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**Programme of work and budget, and other
administrative and budgetary issues**

**Progress in the implementation of resolution 3/10 on addressing
water pollution to protect and restore water-related ecosystems**

Report of the Executive Director

Summary

In paragraph 16 of its resolution 3/10,¹ on addressing water pollution to protect and restore water-related ecosystems, the United Nations Environment Assembly of the United Nations Environment Programme (UNEP) requested the Executive Director of UNEP to take a number of steps to address water pollution with a view to protecting and restoring water-related ecosystems. The present report has been prepared in response to the request in paragraph 17 of the resolution that the Executive Director report to the Environment Assembly, at its fourth session, on the implementation of the resolution.

* UNEP/EA.4/1/Rev.1.

¹ UNEP/EA.3/Res.10.

I. Introduction

1. In its resolution 3/10, the United Nations Environment Assembly of the United Nations Environment Programme (UNEP) requested the Executive Director of UNEP, within available resources, (a) to build upon, as needed, the Global Environment Monitoring System/Water Programme Trust Fund to assist developing countries, at their request and within available resources, in water quality monitoring, including by setting up monitoring stations, capacity-building and data management; (b) to assist developing countries, upon their request, by strengthening their capacity to reach the target of halving by 2030 the amount of untreated wastewater reaching water bodies, taking into account gender perspectives, and including the development of wastewater treatment options in collaboration with national Governments, local authorities and, as appropriate, the private sector; (c) to continue to develop tools to support countries, upon their request, in their efforts to address water pollution and ecosystem health, implement integrated water resources management approaches and address water-related impacts of disasters; (d) to work with relevant international organizations, including through UN-Water, to address issues related to water pollution and build upon the 2016 report *A Snapshot of the World's Water Quality* and taking into account, where appropriate, the recommendations made by the analytical brief "Towards a Worldwide Assessment of Freshwater Quality", including assessments of invasive species, pharmaceutical contaminants, emerging pollutants and severe levels of pathogens in water bodies, and proposed solutions, policies and technologies; (e) to cooperate with other relevant organizations, including through UN-Water, to develop a world water quality assessment for consideration by the Environment Assembly at its fifth session; (f) to compile and share information on the analytical and technical requirements for water quality testing for contaminants (including new and emerging pollutants) that may impact human and environmental health; (g) to support countries in data collection, analysis and sharing, which would support the implementation of the water-related Sustainable Development Goals (SDGs), potentially drawing on Earth observations and global data; (h) to provide the necessary technical support to facilitate monitoring and reporting on Sustainable Development Goal 6 on clean water and sanitation; (i) to support member States, as appropriate, in developing programmes that invest in the management of land and ecosystems to prevent pollution of water sources to ensure the availability of quality water in a sustainable manner for all uses; (j) to work with Governments and relevant stakeholders, including the private sector, in creating an enabling environment for addressing water pollution, including sustainable wastewater management, which encompasses supportive policies, legislation and regulations, tailored technologies and innovative financial mechanisms; (k) to assist developing countries, upon their request and within the mandate of UNEP, in cleaning and recovering polluted water bodies.

2. Resolution 3/10 is consistent with expected accomplishment (a) of the healthy and productive ecosystems subprogramme of the UNEP programme of work for 2018–2019 ("The health and productivity of marine, freshwater and terrestrial ecosystems are institutionalized in education, monitoring and cross-sectoral and transboundary collaboration frameworks at the national and international levels") and the expected accomplishment of the environment under review subprogramme ("Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface to generate evidence-based environmental assessments, identify emerging issues and foster policy action").

II. Progress in the implementation of resolution 3/10

3. A coordinated team from the UNEP Ecosystems and Science divisions, including the Freshwater Ecosystems Unit, the Global Environment Monitoring System/Water Programme (GEMS/Water) and the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA), are implementing this resolution in connection with their regular activities under the UNEP programme of work. The following information is taken from the detailed draft action plan for the implementation of resolution 3/10.

4. The GEMS/Water programme supports countries and provides capacity development in the area of water quality monitoring, monitoring network design and data management within its current workplan and available resources until 2020. Recent activities include the launch of a series of short university-accredited online courses on water quality monitoring and face-to-face training events held in different regions in English and French. The GEMS/Water programme has developed a draft strategy document that guides the operations and workplan development of the programme up to 2024, and beyond, where appropriate. This strategy will be refined and reflects both the main mandated activities relating to the resolution and its operational role in monitoring of and reporting on the implementation of the relevant Sustainable Development Goals. UNEP also developed a draft workplan for the full world water quality assessment and has received expressions of interest from

over 50 organizations. The assessment, which will also encompass a water service and innovation platform, was formally launched during a meeting held on 28 and 29 November 2018 in Geneva and hosted by the World Meteorological Organization. Initial support has been made available by the Government of Switzerland and through in-kind contributions from German partners.

5. The Freshwater Ecosystems Unit is coordinating UNEP-wide efforts for monitoring and reporting regarding Goal 6. It is also leading efforts to implement the Framework for Freshwater Ecosystem Management. To date, Ethiopia and Kenya have expressed interest. UNEP has conducted scoping workshops at the most important freshwater lakes in both countries in order to explore potential further action and funding – for example, through the Global Environment Facility. Colleagues from the China Institute of Water Resources and Hydropower Research have volunteered to translate the four volumes of the Framework into Chinese in order to reach a wider audience. The Unit has also helped in the establishment of a partnership between UNEP and Google Earth Engine for tracking changes to water-related ecosystems and aims to expand on that work with additional work and global data sets for analysis. The GEMS/Water programme and the Freshwater Ecosystems Unit are supporting UNEP in further discussions with private-sector entities – for example, with Huawei Technologies about potential collaboration to improve water quality monitoring networks. Collaboration with private-sector entities is aimed at improving water quality data collection, analysis and sharing and tapping into innovative financing mechanisms for wastewater management.

6. GPA provides tools for capacity building with regards to tackling land-based pollution, with multi-stakeholder initiatives related to wastewater through the Global Wastewater Initiative and nutrient loading through the Global Partnership on Nutrient Management that help implement this Resolution. These include a series of webinars to build capacity on sustainable wastewater management; a massive open online course on wastewater and nutrient management titled “From Source to Sea to Sustainability”; and an electronic decision-making tool, the Wastewater Technology Matrix, which can assist countries in selecting the appropriate wastewater treatment technology. The Matrix can be tested and adjusted in select countries on their request. GPA is also working with partners on establishing guidelines and standards for decentralized wastewater treatment systems and has recently developed a guideline document on decentralized wastewater treatment systems in Tanzania that could provide a model for use elsewhere. In the area of nutrient loading, GPA is also leading on the collaboration with IOC-UNESCO and relevant experts on the development of methodologies for the assessment of Sustainable Development Goal 14’s target 14.1, on marine pollution, linked to target 6.3, on wastewater. GPA is also cooperating with the South Asia Cooperative Programme (SACEP) on addressing water pollution and coral reef conservation in eastern Sri Lanka, has completed a demonstration methodology in the Pantanal wetlands in Brazil, and has developed a scoping paper on pharmaceutical and personal care products as well as communication tools for Africa. GPA and the Freshwater Ecosystems Unit supported a technical exchange between collaborators in India and the Philippines to facilitate replication of an ecosystems health report card methodology around addressing water pollution in Lake Naivasha in Kenya. GPA is also working on the issue of technology readiness and financing instruments for sustainable wastewater management in collaboration with the UNEP Science Division.

7. The relevant indicators of achievement in the UNEP programme of work for the biennium 2018–2019 span a number of subprogrammes, with the following being the most relevant:

- Indicator (i) for expected achievement (a) of subprogramme 3: Increase in the number of countries and transboundary collaboration frameworks that have made progress in monitoring and maintaining the health and productivity of marine and terrestrial ecosystems;
- Indicator (ii) for the expected achievement of subprogramme 7: Increase in the number of countries reporting on the environmental dimension of sustainable development through shared environmental information systems with country-level data made discoverable through UNEP;
- Indicator (i) for expected achievement (a) of subprogramme 5: Increase in the number of countries that have used UNEP analysis or guidance, and, where possible, are applying a multi-sectoral approach in developing or implementing legislation, policies or action plans that promote sound chemicals management (including waste) and implementation of the relevant multilateral environmental agreements and SAICM.

8. With a basis in the mandate of UNEP for the environmental water-related Sustainable Development Goal targets, this work is intended to be global in nature, applicable to all countries and implemented based on expressed interest and funding available in specific countries to address water-related ecosystems of concern.

9. There is no specific budget attached to this resolution. Activities undertaken so far have been within existing or additional human and financial resources (extra-budgetary or Environment Fund) leveraged by water-related programmes and partly ongoing activities which started earlier on within the UNEP secretariat, including for work dedicated to the Sustainable Development Goals, particularly Goal 6 in collaboration with other UN agencies under UN-Water. Many activities towards implementing resolution 3/10 have been undertaken to date, including global reporting on Goal 6, organizing the inception meeting and other activities for the world water quality assessment; funding inception workshops to address issues at Lake Tana, Ethiopia, and Lake Naivasha, Kenya; and creating an online data platform for addressing water ecosystem degradation.

10. The secretariat has also initiated dialogue and provided inputs and updates to member States on implementing the resolution, including on how to mobilize additional resources, on a number of occasions, including at the multi-stakeholder meeting on the development of the Environment Assembly 3 Implementation Plan, held on 13 and 14 June 2018 in Paris; at the Stockholm World Water Week at the end of August 2018 in Stockholm; and at a dedicated side event on 23 October 2018, during a meeting of the Committee of Permanent Representatives Subcommittee in Nairobi. These updates were provided in direct response to related requests by member States and have not yet resulted in additional funding. At the last meeting, on 23 October 2018, a draft action plan for the resolution was presented with a budget for implementing this resolution as listed in the table below, where “funds raised” refers to both internal funds dedicated for related activities as noted above, and bespoke funds specifically for this resolution, which include a cash contribution from Switzerland and an in-kind contribution from Germany for the world water quality assessment and an in-kind contribution from Ethiopia for Lake Tana.

Resolution 3/10 area	Funds raised (cash and in-kind, US\$)	Additional funds needed, 2019–2021 (US\$)
SDG 6 monitoring	1.4 million	2.7–4 million
Earth observation and big data	300 000	1.2 million
Tools and capacity-building for integrated water resources management implementation	500 000	3 million
Capacity-building for water quality monitoring	1.2 million	1.5 million
World water quality assessment	600 000	3.9 million
Wastewater management through the Global Wastewater Initiative	500 000	4.8 million
Framework for freshwater ecosystem management	100 000	2 million
Emerging pollutants	100 000	1.4 million
Developing programmes to address land and water management to reduce pollution	1 million	10 million
Total	5.5 million	31.7 million

11. In addition to working across various units and divisions in UNEP, this resolution is also being implemented in collaboration with a number of external partners, including UN-Water members and partner organizations, the GEMS/Water Capacity Development Centre at University College Cork (Ireland), the GEMS/Water Data Centre at the International Centre for Water Resources and Global Change (UNESCO II Centre), hosted by the Federal Institute of Hydrology (Germany), the GEMS/Water regional hub for Latin American, Caribbean and Portuguese-speaking countries at the National Water Agency (ANA) (Brazil), members of the Global Wastewater Initiative, the Global Partnership on Nutrient Management, the UNEP-DHI Centre for Water and Environment (Denmark), the World Conservation Monitoring Centre, the Global Environment Facility, the International Water Management Institute, the European Space Agency (ESA), the European Commission’s Joint Research Centre, the United States National Aeronautics and Space Administration (NASA), Google and other private-sector entities, including the Rotary Foundation, the African Development Bank and GRID-Arendal, the Helmholtz Centre for Environmental Research (UFZ), the World Health Organization, the UN-Water Members and Technical Advisory Unit, the Bremen Overseas Research and Development Association (BORDA), the South Asia Cooperative Environment Programme and the Mato Grosso University (Brazil) National Institute for Space Research.

III. Recommendations and suggested action

12. A specific action plan for this resolution has been developed and a fundraising strategy is required, including to support countries in the adoption and implementation of the Framework for Freshwater Strategy Management. Further support for monitoring of the implementation of Sustainable Development Goal 6 is required and is being sought under the auspices of the UN-Water integrated monitoring initiative for Goal 6. For instance, in 2018 only 52 member States reported on indicator 6.3.2 relating to the ambient quality of their water bodies, and only 40 were able to report on indicator 6.6.1 on monitoring changes to water-related ecosystems. Additional work and support (and funding) are needed to continue the work to support member States in monitoring and reporting on the implementation of Goal 6. The resolution requested UNEP to produce the world water quality assessment by the fifth session of the Environmental Assembly. Currently only the first year of the assessment is funded (through cash and in-kind funding).

13. The GEMS/Water Trust Fund,² established in 2002, is still active and can be used to receive and use funds dedicated to water quality monitoring support provided by development partners. Member States have not yet contributed to the Fund in response to the resolution.

14. With current agreements for the GEMS/Water Global Programme Coordination Unit and the capacity development component of the existing GEMS/Water programme expiring in 2020, a specific fundraising plan for the GEMS/Water Trust Fund is still needed. This can be linked closely to other elements contained in resolution 3/10 – for example, for monitoring of water quality under the Sustainable Development Goals and coordination of the world water quality assessment.

15. In the field of joint area sustainable wastewater and nutrient management, there is a need to strengthen both the Global Wastewater Initiative and the Global Partnership on Nutrient Management and to encourage relevant stakeholders in countries to use the expertise of these platforms as a key tool for capacity-building. Capacity-building efforts must be supported by sound policies and appropriate technologies. Furthermore, there is a need to leverage funding for sustainable wastewater management by using innovative financial mechanisms. Working closely with the private sector is therefore key to developing and implementing sustainable business models for wastewater management. This was affirmed by participants in the fourth session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, held in Bali, Indonesia, on 31 October and 1 November 2018.

16. A number of partnerships – for example, with Google, NASA and ESA – will improve access to data for better monitoring and tracking of changes to water-related ecosystems. However, significant time and funding are needed to make this information available in a way that is useful for countries. In addition, the private-sector partnerships of UNEP may require general discussion and review.

17. Given the broad support for the resolution from African countries, the European Union, Latin American countries and the United States of America, the resolution would benefit from a broader geographical scope and global awareness of its importance. Thus far, the Governments of Germany and Switzerland have provided support for the first year of the world water quality assessment. The Governments of Germany, the Netherlands and Switzerland are funding integrated monitoring of the implementation of Goal 6, and the Governments of Germany and Ireland are funding the existing workplan of the GEMS/Water programme. Only a few other countries (e.g., Ethiopia and Kenya in Africa) have expressed direct interest in implementing resolution 3/10 through specific projects.

² General Trust Fund to Provide Support to the Global Environment Monitoring System/Water Programme Office and to Promote Its Activities, last extended through Environment Assembly resolution 2/23 (UNEP/EA.2/Res.23) until 31 December 2019.