/publications/guidelines-for-the-monitoring-and-assessment-of-plastic-litter-in-the-ocean>.

⁴ <https://www.unenvironment.org/cobsea/events/workshop/training-trainers-monitoring-and-assessment-marine-plastic-litter-and-microplastics>.

ecosystems to be included in national source inventories in a harmonized way. Preparations are being made to pilot the guidelines in three countries in 2022.

28. The GPML supports the development of national action plans to reduce marine litter and plastic pollution. Support has initially been provided to four countries in Africa (Kenya, Seychelles, Tanzania and Uganda) and four in Latin America and the Caribbean (Ecuador, Guatemala, Mexico and Saint Lucia).

29. UNEP's work on marine litter has contributed to raising global awareness of the issue and to the adoption of four resolutions on marine plastic debris and microplastics by the UN Environment Assembly. The first Environment Assembly in 2014, in its resolution 1/6,⁵ recognized the need to take urgent action to address the challenges posed by marine plastic debris and microplastics and welcomed the establishment of the GPML.

30. The UNEP report "From Pollution to Solution: A global assessment of marine litter and plastics pollution"⁶ describes the sources and pathways of marine litter and plastic pollution and their impacts on ecosystems, economies and society, including negative effects on human health and climate. It was developed with guidance of a Scientific Advisory Committee consisting of 67 experts nominated by Governments and major groups and stakeholders. The assessment and a synthesis were launched on 21 October 2021.

31. Other knowledge products developed by UNEP to inform decision-making and support evidence-based action include the following:

- (a) "Drowning in Plastics – Vital Graphics on Marine Litter and Plastic Waste"⁷ was developed by UNEP in collaboration with the Secretariat of the Basel, Rotterdam and Stockholm Conventions and GRID-Arendal. It provides an overview of global challenges related to marine litter and plastic waste, using graphic illustrations accompanied by condensed descriptions of key thematic areas.
- (b) "Neglected: Environmental Justice Impacts of Marine Litter and Plastic Pollution"⁸ explores the environmental justice impacts of marine litter and plastic pollution. It looks at how vulnerable communities are disproportionately and negatively affected during all stages of the plastic life cycle.
- (c) "Monitoring Plastics in Rivers and Lakes: Guidelines for the harmonization of methodologies"⁹ provides guidance on the monitoring and assessment of plastic contamination in freshwater environments.
- (d) A series of studies¹⁰ comparing the life cycle impacts of single-use plastic products with those of their alternatives, including "Single-Use Plastic Bags and Their Alternatives: Recommendations from Life Cycle Assessments". With the support of the UNEP-hosted Life Cycle Initiative and in response to UNEA-4 resolution 9 and others whose aim it is to tackle marine litter and plastic pollution, an overall report "Addressing Single-Use Plastic Products Pollution using a Life Cycle Approach"¹¹ which includes recommendations for policymakers, was launched on 19 February 2021.
- (e) "Sea-based Sources of Marine Litter"¹² aims to build a broader understanding of sea-based sources of marine litter, particularly from the fishing and shipping sectors, including the relative contributions of different sources, an analysis of plastic use and management in both sectors, and the range and extent of impacts from all sea-based sources of marine litter. This report was developed by GESAMP Working Group 43. Lead agencies were FAO and IMO, with co-sponsorship by UNEP.

⁵ <http://wedocs.unep.org/bitstream/handle/20.500.11822/17285/K1402364.pdf?sequence=3&isAllowed=y>.

⁶ <https://www.unep.org/resources/pollution-solution-global-assessment-marine-litter-and-plastic-pollution>

⁷ <https://www.unep.org/resources/report/drowning-plastics-marine-litter-and-plastic-waste-vital-graphics>

⁸ <https://www.unep.org/resources/report/neglected-environmental-justice-impacts-marine-litter-and-plastic-pollution>

⁹ <https://www.unep.org/resources/report/monitoring-plastics-rivers-and-lakes-guidelines-harmonization-methodologies>

¹⁰ <https://www.lifecycleinitiative.org/single-use-plastic-products-studies/>

¹¹ <https://www.unep.org/resources/publication/addressing-single-use-plastic-products-pollution-using-life-cycle-approach>

¹² <http://www.gesamp.org/publications/sea-based-sources-of-marine-litter>

- (f) “Policy Options to Eliminate Additional Marine Plastic Litter by 2050 under the G20 Osaka Blue Ocean Vision”¹³ was developed by the UNEP International Resource Panel. It was commissioned by the Government of Japan on behalf of the Group of Twenty (G20).
- (g) A legislative guide to the regulation of single-use plastics is being developed with a broader policy toolkit as part of the Law and Environment Assistance Platform.¹⁴

32. UNEP has continued to provide key support to the implementation of UNEA resolutions, in particular by supporting the ad hoc open-ended expert group on marine litter and microplastics (AHEG),¹⁵ which held four meetings in May 2018, December 2018, November 2019 and November 2020. At the last meeting, held online on 9-13 November 2020, the expert group looked at potential options for continued work to be considered by UNEA. It adopted a chair’s summary¹⁶ setting out, among others, potential options for continued work. In response to paragraph 24 of the chair’s summary “Taking into account the broad agreement on the ‘two step approach’ for UNEA-5, the AHEG appreciated the willingness of the Executive Director of UNEP to ensure that the work undertaken to date remains current and updated for purposes of the resumed session of UNEA-5, and, upon request, to organize informal preparatory consultations in support of preparations for the resumed session”, UNEP has provided technical and logistical support to a number of informal country-driven processes including the Ministerial Conference on Marine Litter and Plastic Pollution co-convened by Ecuador, Germany, Ghana and Viet Nam that was held on 1-2 September 2021 in Geneva and online, as well as its two preparatory meetings in May and June 2021. The Ministerial Statement finalized during the Conference has been endorsed by 75 countries.¹⁷

33. UNEP 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 (NOWPAP), the Permanent Commission for the South Pacific (CPPS), the Secretariat of the Pacific Regional Environment Programme (SPREP), the South Asia Cooperative Environment Programme (SACEP), the Coordinating Body on the Seas of East Asia (COBSEA), the Nairobi Convention, the Tehran Convention (Caspian Sea), Protection of the Arctic Marine Environment (PAME), the Baltic Marine Environment Protection Commission (HELCOM) and the North-East Atlantic Region (OSPAR). It has also supported development of the Regional Action Plan on Marine Litter for the Northeast Pacific (for Latin America), which is in the final stages to be launched in 2022.

34. The Clean Seas campaign and related activities play a key role in disseminating knowledge generated. On 22 November 2021 it launched “Clean Seas 2.0 – From Source to Sea”. This new phase will build from a focus on eliminating single-use plastic products to communicating more broadly on unnecessary, avoidable and problematic plastics together with the root causes associated with their production, use and disposal from source to sea. The Clean Seas campaign 2.0 roadmap prioritizes action on the most problematic products, sources and sectors through four concerted activations under the overarching campaign message of urgency and profound actions to turn the tide against marine litter and plastic pollution. These activations will run from November 2021 to May 2022.

35. Additional activities in support of the Clean Seas campaign include the “Tide Turners Plastic Challenge Badge”, which seeks to increase awareness and educate young people on challenges and solutions related to the production and waste of single-use plastics. Over 214,000 young people have been engaged in 32 countries in Africa, Asia and the Caribbean. More than 2,400 young champions have been trained on advocacy through Advocacy Bootcamps.

36. The GPML Digital Platform is a multi-stakeholder and partly open source initiative that compiles, and uses crowdsourcing to access different resources on marine litter and plastic pollution, integrating data and connecting stakeholders to guide and coordinate ad hoc and regular action.¹⁸ The

¹³ Available at <https://www.resourcepanel.org/reports/policy-options-eliminate-additional-marine-plastic-litter>

¹⁴ See <https://leap.informea.org/>

¹⁵ More information available at <https://www.unep.org/environmentassembly/expert-group-on-marine-litter>

¹⁶ The summary is annexed to the report of the meeting and is also available at <https://environmentassembly.unenvironment.org/chairs-summary-aheg-4>.

¹⁷ <https://ministerialconferenceonmarinelitter.com/ENDORSEMENTS/>

¹⁸

<https://wedocs.unep.org/bitstream/handle/20.500.11822/34453/UNEP%20GPML%20Digital%20Platform%20Concept%20for%20User%20and%20Partner%20Consultations%20May%202021.pdf>

Digital Platform is being developed using a phased approach. A series of releases, informed by user-centred design, will culminate in a final version in June 2023

37. In June 2021 UNEP, the GPML and IOC-UNESCO launched the Ontology Community of Practice (CoP) to develop the first marine litter and plastic pollution ontology, creating a coherent and machine-readable classification for marine litter and plastic pollution and driving harmonization of existing definitions and terminology. The Ontology CoP plays a pivotal role in connecting experts with ontology developers to ensure the highest possible accuracy and utility of the ontology. A Data Harmonization CoP will soon be launched to derive standards and consistent methodologies, which will be underpinned by harmonized terminology.

3. Wastewater

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

39. During the reporting period the Global Wastewater Initiative continued its work to mobilize stakeholders to address unregulated and illegal discharges of untreated wastewater into the natural environment. Through projects and activities the Initiative has encouraged wastewater reuse and recovery and aimed at changing the paradigm from perceiving wastewater as waste to considering it a valuable resource for preventing pollution and enhancing water security. It has also encouraged policy and institutional reforms in support of new investment in wastewater management. Managing wastewater sustainably may have numerous benefits: it can create jobs, support livelihoods, enhance human well-being and improve the health of ecosystems.¹⁹ The Initiative has also focused on capacity development and training, promotion of best practices, effective technologies and successful policies, awareness-raising and communication, addressing data gaps and trends, and generating knowledge.

40. As a direct response to UNEA resolution 3/10, “Addressing water pollution to protect and restore water-related ecosystems,” UNEP provided technical and financial support to the county Government of Vihiga, Kenya, to address pollution from wastewater and nutrients. In January-June 2021 the implementing partner developed and finalized a county environmental action plan, a county waste management strategy, and a draft waste management policy. The county Government of Vihiga also identified construction of an ablution block as a measure to tackle improper sanitation and consequent wastewater pollution. Locating the ablution block near a market will improve current provision of sanitation. The goal is to reduce pollution from wastewater and improve people’s health.

41. With support of UNEP, ACT Malaysia has completed a demonstration project focusing on tackling wastewater pollution in Sabah Marine National Park in northern Malaysia. The purpose of the project was to empower villagers to sustain their livelihoods and avoid water-borne diseases. This project demonstrates a successful alternative, low-cost technology for wastewater treatment, economic development and community empowerment with the potential for large-scale replication. The United Nations Department of Economic and Social Affairs (UN DESA) selected the project as one of the SDG Good Practices.

42. UNEP and the Bremen Overseas Research and Development Association (BORDA), a member of the Global Wastewater Initiative, have concluded a project to build the capacity of wastewater management stakeholders in Tanzania. The project translated the 2018 “Guidelines for Application of Small-Scale, Decentralized Wastewater Treatment Systems” into Swahili. On 8-11 June 2021 BORDA and UNEP organized a training in Dar es Salaam for key stakeholders from Tanzania in order to disseminate the guidelines and build their capacity with respect decentralized wastewater treatment systems.

43. Use of wastewater for reforestation and afforestation has been supported by UNEP in Ghana and Niger. In Ghana the project contributed to increasing forest cover by 55 per cent on degraded lands at the Sakumo Ramsar site and promoted coconut tree planting using treated wastewater while generating income for local communities.

44. The “Sanitation and Wastewater Atlas of Africa” was launched on 2 February 2021. It is the flagship result of a four-year project implemented jointly by UNEP, GRID-Arendal and the African Development Bank (AfDB). The purpose of the project was to understand the status of wastewater

¹⁹ <http://staging.unep.org/gpa/documents/gwi/GWIFactsheet.pdf>.

management and sanitation across the African continent. The Atlas consists of chapters focusing on aspects of wastewater management, including ecosystems, human health, policies, and the circular economy. It also contains detailed country profiles. The Atlas is a tool to help policymakers and the public in Africa and beyond to understand and address gaps and opportunities in this sector in support of SDG 6, which seeks to ensure safe drinking water and sanitation for all. A webinar on 2 March 2021 focused on the process that led to the creation of the Atlas and presented the publication's main findings and key messages.

45. UNEP and the Stockholm Environment Institute, a member of the Global Wastewater Initiative, launched on World Water Day 22 March 2021, the second edition of the report "Sanitation, Wastewater Management and Sustainability: From Waste Disposal to Resource Recovery." The report, which is available in English and Spanish, explains how improved sanitation and wastewater management can benefit people and the environment. Two new case studies have been added related to the closed-loop wastewater system in Hamburg, Germany, and off-grid sanitation services converting faecal sludge into charcoal briquettes in Kenya.

46. UNEP has organized at least three wastewater-related webinars every year focusing on financing, COVID-19 and wastewater, nature-based solutions, emerging pollutants and other topics. To mark UN World Toilet Day, it organized, together with the members of the Global Wastewater Initiative, a symposium on wastewater and sanitation on 19 November 2021. The MOOC "From Source to Sea to Sustainability", jointly developed by UNEP and Concordia University (Canada), was made available in April 2019, January 2020 and 2021. It provides a holistic conceptual and practical approach covering the scientific basics of nutrient cycling and pollution impacts, methodologies and assessment tools, financial mechanisms for water protection, policy and governance issues, and technologies for turning waste into resources.

B. Regional initiatives

47. 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, D.C. 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, revitalization of the Regional Seas Programmes.

48. At the fourth Intergovernmental Review Meeting, Governments noted that the follow-up work of the Global Program of Action should include improvement of coordination, engagement and support for work with Member States on land-based pollution, and fostering of linkages with the Regional Seas Programme and other relevant platforms and international initiatives for effective delivery. In the Regional Seas Strategic Directions (2017-2020) UNEP made a commitment to reduce marine pollution of all kinds in line with the SDG target 14.1. The Regional Seas Conventions and Action Plans continue to act as effective vehicles for expediting implementation of the GPA, facilitating the development and adoption of region-based action plans and strategies as well as capacity-building workshops and training courses on waste management and ocean governance. Several Convention secretariats have also developed robust monitoring programmes to assess compliance by Member States, as well as implementing regional projects, developing guidelines, and producing scientific reports aimed at mobilizing action in support of the priority source categories of the Global Programme of Action.

49. The ongoing project "Enhancing Marine Management in West, Central and Southern Africa through Training and Application", implemented by GRID-Arendal and the Abidjan Convention Secretariat, aims to strengthen national and regional action to capture the value of marine and coastal ecosystems. In 2019 the Grand Bassam Protocol on Pollution from Land-based Sources and Activities was adopted during a meeting of Abidjan Convention plenipotentiaries.

50. From 4 to 13 March 2021, a series of webinars were organized on plastic waste management in the region, with the objective of providing a regional framework for the plastic pollution issue. The "Sargassum White Paper" highlights collaboration with the Abidjan Convention on sargassum, which is related to nutrient management. The 13th Conference of the Parties was held on 13-17 December 2021 in Pointe Noire (Republic of the Congo) with the theme "Ocean governance for sustainable development of the countries of the Abidjan Convention".

51. During the 21st Meeting of the Contracting Parties to the Barcelona Convention in December 2019, a Mediterranean Marine Litter Node was launched to further the UNEP Mediterranean Action Plan (UNEP/MAP). This Node provides a regional hub for knowledge and information sharing, networking and partnerships for the region. The Mediterranean Action Plan was revised in 2021 to widen

its scope from single-use plastics to other plastic products of priority; promote extended producer responsibility schemes and circular economy measures; and include prevention and action measures.

52. Several other developments within the region include implementation of 25 Adopt-a-Beach pilots in nine Mediterranean Countries; implementation of Fishing-for-Litter pilots in four Mediterranean countries; provision of technical assistance to five Mediterranean countries to enhance public authorities' capacities to phase out single-use plastic bags and promote extended producer responsibility for food and beverage packaging. Pilots for better management of sea-based litter in ports and marinas have been implemented in seven Mediterranean countries and the region is also working towards finalizing the legally binding regional plans for wastewater treatment and for sewage sludge management.

53. Of the 26 Contracting Parties to the Cartagena Convention, 16 have ratified the Protocol Concerning Pollution from Land-Based Sources and Activities to the Cartagena Convention. A project developed through the GPML – Caribbean Node (GPML-Caribe), in collaboration with the Global Ghost Gear Initiative, focuses on minimizing the occurrence and impact of abandoned, lost or otherwise discarded fishing gear through assessment of port reception facilities, identification of innovative technologies, data collection, and promotion of best practices including peer-to-peer exchanges at the regional and global levels. This project is carried out in cooperation with artisanal fishing communities in the wider Caribbean.

54. The GEF-funded CreW+ project, co-implemented by UNEP and the Inter-American Development Bank in 18 countries of the Wider Caribbean Region, is an integrated approach to water and wastewater management in the region focusing on policy development, knowledge management, financing and technical solutions for sustainable wastewater management.

55. A 2019 report on the status of styrofoam and other plastics bans in the Wider Caribbean Region, finalized by the Secretariat for the Cartagena Convention and the Caribbean Environment Programme, highlights ongoing efforts and lessons learned. It aims to support future efforts to control the manufacture and use of single-use plastics and other persistent materials. A Regional Nutrient Pollution Reduction Strategy and Action Plan, adopted in July 2021, provides a roadmap with short-, medium- and long-term actions, targets and indicators to support countries in the region to reduce pollution from excess nutrients in an integrated matter.

56. The Secretariat of the Cartagena Convention supports the development of national action plans for reducing marine litter and plastic pollution, community-based projects for plastics reduction using a circular economy approach, management of ship-generated waste including plastics, improving national policies, legislation and regulations on plastics management, and promotion of research on the occurrence and impacts of microplastics in the region through the EU-funded African, Caribbean, and Pacific Countries Capacity Building of Multilateral Environmental Agreements (ACP MEA) project.

57. Parties to the Convention on the Protection of the Marine Environment of the Baltic Sea Area (HELCOM) adopted a revised Regional Action Plan on Marine Litter as the main regional tool for achieving marine litter ecological and management objectives, ensuring that there are measures in place to address the most common and harmful litter items found in the Baltic Sea region. The Baltic Sea Action Plan (BSAP) was revised in 2021. It is divided into four segments, seeking to reflect pressures from land (“Eutrophication” and “Hazardous substances and litter”) and activities at sea (“Sea-based activities”), as well as the state of the environment (“Biodiversity”). The BSAP is supported by the HELCOM Nutrient Reduction Scheme, a regional approach to sharing the burden of nutrient reductions and the Baltic Sea Regional Nutrient Recycling Strategy.

58. The Contracting Parties to the Nairobi Convention adopted the Western Indian Ocean Regional Action Plan on Marine Litter in 2018. Subsequently a Western Indian Ocean Marine Litter Working Group, a regional forum to coordinate stakeholder participation in marine litter management, was established. In 2020 the Western Indian Ocean Marine Spatial Planning (MSP) Technical Working Group was formed with the broad goal of providing policy guidance to the Nairobi Convention and synthesizing information on MSP. The Contracting Parties are implementing a marine litter monitoring programme in the region through the Western Indian Ocean Marine Science Association (WIOMSA), in collaboration with the Sustainable Seas Trust, the African Marine Waste Network and country partners.

59. At the tenth meeting of the Conference of the Parties to the Nairobi Convention, held virtually on 23-25 November 2021, Member States agreed to establish a regional task force on water quality to support the development of a water quality monitoring framework and guidelines on national

interventions, and to finalize the preparation of a regional action plan to address marine litter and plastic pollution for adoption at the eleventh meeting of the Contracting Parties.²⁰

60. In 2017 the Strategic Action Programme Policy Harmonization and Institutional Reforms (SAPPHIRE) project was initiated to deliver the work called for in the Strategic Action Programme of the Nairobi Convention. A Regional Training Workshop on Ocean Governance to support capacity development to realize improved ocean governance in the Western Indian Ocean (WIO) region was conducted in 2021 under the SAPPHIRE project. In parallel, the Implementation of the Strategic Action Programme for the protection of the Western Indian Ocean from land-based sources and activities (WIO-SAP) project is being delivered to reduce impacts from land-based sources and activities and sustainably manage critical coastal-riverine ecosystems through implementation of the WIO-SAP priorities, with the support of partnerships at national and regional levels. Twenty demonstration projects are currently being implemented under the WIOSAP project, focusing on critical habitats restoration, improving water quality, and sustainable river management.

61. The Nairobi Convention Secretariat, in collaboration with the GPA, has also worked to address wastewater pollution. In 2019 it provided training on tools developed under the GPNM and the GW²I. Among the tools featured were the wastewater technology screening assessment tool developed by the GW²I in association with the International Water Association, and the Ecosystem Health Report Card that has been applied in GPNM-supported projects in India and the Philippines. The tools were used in the development and implementation of on-the-ground interventions in countries participating in the GEF-WIOSAP Project.

62. An Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region (NOWPAP) Tripartite Environment Ministers Meeting between China, Japan, and Korea Joint Workshop on Marine Litter Management was held online on 15 September 2021, with the goal of reviewing progress on marine litter management in the NOWPAP region including policy changes, updated statistics, investments and new approaches. Back-to-back with this workshop, experts from all four NOWPAP countries met on 16 September 2021 to assess progress in implementing the Regional Action Plan on Marine Litter. UNEP, through its Global Programme of Action secretariat, is currently assisting in advancing the Northwest Pacific Regional Node of GPML. Several projects, including research on microplastic pollution and abandoned fishing gear, are among these efforts.

63. The Northwest Pacific Regional Node of the GPML hosts the Data, Information and Networking Regional Activity Centre (DINRAC). The Regional Node showcased its efforts and shared experiences in combating marine litter at a global webinar on 29 March 2021, in collaboration with the GPML secretariat. This webinar was the first in a series of similar events highlighting the efforts of GPML's Regional Nodes.

64. The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) is developing a new Regional Action Plan on Marine Litter, which will include a set of prioritized objectives to address new and emerging issues and to reduce the impacts of those items causing most harm to the marine environment. In October 2021, at the Ministerial Meeting of the OSPAR Commission, members adopted the new North-East Atlantic Environment Strategy 2030. The objective and activities of the Strategy will focus on preventing inputs of and significantly reduce marine litter, including microplastics, to reach levels that do not cause adverse effects in the marine and coastal environment, with the aim of eliminating inputs of litter. The members also adopted the Cascais Declaration and committed to achieve a clean, healthy and biologically diverse North-East Atlantic that is productive, used sustainably, and resilient to the effects of climate change and ocean acidification. This goal will be accomplished by putting into action the new Strategy 2030. OSPAR recommendation 2021/06 on reduction of plastic pellet loss into the marine environment was also adopted.

65. The Regional Marine Litter Action Plan for South Asian Seas Region was adopted in 2019 at the Sixth Inter-governmental Meeting of Ministers of the South Asian Seas Programme. To further work on marine litter and plastic pollution, the Fifteenth Meeting of the Governing Council approved the South Asia Co-operative Environment Programme (SACEP) 2020-2030 Strategy. Goal 3 of the Strategy is to ensure effective waste management, including waste streams comprising chemicals, hazardous wastes, plastics and wastewater. SACEP, the World Bank and Parley for the Oceans are collaborating in the formulation and implementation of a regional project on Plastics Free Rivers and Seas for South Asia. The Project will help South Asia curb marine plastic pollution and ramp up eco-innovation to reinvent plastic use and production.

²⁰https://www.nairobiconvention.org/clearinghouse/sites/default/files/Adopted%20Decisions%20for%20COP10_25_11_21_12.00pm_CLEAN.pdf

66. In parallel, SACEP and the Institute for Global Environmental Strategies Centre, collaborating with UNEP on Environmental Technologies (CCET) have developed a Status Report on Waste Management in South Asia and a roadmap to improve waste management. In 2019 three related workshops took place and the Roadmap for Sustainable Waste Management and Resource Circulation in South Asia, 2019-2030 was approved by the 15th Meeting of the SACEP Governing Council. The Council also approved the Roadmap towards South Asia Nitrogen Framework Policy. SACEP partnered with the South Asian Nitrogen Hub (SANH) in 2019 to study the impacts of different forms of nitrogen pollution and suggest policy interventions. SACEP also supported the Government of Sri Lanka and UNEP, in partnership with SANH, in launching the UN Global Campaign on Sustainable Nitrogen Management. At COP-26 in 2021, it organized a side event with the Government of Sri Lanka on the contribution of nitrogen to Nationally Determined Contributions (NDCs), national climate plans highlighting climate actions, entitled "NDC Update and Nitrogen-Climate Opportunities: From South Asia to the World".

67. The Coordinating Body on the Seas of East Asia (COBSEA) has developed Strategic Directions 2018-2022 and a Working Group on Marine Litter to guide implementation of the Regional Action Plan on Marine Litter adopted in 2019. The SEA Circular Project was initiated in 2019 and its activities feed into the meetings of the Working Group and provide technical assistance on marine litter monitoring. The 25th Intergovernmental Meeting of the COBSEA discussed, *inter alia*, the development of new COBSEA Strategic Directions, the development of a biennial workplan for implementation of the COBSEA Regional Action Plan on Marine Litter, establishment of the East Asian Seas Regional Node of the GPML and Regional Activity Center of COBSEA, and a project document in line with the East Asian Seas Action Plan.

68. COBSEA has conducted several trainings and workshops. A Regional Training Workshop on Marine and Coastal Spatial Planning was followed by a Marine and Coastal Spatial Planning Policy Review Workshop to discuss the draft Marine and Coastal Spatial Planning policy review which will further inform upcoming activities, such as work towards establishing a COBSEA network of marine protected areas and a training on Sustainable Ocean Economy to be held in collaboration with the Blue Solutions Initiative. To further work on nutrient management, a virtual workshop on nutrient pollution, in collaboration with the GPNM, took place to share draft findings of a desk review on nutrient pollution and to exchange views on possible future efforts to address nutrient pollution through COBSEA.

69. The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), at its 38th Meeting in 2019, amended its existing Conservation Measure on General environmental protection during fishing (Conservation Measure 26-01), which has been in force since 2006, extending requirements for environmental protection while vessels are fishing in the Convention Area by prohibiting the discharge of plastics and expanding restrictions on the dumping and discharging of oil or fuel products or oily mixtures into the sea to the whole Convention Area in line with MARPOL.

70. Under the CCAMLR marine debris programme, the Scientific Committee for the Conservation of Antarctic Marine Living Resources continues to monitor and collect data on marine debris, beach debris, the entanglement of marine mammals, and marine debris associated with seabird colonies, as well as recording rare events of animals observed to be contaminated with hydrocarbons. CCAMLR regularly engages with the GPML by contributing information on marine debris monitoring in the Southern Ocean when requested.

71. There has been regular bilateral cooperation between the Black Sea Commission's Permanent Secretariat and UNEP/MAP, an example of successful collaboration between the Regional Seas at the global level. Three annual joint meetings between the two Secretariats were held in the period 2017-2019. During these meetings joint work plans were prepared. The UNEP Secretariat supports several activities under an EU-funded Marine Litter MED project to strengthen bilateral collaboration in the field of marine litter management. There are also agreements with key global and regional organizations covering the seas (General Fisheries Commission for the Mediterranean, and Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area Agreements).

72. A 2020 publication on "Marine Litter in the Black Sea", prepared during the COVID-19 pandemic, includes information from sources of macro- and microlitter in different ecosystems. Interactions of plastics with biota are also presented. This publication highlights knowledge gaps and various aspects of policy and management. The Black Sea Marine Litter Regional Action Plan was adopted by the Black Sea Commission in October 2018. A draft Marine Litter Monitoring Programme for the Black Sea is currently being considered for adoption. The Annual Black Sea Commission Work Programme 2019/2020 sets out general coordination and policy actions for the region. Further work is

planned on implementation of the Black Sea Regional Action Plan on Marine Litter and adoption of the Monitoring Programme, as well as a list of common monitoring indicators

73. At the 12th Ministerial Meeting of the Arctic Council, held in Reykjavik, Iceland on 20 May 2021, members of the Arctic Council adopted the Regional Action Plan on Marine Litter in the Arctic and the Arctic Council Strategic Plan 2021-2030. The Arctic Council's Arctic Marine Strategic Plan 2015-2025 establishes 40 Strategic Actions to safeguard Arctic marine and coastal habitats. As part of the first phase of the Marine Litter Project Work Plan 2017-2019, Protection of the Arctic Marine Environment (PAME) carried out a desktop study on marine litter, including microplastics, in the Arctic. The Working Group on Arctic Monitoring and Assessment Programme (AMAP) has developed a comprehensive monitoring plan and technical guidelines for monitoring litter and microplastics in the Arctic.

74. Additional ongoing work in the Arctic region includes coastal clean-ups that will contribute to enhancing efforts to remove litter and improve fishing practice, and a gear inventory that focuses on enhancing understanding of abandoned, lost or otherwise discarded fishing gear.

75. In 2018 the Regional Action Plan for the Sustainable Management of Marine Litter in the Red Sea and Gulf of Aden (English version) was adopted by the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) of the Jeddah Convention. To further the Marine Litter Program, guidelines to prepare a National Action Plan to manage marine litter were developed in English in 2019 and in Arabic in 2020. At the national level, the Egyptian National Action Plan for the Sustainable Management of Marine Litter in the Red Sea Coast is in progress and the Saudi National Action Plan for the Sustainable Management of Marine Litter in the Red Sea Coast is under development as well.

76. Several workshops have been initiated to further the Marine Litter Program's aim and priority actions identified by the Regional Action Plan. They include workshops on Liability and Compensation for Ship-source Pollution; Assessment of Marine Litter in Yemen; MARPOL Annex V and VI; Oil Spill Preparedness, Response and Shoreline Clean-up; Tabletop Exercise on Oil Spills Crisis Management; The Uses of Dispersants in Marine Oil Spill Response; Preparedness and Response to Oil Spills, Focusing on the International Legal Framework; Implementation and Enforcement of MARPOL Annex V; and Port Reception Facilities and MARPOL Annex V.

77. Marine pollution has been a key focus of the Regional Organization for the Protection of the Marine Environment (ROPME) of the Kuwait Regional Convention since its establishment in 1979. The Council of ROPME, during their Fifth Extraordinary Meeting held on 8th March 2021, passed a resolution to establish a regional organization for the protection of the marine environment which should be a specialized committee of leading scientists from member states to review and direct this regional organization's programmes for the protection of the marine environment. The ROPME Secretariat has been storing collected marine samples at the Marine Sample Bank under the ROPME monitoring programmes. Data obtained from analyses of these samples is used to develop the spatial and temporal integrated trends of the marine environmental status in the region. A paper, "Marine plastic litter in the ROPME Sea Area: Current knowledge and recommendations", was published in 2020.²¹

78. Experts from the Caspian littoral states developed an initiative, "Addressing Marine Litter in the Caspian Sea Region", which was carried out by Kazakhstan's Public Fund Water Initiatives Center under the auspices of the Tehran Convention Interim Secretariat and supported by the Coca-Cola Foundation under the Global Water Challenge. Its activities took place between October 2018 and May 2020. Through this initiative a national and region-wide network of professionals and experts from various sectors in the field of marine litter was established through the Caspian Environment Information Center as a web-based cooperation platform, as well as through international trainings on marine litter and sustainable tourism strategies and through coastal clean-up campaigns in the Caspian countries on Caspian Sea Day in 2019. Subsequently experts discussed and agreed on the Caspian Regional Marine Litter Action Plan (CRMLAP) draft, which was submitted to the Tehran Convention Contracting Parties. The CRMLAP can be regarded in the context of implementation of the Protocol for the Protection of the Caspian Sea against Pollution from Land-based Sources and Activities (the Moscow Protocol). In November 2021 Kazakhstan ratified the Moscow Protocol.

79. The Caspian Sea State of the Environment 2019 report provides information on status and trends in the region's marine and coastal environment, based on frequent reporting from the Caspian littoral countries and literature sources. According to the terms of the Tehran Convention and its protocols, this

²¹ <https://doi.org/10.1016/j.ecoenv.2019.109839>

report summarizes the current situation of the Caspian Sea's marine ecosystem, taking into consideration sea level change and pollution including from land-based sources.

80. The “Pacific Regional Action Plan: Marine Litter 2018-2025” outlines the policy background as well as important activities to reduce marine litter throughout Pacific Island countries and territories. The Pacific Ocean Litter Project aims to complement existing waste management projects to support delivery of the Secretariat of the Pacific Regional Environment Programme (SPREP) Pacific Regional Action Plan on Marine Litter 2018. The 2019 report summarizes accomplishments with respect to a number of strategic goals, including enhanced waste management and pollution control.

81. The “State of Environment and Conservation in the Pacific Islands: 2020 Regional Report”, released on 29 April 2021, includes a study of environmental trends and circumstances in order to better inform regional decision-making. SPREP serves as the GPML Regional Node for marine litter work in the Pacific. As part of the framework for a Cleaner Pacific 2025, a regional plan established with Pacific leaders and waste management experts and the Regional Node will help reduce duplication of marine litter-related initiatives and encourage cooperation. The Third Clean Pacific Roundtable, conducted online on 16 -25 November 2021, focused on creating a safe Pacific Circular Economy.

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

82. Over the period, staff costs amounted to just over US\$6,3 million. Of that amount, US\$4,4 million was contributed from the UNEP Environment Fund while just over US\$1,9 million was contributed from the regular budget. Extrabudgetary resources allocated to activity implementation by thematic area totalled US\$12,4 million. This included donor contributions from partnership and earmarked funds and funding from the Global Environment Facility. More detailed information is available in Annex 1.

D. 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

83. Since the fourth Intergovernmental Review Meeting, UNEP has enhanced its outreach efforts in terms of communicating through web-based technologies and the production of materials such as flyers, factsheets, videos, policy briefs, research reports and scientific papers in a number of languages.²² MOOCs, campaigns, such as the Clean Seas and Nitrogen Campaigns, press releases, media advisories, press conferences and public service announcements have also been used to enhance the visibility of the work of the Global Programme of Action and its three partnerships in order 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.

84. The Programme has also ensured its presence in major global and regional meetings and conferences through workshops, seminars, and trainings. In addition, programme officials have participated in events organized by partners as resource persons and keynote speakers.

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

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

86. Coastal resources - including fish, minerals and energy - are critical to people, nature and the economy, and are a focus for the emerging sustainable blue economy agenda. It has long been recognized that a particular challenge in coastal areas is the management of land-based activities that generate detrimental impacts on coastal resources in the marine environment. Many of these pressures are negative externalities of land-based human activities that are not taken into account within existing resource-governance frameworks primarily focused on sectors. Therefore, the evolution of a comprehensive approach to land-sea governance that take account of how land-based activities affect the quality and availability of coastal resources has been the focus of GPA²³.

²² <http://unep.org/gpa/resources/Videos.asp>.

²³ <https://www.unep.org/resources/publication/governing-coastal-resources-implications-sustainable-blue-economy>

87. The Global Programme of Action and its priority action areas – nutrients, marine litter and wastewater – have been embedded into the programme of work of UNEP. In the UNEP programme of work for the biennium 2020-2021, the work of the Global Programme of Action contributed to the following indicator under the expected accomplishments of the chemicals, waste and air quality subprogramme: “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.

88. During the current reporting period the work has continued to be implemented through the UNEP programme of work, in particular through the project “Protecting the Marine Environment from Land-Based Pollution through Strengthened Coordination of Global Action”.

89. Efforts to address land-based sources of marine pollution also have been gradually embedded in other parts of the programme of work of UNEP, such as the work on sustainable consumption and production, environmental governance, the new plastics economy global commitment, GEF projects globally and in the regions, and the work of the International Resource Panel (IRP) of UNEP.

II. Lessons learned and the way forward

90. Historically the management of our ocean has been fragmented by natural, legal and administrative boundaries. Land-based and ocean-based activities have been governed independently creating a disconnect between where impacts are experienced and where they originate²⁴.

91. The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities has been providing meaningful contributions over the years to overcome policy fragmentation, as demonstrated by the Programme’s implementation during the period 2019-2021, as well as the role played by UNEP as its secretariat. The Programme is recognized as a valuable international cooperative mechanism guiding national and regional actions to maintain the integrity of the coastal and marine environment and the services they provide which enhance human well-being and sustainable development.

92. The three partnerships (GPNM, GPML and GW²I), facilitated by UNEP pursuant to the decision of the third session of the Intergovernmental Review Meeting, have 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 protect the marine environment from land-based activities.

93. However, marine and terrestrial environments remain being treated as separate governance units. The report “Governing Coastal Resources: Implications for a Sustainable Blue Economy”²⁵, launched in 2021 by the IRP, still found that legal and administrative barriers are determining that land-based activities generate multiple impacts of different strength on coastal resources. The findings clearly showed that coastal resources, particularly living resources, are negatively affected by stressors generated by land-based activities that may take place at great distances from the coast.

94. Onwards, a source to sea governance response within UNEP’s programme of work will support coordinated outcomes that: respect the importance of land-based activities and coastal resources; protect the most vulnerable coastal resources, and sustain healthy ocean economies that rely on living and non-living marine resources. In the context of the UNEP Mid-Term Strategy 2022-2025 a new delivery framework followed by a revigorated resource mobilization strategy will put the land-sea relationship at the centre of action, in terms of both natural connections (such as river basins discharging into the sea) and human connections (such as mass tourism to coastal areas). Close consultations with members States will be carried out as well as regular reporting to UNEA.

²⁴ <https://www.unep.org/resources/publication/governing-coastal-resources-implications-sustainable-blue-economy>

²⁵ <https://wedocs.unep.org/handle/20.500.11822/36325>

**Annex 1. Resources committed to the Global Programme of Action over the implementation period
2019–2021^a**

Staff cost (est. over 3 years)

<i>Source</i>	<i>Total</i>
Global Programme of Action Trust Fund	0
UNEP Environment Fund	4 430 735
UN regular budget ^b	1 907 435
Total^c	6 338 170

Extrabudgetary resources allocated to activity implementation by thematic area (est. over 3 years 2019-21)

<i>Donor</i>	<i>Thematic area</i>			<i>Total</i>
	<i>Nutrients</i>	<i>Wastewater</i>	<i>Marine litter</i>	
Global Environment Facility (UNEP executed)	1 718 182			1 718 182
Canada			55,436	55,436
African Development Bank		550 000		550 000
Denmark	974,950			974 950
Monaco			33,000	33,000
Norway			4 615,700	4 615,700
Sweden	780,000	749,992	1,045,019	2,575,011
Japan			181,818	181,818
United States of America			1,700,00	1,700,000
Total	3 473 132	1, 299, 992	7,630,973	12,404,097

^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.