

# HIGH-LEVEL SYMPOSIUM ON WATER

Lisbon, 27<sup>th</sup> of June 2022

Bridging SDG 6 and SDG 14  
Fresh and salt water communities working together

## High-Level Symposium on Water – “Bridging SDG6 and SDG14 - Fresh and Saltwater Communities Working Together”

Lisbon, 27<sup>th</sup> of June 2022

### Chair’s Summary

The High-Level Symposium on Water, *Bridging SDG6 and SDG14 – fresh and saltwater communities working together*, took place in Lisbon, on the 27<sup>th</sup> of June 2022, as one of the four Special Events of the 2022 UN Ocean Conference.


This Symposium was organized by the Government of Portugal, in close coordination with the United Nations (UN-Water and UN-DESA) and together with the Governments of Argentina, Mozambique and Singapore. The Governments of the Netherlands and Tajikistan also assumed a prominent role in this event and its preparatory work, in their capacity of co-hosts of the 2023 UN Water Conference.

When the Government of Portugal took the decision to organize this High-Level Symposium, a commitment was assumed to elaborate, as the output of this event, a Chair’s Summary to inform the 2023 UN Water Conference, as well as the 2023 High-Level Political Forum on Sustainable Development and other water-related processes, including the Climate and Biodiversity COPs.

This approach aims to ensure that this event was not an isolated act, but one more “brick” in the construction of this bridge between SDG 6 and SDG 14.

Detailed information about the High-Level Symposium, its preparation and the recording of the event can be found on the website: <https://hlswater.sgambiente.gov.pt/>

The Symposium was held in Altice Arena, in the Plenary Room of the UN 2022 Ocean Conference, during the afternoon (2:00-6:00 pm) of June 27<sup>th</sup> and was attended by high level delegations, representatives from UN Member States, international organizations, international financial institutions, local governments, non-governmental organizations, representatives from academia and private sector, counting with the participation of around 500 people, in person. It was also web-streamed live by UN Web TV, with a live audience of over 1.500 people.



In accordance with UNGA Resolution A/RES/75/212, paragraph 18, the High-Level Symposium on Water was part of the roadmap leading to the 2023 UN Water Conference.

Its ultimate goal was, therefore, to contribute to the preparatory process of the 2023 UN Water Conference, namely promoting a reflection around the interlinkages between SDG6 and SDG14 in order to accelerate the implementation of Agenda 2030 and, particularly to address some of the remaining gaps in SDG6 implementation.

Based on a substantive technical preparatory work, the programme of the Symposium allowed to touch upon several dimensions of these interlinkages.

The event started with a **High-Level Opening Session**, followed by **Three High-Level Roundtables**, and closed with a **High-Level Closing Session**.

In total, 21 internationally recognized Panellists, coming from different Member States and UN Major Groups, together with 3 moderators, promoted an enthusiastic and fruitful reflection on these major challenges.

### High-Level Opening Session

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The Opening Session counted with a welcome speech by H.E. the Minister for Environment and Climate Action of Portugal, Mr. **Duarte Cordeiro**, who presented the “Portuguese Case” regarding the evolution of water and sanitation services over the last three decades, taking also into account the challenges imposed by climate change. Drought was identified as a major structural challenge for water resources management in Portugal. Water Governance at local, regional, and international levels and the need for an increasingly circular water management were some of the challenges specially addressed in this opening speech. Simultaneously, greater innovation and better coordination in the design and implementation of public policies were identified as main opportunities to better interlink fresh and saltwater management.

H.E. the Principal Secretary of the Ministry of Agriculture, Livestock, Fisheries, and Cooperatives of Kenya, Mr. **Francis O. Owino**, recalled the organization of the Conference for a Sustainable Blue Economy, in Nairobi, in 2018, which contributed to an integrated vision of all aquatic resources, thus breaking the existing silos. The indivisible nature of SDGs and the remaining gaps to the achievement of the 2030 Agenda were recalled, and the 2023 UN Water Conference was identified as a major opportunity to fast-track its implementation.

The third speaker was H.E. the Minister for Energy and Water Resources of Tajikistan, Mr. **Daler Juma**, in his capacity as co-host of the 2023 UN Water Conference. Minister Juma mentioned his country's initiatives to promote water as an essential aspect of sustainable development, namely in the context of the UN General Assembly. A special reference was also made to the 2<sup>nd</sup> Dushanbe Conference and its contributions to the 2023 UN Water Conference. The findings of the Dushanbe Conference showed once more that we were not on track to meet SDG6, which should encourage the international community to join forces to face existing challenges in the water agenda.

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The final speech in this opening session was delivered by H.E. UN Under-Secretary-General for Economic and Social Affairs, Mr. **Liu Zhenmin**, who stated the importance of an integrated vision from “source-to-sea”, to prevent ocean pollution from rivers, and to ensure that the oceans contribute to improve climate regulation, with positive effects on freshwater availability. Mr. Liu also highlighted the importance of healthy freshwater and marine ecosystems for economic growth and action against climate change. The role of blue carbon sinks was also referred. USG Liu recalled that UNDESA is part of two separate coordination mechanisms (UN-Water and UN-Ocean) and recognized the need to not work in silos and foster synergies between the two areas.

### High-Level Roundtable 1 - Synergies between SDG 6 and SDG 14 – an integrated vision of the whole hydrological cycle: strengthening cross-sectoral approaches to accelerate implementation of related targets, including financing and governance

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High-Level Roundtable 1 was dedicated to the relevance of an integrated view of the entire hydrological cycle, strengthening cross-cutting approaches to accelerate the implementation of water-related targets, including financing and governance. This roundtable touched upon the following topics: River Basins – Integrated Water Resources Management (IWRM); Wetlands Resilience; Sediment Flux Management; Marine Litter and Microplastics.

It was co-hosted by Portugal and Argentina, the latter represented by H.E. the Minister for Environment and Sustainable Development, Mr. **Juan Cabandié**.

The Roundtable comprised a keynote speaker and four speakers, moderated by journalist from CNN Portugal, **Catarina Canelas**.

Minister **Juan Cabandié** acted as keynote speaker, highlighting the need to look into water as a Human Right, rather than a market product. He pointed out existing data on the lack of basic infrastructures at the global level, and he stressed the importance of means of implementation and funding for developing countries to be able to protect the ocean under their jurisdiction and their water resources. Finally, Minister Cabandié presented the relevance of marine protected areas in Argentina and the need to have agile policies.

The first speaker of the panel, H.E. the Minister of Environmental Protection and Regional Development of Latvia, Mr. **Artūrs Toms Plešs**, focused his intervention on the need to fight climate change and on how climate change impacts the interlinkages between SDG6 and SDG14. As a representative of the Baltic Region, he presented some of the challenges that are being felt, namely the need to intensify transboundary water cooperation, fight coastal erosion and biodiversity loss. He also mentioned some of the work in place, such as the National Climate Action Plan and the work around transforming wastewater facilities to be less energy intensive. Finally, he also highlighted Mission Sea 2030 as an emblematic project, that stands for the renewal of the Baltic Sea.

H.E. the European Commissioner for Environment, Oceans, and Fisheries, Mr. **Virginijus Sinkevičius**, referred to the milestone decision taken by the 5<sup>th</sup> UN Environment Assembly to negotiate an international binding instrument to end plastic pollution. When it comes to water and plastic, the focus is usually on the presence of plastic in drinking water and river flows, but

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the underlying problem is one of improper waste management. The full cycle should be managed from source to sea and back again. Eliminating plastic at any point in the cycle is crucial, and for that better knowledge is needed about where plastic can be found. He noted that climate change has increasingly forced the circular use of wastewater and desalinated seawater for irrigation, which creates additional challenges and fosters increased action on water quality.

H.E. Ms. **Martha Rojas Urrego**, Secretary-General of the Ramsar Convention on Wetlands, stated that this Convention protected precisely the ecosystems that unite SDGs 6 and 14, with a very important role in protecting coasts and performing a function of water “filters”, with their protection, thus contributing to the quality of water. Wetlands also act as flows control, preventing floods, for instance. They are green infrastructures, protecting the coast from extreme events. She also recalled that 95% of ocean pollution comes from rivers, so pollution needs to be dealt with upstream, in rivers, lakes and throughout the water cycle. She noted with regret that wetlands are under severe threat, disappearing at an average of up to three times faster than forests.

H.E. Mr. **Bernard Baerends**, Executive Secretary of the Common Wadden Sea Secretariat, mentioned the example of this wetland in the North Sea, managed in a tripartite manner by Denmark, Germany, and the Netherlands, in an integrated manner, for more than 40 years. His intervention presented the unique World Heritage that Wadden Sea represents, and the political cooperation existing between these States, recognizing the need to protect and commonly monitor this unique ecosystem. Some examples were shared, namely on cooperation with the fisheries community.

There were three interventions from the floor: (i) the Special Envoy for Water of the Netherlands, Mr. **Henk Ovink**, noted that bridging SDGs demands cooperation, collaboration, and partnerships. In his view, protection starts with prevention, and investing in water is investing in the full Agenda 2030. He stressed the 2023 UN Water Conference’s focus on action and the need to scale up and deliver real action on water. (ii) The Permanent Secretary of the Ministry of the Environment of Finland, Mr. **Juhani Damski** informed that the country had carried out a strategy to integrate freshwater and saltwater governance structures at national, regional, and global scale. (iii) And the Chief of Staff of the Minister of the Environment of Costa Rica, Mr. **Diego Vincenzi León**, stressed that Costa Rica gives equal importance to freshwater and saltwater, referring to some of the policies and instruments implemented to guarantee good water governance.

#### **High-Level Roundtable 2 - Water and Sanitation Services Bridging SDG 6 and SDG 14**

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High-Level Roundtable 2 focused on water sanitation services bridging SDG6 and SDG14. This roundtable touched upon the following topics: The impact of human behavior in reducing marine pollution; Wastewater and stormwater management on pollution control; The circular (blue) economy.

It was co-hosted by Portugal and Mozambique, the latter represented by H.E. the Minister for Public Works, Housing and Water Resources, Mr. **Carlos Alberto Fortes Mesquita**. The

Roundtable comprised a keynote speaker and four speakers, moderated by Ms. **Catarina de Albuquerque**, Chief Executive Officer of the UN Partnership Sanitation and Water for All (SWA).

The keynote speaker, H.E. the Minister for Public Works, Housing and Water Resources of Mozambique, Mr. **Carlos Alberto Fortes Mesquita**, pointed out that SDGs 6 and 14 intersect particularly in target 14.1, focused on reducing marine pollution by 2025. He took this opportunity to refer to the serious problems faced by Mozambique regarding access to water and sanitation (which in turn created increased pressures on the ocean), as well as the country's vulnerability to climate change, for instance to floods and droughts. References were made to the impacts of tropical cyclone Idai (March 2019), cyclone Kenneth (April 2020) and others, with economic losses around 4 billion euros. A special word was dedicated to regional cooperation, where Mozambique (as a downstream country) has played a relevant role. Finally, he presented the program "Water for Live" as an example of the political prioritization of this issue in Mozambique.

H.E. Ms. **Monica Medina**, Assistant Secretary for Oceans and International Environmental and Scientific Affairs of the United States of America, listed the existing global gaps in water and sanitation, recognizing that even the US were not immune to them, especially their most vulnerable communities. She presented some of the measures taken by the Biden Administration to protect the ocean and to increase water security, namely the Law "save our seas", the White House Action Plan on Global Water Security or the President's Emergency Plan for Adaptation and Resilience (PREPARE).

H.E. the Minister of Health, Environment and Nature of Curaçao, Kingdom of the Netherlands, Ms. **Dorothy Pietersz-Janga**, touched upon the pollution sources upstream and the tools at our disposal to reduce them. She started by underscoring that, despite the fact that water and sanitation are Human Rights, millions of people still do not have adequate and safe access to them, and a financing gap exists. This was also an opportunity to present the Dutch efforts to increase access to water and sanitation globally, and to prepare the 2023 UN Water Conference – a watershed moment for the world, that should be inclusive, action-oriented, and cross-sectoral. As cohosts, the Netherlands expect this Conference to change the way we value and manage water.

Mr. **Torgny Holmgren**, Executive Director of the Stockholm International Water Institute (SIWI), considered that the current fragmentation of fresh and saltwater governance is a risk to ecosystems and to people themselves. To restore ecosystem health, we need to move away from today's siloed governance. To overcome this fragmentation, we need a "source-to-sea approach", and policy reforms are needed. Meaningful change needs to happen, and six ideas were presented: *i)* invest in science, education, data and monitoring *ii)* incentivize and implement holistic management of terrestrial, freshwater, coastal and marine ecosystems, *iii)* catalyze action, mainstreaming "source to sea" thinking in the design and implementation of projects, plans, etc., *iv)* include all stakeholders in decision-making, *v)* innovative, transformative and scalable solutions that address "source to sea" and *vi)* accelerate the transition by developing financing and regulatory tools.

The last speaker of the panel, Mr. **Jaime Melo Baptista**, President of the Lisbon International Center for Water (Lis-Water) focused his intervention on three main dimensions. The first was the need to reduce water consumption and the practices that can be put in place to improve water efficiency, namely through awareness-raising, better communication and education on the value of water. Secondly, he focused on water and energy consumption in buildings, namely through the introduction of certification and classification mechanisms. Thirdly, he mentioned the need to improve water and energy efficiency in public infrastructure, reducing leakages and improving asset management. Additionally, he stressed the need to improve circularity in this sector. This can be achieved through the implementation of a holistic approach on the demand side, using different sources of water, and evolving from a traditional concept of water services management, using less resources to guarantee the same and better services. Additionally, a reference was made to the need to structure future infrastructures around the notion of circularity, introducing for instance a separation between organic wastewater and grey wastewater. Final remarks were made on financial and economic instruments and the way they must be used to change patterns and behaviors.

There were two interventions from the floor: (i) Mr. **Ran Amir**, Director of the Division of Marine and Environment Protection from the Ministry of Environmental Protection of Israel, gave the example of the Israeli experience of desalination of sea water, which became a relevant water source in the country, and pointed out the effects of desalinization in the marine environment. Planning and monitoring are key as desalination use grows. (ii) Mr. **Carlos Mucapera**, Secretary General of the National Association of Municipalities of Mozambique considered that the growing involvement of local actors is a key element to implement the human rights to water and sanitation. A reference was made to the need to protect Public Goods, guaranteeing that they are also free from speculation, so that citizens can have access to them. A mention was also made to the new PACT of UCLG – United Cities and Local Governments.

### **High-Level Roundtable 3- Existing successful and innovative partnerships to support the implementation of SDG 6 and 14: Challenges, opportunities, and actions.**

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High-Level Roundtable 3 was dedicated to the theme of Innovative and successful partnerships to support the implementation of SDGs 6 and 14: challenges, opportunities, and actions. This roundtable touched upon the following topics: Coastal waters and ecosystems; Surface and groundwater resources; Drinking water, wastewater, and stormwater services; Governance and partnerships.

This Roundtable was co-hosted by Portugal and Singapore, represented by H.E. the Minister of Foreign Affairs of Singapore, Mr. **Vivian Balakrishnan**. The Roundtable was organized around a keynote speaker and four speakers, moderated by Ms. **Madhushree Chatterjee**, Secretary of UN-Water, the UN coordination mechanism for freshwater and sanitation.

H.E. Minister **Vivian Balakrishnan** acted as Keynote speaker and, in his intervention, stated that, to deal with water-related challenges in a densely populated city-State like Singapore, both saltwater and freshwater issues were managed by a single centralized agency, under the responsibility of a single Minister in charge of all topics related with water: access to water,


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water supply, coastal protection, state of the ocean and aquaculture, etc. This strategy enabled policy coherence and sustainable investment in necessary infrastructure, as well as the right pricing of water. This strategy also allowed to capture, use and reuse almost every single drop available, as recycling of used water is critical for Singapore's success. Energy is a critical factor, for instance for desalinated water. Another key innovation was floating solar panels, which enabled the generation of green energy. The price of water was highlighted as another critical aspect of Singapore's experience, implying social support, so that the most disadvantaged would not lose access to water. Climate adaptation deserved great attention, and site-specific studies on coastal zones are being developed to implement adaptation measures.

H.E. the Minister of Agriculture and Environment of Cabo Verde, Mr. **Gilberto Correia Carvalho Silva** called for a better articulation between Governments, regulatory entities, the private sector, local authorities, agricultural and fishing communities, as well as civil society to assure a holistic management of water. The existence of consistent, strategic, and multiannual plans is critical to this holistic view. Cabo Verde's Sustainable Development Plan was designed at national level, for 3 years, and is frequently reviewed. Municipal plans are already in place in order to guarantee the involvement of local actors in water management. As in Israel, in Cabo Verde the interlinkage between SDG 6 and SDG 14 is directly made through desalination. In Cabo Verde, 70% of the drinking water comes from desalination, which required even greater care in the protection of coastal areas. Minister Gilberto also described the full range of instruments and measures implemented by the government to improve water governance in Cabo Verde.

H.E. the Executive Secretary of the Intergovernmental Oceanographic Commission and Assistant Director General of UNESCO, Mr. **Vladimir Ryabinin**, started his intervention referring to the launch of the Ocean Decade Alliance and mentioning the numerous initiatives that are relevant to improve ocean management globally. The work done by UNESCO in trying to change the way people think and act was also mentioned, through, for instance, groundwater. Mr. Ryabinin referred to the need to mobilize all UN structures, to integrate all existing components (e.g. UN Decades) and to include the scientific dimension. Finally, a reference was also made to the integration of communities from different areas and thus to the "multiplication of forces", namely through collaboration with the Intergovernmental Hydrological Program. "Integration" was the key word highlighted by Mr. Ryabinin.

The next speaker of this Roundtable was H.E. the President of the Prefectural Council of Rabat and President of the Moroccan Association of Presidents of the Councils of Prefectures and Provinces, Mr. **Abdelaziz Derouiche**. Mr. Derouiche highlighted the Moroccan 2020-2027 National Water Program, that intends to respond to the increasing needs of water in the country and to address climate change. A word was also dedicated to desalination, which was considered an interesting solution for the country. A reference was also made to the efforts put in place to mobilize used and treated water for agricultural and other purposes, thus avoiding the waste of drinking water. Finally, a reference was also made to the significant investment made in the fight against climate change, to the organization of UNFCCC COP22 (in Marrakech) and to the signature of the Rabat Declaration.



Finally, the Head of UNEP's Global Environment Monitoring Department, Mr. **Hartwig Kremer**, stressed the different crises we are facing (climate, biodiversity, etc.) and the changes that are already being felt in river basins all over the world. Integrated Water Resources Management was highlighted as a tool to guarantee the involvement of all the decisive stakeholders. Restoring ecosystems (marine, coastal and terrestrial ones) is critical. Good governance examples were also stressed, such as the collaboration around the management of the Rhine or Danube Rivers. Mr. Kremer stressed the relevance of participation and financing in Integrated Water Resources Management. A truly "source-to-sea" vision is critical, with public participation and the involvement of coastal and marine communities, particularly the most vulnerable and affected ones. Final words were about the relevance of data, and the role of UNEP in data-collection to support decision-making.

There were seven interventions from the floor: (i) Mr. **Sulton Rahimzoda**, Special Envoy of the President of the Republic of Tajikistan for Water Affairs, focused on the preparation of the 2023 UN Water Conference and the need to make it a success. He referred to the results of the Dushanbe Conference, the pledges and commitments presented in the Conference and integrated in the Dushanbe Declaration, which also supported the development of a Water Action Agenda, which will collect voluntary commitments in the context of the UN Water Conference; (ii) Mr. **Ayman Tharwat**, Deputy Director for Climate, Environment and Sustainable Development at the Ministry of Foreign Affairs of Egypt, stressed the importance of UNFCCC COP27 in Sharm-el-Sheikh – which for the first time included a thematic day specifically dedicated to Water – and the relevance of the Cairo Water Week, organized immediately before COP27; (iii) H.E. Mr. **Ibrahim Al-Mounir**, Minister of Environment of Libya, centered his intervention on governance issues, stressing the increasing gap between developed and developing countries. Mr. Mounir called the audience's attention to the need for greater monitoring and accountability by decision-makers; (iv) H.E. Mr. **Ursell Arends**, Deputy Prime Minister and Minister for Integrity, Transport, Nature and Elderly Care from Aruba, the Netherlands, called upon the international community to strengthen partnerships around the blue economy. (v) Mr. **Thomas Klein**, the Director of the Swedish Agency for Marine and Water Management, mentioned that this structure manages fresh and salt water in an integrated way; stressed the importance of the source-to-sea Platform and the need to mobilize commitments and financing; (vi) Ms. **Sara Reis**, Co-Founder of AquaInSilico and Co-Coordinator of the Phos-Value Project, presented a wastewater treatment project in Cabo Verde, implemented with the support of UNDP's Ocean Innovation Challenge Initiative, with the aim of cutting pollution and providing local communities in Cabo Verde with higher water quality; (vii) Mr. **Vedant Kulkarni**, from the non-governmental organization "One Shared World" highlighted the need to have a comprehensive strategy for both fresh and salt water, the need to treat water upstream and to support developing countries in ending open defecation.



## High Level Closing Session

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The High-Level Symposium on Water closed with a High-Level Session, counting with the presence of the UN Secretary-General's Special Envoy for the Ocean, H.E. Mr. **Peter Thomson**, and H.E. the Minister of the Economy and Maritime Affairs of Portugal, Mr. **António Costa e Silva**.

Mr. Peter Thomson highlighted the relevance of looking into the full hydrological cycle and the significant role played by sanitation in the solutions we all want to achieve. H.E. Minister António Costa e Silva stressed the vital role of water in interconnecting all the elements of our planet. He further highlighted the climate crisis we are all living, the desertification that is affecting many countries and the need to reply to this crisis with an integrated management of the hydrological cycle. He also stressed the importance of good governance structures and referred to the need for multistakeholder engagement. To minimize water losses, some of the solutions pointed out were digitalization, monitoring, and knowledge of what is happening along the network. An appeal for greater partnership between the countries of the Mediterranean was made at the end of his intervention, as well as a global call for joint efforts and partnerships.

## Main findings of the High-Level Symposium on Water

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- This Symposium was a unique opportunity and a clear signal of the political interest, as well as of the scientific, business, and civil society communities' interest in this interlinkage.
- Nevertheless, the path towards integration is still long, and the data points to the fact that there is still a significant gap to be filled in terms of water management and ocean health.
- Closing the remaining gaps in the access to safe drinking water, sanitation or even waste management is crucial, if we want a healthy ocean.
- The Ocean is an integral part of the hydrological cycle, and its health depends, to a large extent, on the management of inland and coastal waters and associated ecosystems, as well as water and sanitation services.
- Transboundary cooperation on the planning and management of shared river basins, as well as in coastal zones, must be strengthened and consolidated to respond to all the challenges "from source to sea".
- It is necessary to reinforce the collaboration between decision-makers and researchers in the implementation of public policies and in the coordination mechanisms among different political areas.
- It is important to highlight the role of coastal wetlands – marshes, sea grasslands and mangroves – and pay more attention to them, remembering their fundamental role as carbon sinks, as some scientists argue they have an even greater potential than terrestrial forests.

- Marine litter is a threat, not only to marine species and ecosystems, but also to human health and well-being, with a negative impact on several economic sectors.
- The historical resolution adopted by UNEA 5 (Resolution 5/14 entitled “End plastic pollution: Towards an International legally binding instrument”) requires commitment to be duly implemented by the end of 2024.
- Drought is one of the visible faces of climate change and it is severely impacting several countries, like Portugal. It should thus be a higher priority on the political agenda.
- Growing urbanization in coastal areas has not been accompanied by the necessary infrastructure, namely in developing countries, making the connection of SDGs 6 and 14 more challenging.
- Without safe water and sanitation, the reduction of marine pollution from wastewater and stormwater cannot be achieved.
- The Human Rights to water and sanitation need to be guaranteed in practice.
- The necessary investments in water and sanitation infrastructure will not by themselves solve existing problems if they are not accompanied by a real climate change adaptation strategy.
- The adoption of a holistic approach from “source to sea” is critical to a circular vision of human water use and to create financial, legal, and regulatory instruments that are essential for the implementation of these public policies.
- It is fundamental to provide the same and better services with less resources, evolving from a concept of linear infrastructures to one of circular infrastructures.
- It is crucial that usual top/down approaches are complemented with bottom/up approaches, to guarantee an increasing involvement of local communities, and to ensure that implemented actions also contribute to the elimination of existing inequalities.
- Partnerships are key to our planet’s sustainability. There are already good examples of local, bilateral projects, with public and private partners, but it is necessary to accelerate actions on the ground and to scale up successful solutions.
- Skills to protect coastal waters from the impacts of stormwater, agricultural effluents, industrial and urban wastewater must be strengthened.
- It is essential to strengthen and improve communication on the value of water, so that society adopts better daily practices to protect and conserve this resource, whether it is freshwater or saltwater.
- A paradigm shift to manage water as a precious resource is essential. Economic and financial instruments are essential and need to be efficient.
- The 2023 UN Water Conference will be a critical moment to connect the world around water, leaving no one behind (with an all-inclusive approach) and defining concrete actions at the global level, given water’s cross-cutting role for sustainable development.

## Annex I – Written Submissions

Due to the limited time available for the reflection on the 27<sup>th</sup> of June, and trying to enable a broader reflection and participation in the event, the Government of Portugal, in close cooperation with the United Nations, the Governments of Argentina, Mozambique and Singapore, as well as the Governments of Tajikistan and Netherlands, decided to launch a call for written submissions, inviting all the interested parties in joining their voices and submitting a written contribution to one or more of the themes of the Roundtables or on the overarching theme of the Symposium.

These written contributions were collected through a dedicated registration form available on the Symposium's website: [https://hlswater.sgambiente.gov.pt/?page\\_id=21](https://hlswater.sgambiente.gov.pt/?page_id=21)

The compilation of contributions received (12 in total) can be consulted in this Annex I to the Chair's Summary. The contributions are listed below, by alphabetic order of the submitting entity and identifying the Roundtable to which they apply.

### **ADACO – Association pour le Devenir des Autochtones et le Leur Connaissance Originelle (Gabon)**

#### **Roundtable 3**

##### Contribution

*“The Sustainable Development Goals adopted by the General Assembly of the United Nations in 2015 provides a shared blueprint for peace and prosperity for people and the planet. So, the General Assembly of the United Nations proclaimed the International Decade for Action on “Water for Sustainable Development” (the “Water Action Decade”) in the period from 2018-2028 to further improve cooperation, partnership, and capacity development in response to the ambitious 2030 Agenda. Historically, the contributions of Indigenous Peoples in managing these ecosystems and their important role in conservation and disaster-risk reduction initiatives in marine, coastal and inland water areas have been routinely ignored or underestimated in research, management, and policy.*

*For the Indigenous Peoples of the world, there is a spiritual and unique relationship with water as an integral part of their culture and worldview. There is a sacred connection to water, individual and communal survival which depend on the presence of water. Indigenous Peoples and their communities use and manage marine, coastal and water ecosystems differently to which they have specific knowledge, capabilities and needs related to these. They are differently impacted by changes in their environment due to climate change, pollution, and globalization.*

*On the other hand, effective wastewater management in coastal urban areas is a basic condition to prevent the deterioration of ocean's quality. The challenge ahead is to mobilize all stakeholders to solve the financing gap of the sector and to guarantee effective value for money of the adopted solutions. Finally, we need to adopt nature-based solutions.”*

### Voluntary commitment

*“The challenge ahead is to mobilize all stakeholders to solve the financing gap of the sector and to guarantee effective value for money of the adopted solutions. Finally, we need to adopt nature-based solutions.”*

## **ANAD – Association Nesser pour l’Agriculture et Development (Mauritania)**

### **Roundtable 1**

#### Contribution

*“The water strategy implemented in Mauritania aims to ensure better access to drinking water for all populations, especially the most vulnerable, which requires improving identification of exploitable water resources, rationalizing their use, and mobilizing the necessary funding to create the necessary infrastructure.”*

#### Voluntary commitment

*“The association pledges to work on creating projects that help in access to suitable water, in cooperation with its technical and financial partners.*

*It will also put pressure on the Mauritanian government to speed up the pace of work, in addition to the large water revenues that are supervised by the authorities in order to provide suitable water for all citizens.”*

## **AqualnSilico (Portugal)**

### **Roundtable 3**

#### Contribution

*“Phos-Value is a project backed by the UNDP’s Ocean Innovation Challenge, which brings AqualnSilico together with water utilities and local authorities to help conserve one of the world’s most diverse marine environments found in Cape Verde.*

*Phos-Value innovation aims to use AqualnSilico’s innovative digital tools to improve wastewater treatment to cut pollution, recycle scarce resources, and at the same time provide local communities with much higher quality water.*

*The seas around Cape Verde are particularly vulnerable to pollution and climate change. Severe and recurring droughts mean water scarcity is rising, while poor wastewater treatment means loss of resources and risk of marine eutrophication through too many nutrients entering the sea.*

*Better wastewater management is critical to stop this from happening. The joint action of the digital tools and our partners is helping local authorities to identify problems with existing wastewater treatment facilities and solve them. We aim to: reduce the amount of nutrients*

*entering the sea, recycle these nutrients into biofertilizers, and address water scarcity by improving treated water quality.*

*Phos-Value completed its first year with positive impacts on the reduction of water pollution indicators. During this second year, we are confident in setting a path for Cape Verdean stakeholders to create a circular economy model for wastewater treatment with the potential for other commercial opportunities.*

*Our work can make an important contribution to achieving the United Nations 2030 Sustainable Development Goal by helping countries to make the right decisions in wastewater treatment.*

Voluntary commitment

*“AquaInSilico develops digital intelligence management tools for municipal and industrial wastewater utilities. This innovation addresses the poor wastewater asset management, a problem that causes environmental pollution and loss of scarce resources, harms human health and reduces the margins of wastewater utilities.*

*AquaInSilico was selected as an UNDP Ocean Innovator and is leading the Phos-Value project in Cape Verde. This project aims to reduce the amount of nutrients entering the sea, recycle nutrients into biofertilizers, and address water scarcity by improving treated water quality. AquaInSilico's digital intelligence management tools are helping local authorities to identify problems with existing wastewater treatment facilities and solve them, as well as to create a circular economy model for wastewater treatment with the potential for other commercial opportunities. The replication of this innovation to other regions can make an important contribution to achieving the SDG 6 and 14.*

**Iran National Inventions and Innovation Team / Sustainable Development Goals Program**

**Roundtables 1, 2 and 3**

Voluntary commitment

*“Iran National Team of Inventions and Innovation / Sustainable Development Program to solve challenges and problems in the field of water and SDG6. This set of innovative solutions that provide products or services in the form of innovative companies to international organizations and the country. Will also conduct international studies and research to address water challenges.*

*Maintaining the stability of oceans and seas and solving challenges and problems in this area with the help of innovation and technology.*

*Education – Innovation – Technology”*

**Israel Ministry of Environmental Protection**

**Roundtable 2**

Contribution

*“Seawater desalination became a major source in supplying potable water around the globe. With climate change reducing the availability of rainwater, it is expected that desalination will become more widespread. Therefore, the awareness and the need to protect it from pollution sources is growing, thus adding public and governmental intervention.*

*While its obvious advantages, seawater desalination itself has potential effects on the marine environment. Discharging huge amounts of brine into the sea (generally double than the inputs) creates localized conditions different to those of the surrounding environment. These include a higher density, higher salinity, and chemical additives. The brine plumes also create a barrier between the seafloor and the above water column, disturbing the transfer of nutrients between them.*

*The abstraction of seawater intake may also be a stressor to the marine environment, as the removal of planktonic larvae may alter the food web and affect local species diversity. This issue is especially important in coral reefs regions, where larvae supply is crucial for the rejuvenation and rehabilitation of reefs which are deteriorating worldwide.*

*While current scientific studies and monitoring data show the effects of desalination on the marine environment are mostly local and good dilution can deal with most of the potential harm, a synergistic effect may appear when new facilities are built in proximity to existing ones, influencing large marine areas.*

*The use of seawater desalination will certainly grow. It is crucial to plan carefully and closely monitor its impacts, to make sure our will to create drinking water source, will not exceed the carrying capacity of the marine environment. That might return to coastal countries like a boomerang.”*

#### **Ministry of Environmental Protection and Regional Development of Latvia**

##### **Roundtable 1**

##### Contribution

*“The marine environment is largely affected by the land-based inputs, inter alia, via rivers.*

*Latvia is the coastal state of the Baltic Sea. More than half of the riverine runoff comes from neighboring countries upstream. Therefore, international co-operation in the protection and management of water resources is very important for us.*

*Our vision for the Baltic Sea is a healthy and clean sea with thriving biodiversity. However, the Baltic Sea due to its closed nature is particularly sensitive to environmental pressures, including climate change and human activity.*

*River Basin Management Plans (RBMPs) are an excellent practical example for links between SDG 14 and SDG 6.*

*RBMPs provide:*

- *A good framework for actions for the protection and sustainable use of water resources;*

- *A basis for transboundary cooperation with countries sharing the same river basin. As a result, the integrated water resources management in the whole river basin contributes to the achievement of good status of marine environment.*
- *Detailed river basin characteristics, assessment of pressures, objectives and measures which help to tackle different water-related challenges: water scarcity, droughts, flooding.*

*We must change the way the water resources are managed, also considering the impacts of climate change. Involvement of all sectors and the well-informed society is crucial in this transformation process.*

*Digital technologies can help in data collection, exchange of data and practices. Latvia strives to extend the amount of open environmental data, to develop publicly available digital tools for assessment of risks, and to digitalize permitting procedures.”*

### **Oisan (Norway)**

#### **Roundtable NA**

##### Contribution

*“We believe that everybody deserves clean water and that solving the water crisis should not create an environmental crisis. Waterfountain 10 is an unmanned, modularized desalination system that can store up to 30 m<sup>3</sup> and produce up to 3,000 m<sup>3</sup> per day.*

##### *Benefits of Waterfountain:*

- *No chemicals required;*
- *50% reduction in operating costs;*
- *35% reduction in construction costs;*
- *Can be powered by renewable energy;*
- *Over 90% reduction in land required;*
- *Over 95% reduction in brine salinity;*
- *Can be relocated or removed.*

##### Voluntary commitment

*“Scaling up and substituting LNG with other fuels.”*

### **Pakistan Education, Health, and Innovation Consultant Group**

#### **Roundtables 1, 2 and 3**

##### Contribution

*“Assessing The Drinking Water Quality of Selected Areas of the Pakistan Mega City*

Water pollution has a great detrimental effect on public health. Millions of people suffer from water-borne diarrheal infections such as cholera each year, besides this many other deadly infections are also caused by the polluted water annually. Due to the poor sanitation system, it breeds bundles of unwanted organisms. Drinking water quality is greatly affected by many reasons like animal wastes, industrial and household wastes, agriculture runoff, large amounts of microbes, and even natural. The current study aimed to assess the quality of drinking water in the selected areas of Karachi. Water quality was assessed by following standard protocols. Result revealed that average turbidity (3.5 NTU), pH (7.1), conductivity (400  $\mu\text{S}/\text{cm}$ ), TSS (18mg/L), and TDS (280mg/L) was within permissible limits. Among metals, concentration mean values for Cd (0.006), Cr (0.068), and Pb (0.022) were found high while on the other hand Mg (63.8), Zn (1.58), Fe (0.12), Cu (0.86). Besides this As, Hg and Sn were not detected at all. Further bacterial test results revealed that *E. coli* (n=30) was found more abundantly than is 20.97%. Followed by the *S.faecilis* (n=27) 18.88%. from the current study, it was concluded that in terms of physicochemical parameters water is suitable for drinking purposes but in terms of microbial analysis, water should be treated well to eliminate all the bacterial fauna from the water, to avoid any deadly infections.

*Keywords: Karachi, Drinking water, the physiochemical parameter of water, water sampling”*

#### Voluntary commitment

*“Our group working on an awareness program about the Implementation of SDG 6 and training the experts on how can solve these issues.*

*We are working on Achieve access to adequate and equitable sanitation and hygiene for all and ending open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.*

*Improve water quality by reducing pollution, eliminating dumping, and minimizing the release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.*

*Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.*

*Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.”*

**Stockholm International Water Institute – SIWI (Sweden)**

#### **Roundtable 1**

##### Contribution

*“Many regions are facing unprecedented challenges linked to deteriorating ocean health. Addressing these challenges from source to sea cannot wait.*



*Decision-makers around the world must come together now, recognizing the linkages between SDG 14 and SDG 6, to create meaningful change.*

*Immediate action from local to global scales is required. Governments, industry, businesses, academia, and citizens must work together to:*

- *INVEST in science, education, knowledge sharing, data, and monitoring to better understand the linkages across the source-to-sea continuum and ensure development on land and along rivers safeguards healthy marine and coastal ecosystems and protects livelihoods dependent upon ecosystem services.*
- *INCENTIVISE and implement holistic management of terrestrial, freshwater, coastal and marine systems to ensure development prevents biodiversity loss, deterioration of ocean health, ecosystem degradation, and exacerbation of climate change impacts.*
- *CATALYZE source-to-sea action at global, regional, national, and subnational levels by mainstreaming source-to-sea thinking in the design and implementation of projects, plans, governance frameworks and investments.*
- *INCLUDE all stakeholders in decision-making, ensuring that the voices and concerns of marginalized and vulnerable communities, youth, women, and Indigenous Peoples are heard at all phases of policy making, and benefits are shared equitably.*
- *INNOVATE transformative, replicable and scalable solutions that address source-to-sea challenges while enhancing livelihoods, ensuring equity, harnessing collective wisdom and sustaining ecosystems.*

*ACCELERATE the transition towards sustainable consumption and a circular economy by developing financial and regulatory tools that stimulate cross-sectoral behaviour change, coordination, and upstream-downstream cooperation in identifying solutions at the source.”*

## **UN Environment Programme (UNEP)**

### **Roundtable 3**

#### Contribution

*“Humanity is facing three interlinked planetary crises – climate change, biodiversity loss and pollution. These have major effects on freshwater ecosystems.*

*Aquatic ecosystems around the world are suffering from severe pathogenic and organic pollution. Human pressures are adversely impacting the quantity and quality of surface water, and freshwater biodiversity is being lost at an unprecedented rate.*

*Over 3 billion people are at risk because they don’t know enough about the health of surface and groundwater resources. Moreover, available surface water within a fifth of the world’s river basins has changed dramatically, linked to population growth, land use change and climate change.*

*The triple planetary crisis is being felt through our fresh water, but the good news is that when protected, restored, and well managed, freshwater ecosystems help us take action to combat all three crises.*

*Understanding the drivers of the triple planetary water crisis is central to UNEP's global strategy for working on fresh water. The recent United Nations Environment Assembly resolutions on Sustainable Lake Management, Plastic Pollution, Nature-based Solutions and Sustainable Nitrogen Management are a step in the right direction, and we are looking eagerly towards the outcomes of the HLWC and UNOC in the lead up to major commitments and attention being focused on water over the coming year.*

*UNEP is supporting Member States and others, including through the World Water Quality Alliance, the Global Partnership on Marine Litter and the Global Wastewater Initiative (GW<sup>2</sup>I) and the Global Partnership on Nutrient Management."*

#### Voluntary commitment

*"UNEP, as the global custodian of SDG 6 indicators in the targets on ambient water quality (6.3), freshwater ecosystems (6.6) and integrated water resources management (6.5), commits to accelerating actions and progress on both monitoring and implementation of these targets. This includes helping countries to improve data collection, understand and monitor water quality and ecosystem health from source to sea, with a proposed special focus on rivers and coastal community impacts. Furthermore, UNEP aims to strengthen the science and advocacy around integrated water resources management, linking it to climate change adaptation planning and access to finance for both at the national level."*

### **World Team Now (USA)**

#### **Roundtable 1**

##### Contribution

*"Marine litter and microplastics are one of the direst anthropogenic threats to ocean health facing the planet.*


*Around 11 million tons of plastics enter the oceans every year. By 2040 this amount is expected to nearly triple to 29 million metric tons.*

*The Great Pacific Garbage Patch is estimated to be around 1.6 million square kilometers – about twice the size of Texas.*

*Technology and efforts like Boyan Slat's The Ocean Cleanup need to be scaled rapidly and sufficiently funded.*

##### Voluntary commitment

*"World Team Now will incorporate awareness of Marine Litter and Microplastics in the Ocean Curriculum being developed. World Team Now's innovative invented technical and natural-based solutions and awareness-building exercises such as area cleanups will be part of the physical ocean deployment of the curriculum.*



*WTN's approach is to support coalitions of multistakeholder partnerships (MSPs) where institutions, intent with common enduring goals, are part of the same messaging.*

*We are preparing a new timeframe for the 2030 goals with the registration of an MSP for SDG 14 that will demonstrate experiential education which approaches learning using science and experiences of nature and her processes. Key UN agencies will be invited to the MSP.*

*WTN plans to establish the use of the curriculum and the MSP by June 2023.*

## Annex II – Program

### High-Level Opening Session

**Duarte Cordeiro** H.E. Minister for Environment and Climate Action of Portugal

**Francis O. Owino** H.E. Principal Secretary, Minister of Agriculture, Livestock, Fisheries and Cooperatives of Kenya

**Daler Juma** H.E. Minister for Energy and Water Resources of Tajikistan

**Liu Zhenmin** H.E. United Nations Under-Secretary-General

### High-Level Roundtable 1

**Keynote: Juan Cabandié** H.E. Minister for Environment and Sustainable Development of Argentina

**Artūrs Toms Plešs** H.E. Minister for Environmental Protection and Regional Development of Latvia

**Virginijus Sinkevičius** H.E. European Commissioner for Environment, Oceans and Fisheries

**Martha Rojas Urrego** Secretary-General of the Ramsar Convention on Wetlands

**Bernard Baerends** Executive-Secretary of the Common Wadden Sea Secretariat

**Moderator: Catarina Canelas** CNN Portugal

Interventions from the floor:

**Henk Ovink** Special Envoy for International Water Affairs, Kingdom of the Netherlands

**Juhani Damski** Permanent Secretary of the Ministry of Environment, Finland

**Diego Vincenzi León** Chief of Staff of the Minister of Environment, Costa Rica

### High-Level Roundtable 2

**Keynote: Carlos Alberto Fortes Mesquita** H.E. Minister for Public Works, Housing and Water Resources of Mozambique

**Monica Medina** H.E. Assistant Secretary for Oceans and International Environmental and Scientific Affairs of the United States

**Dorothy Pietersz-Janga** H.E. Minister of Health, Environment and Nature of Curaçao, Kingdom of the Netherlands

**Torgny Holmgren** Executive Director of the Stockholm International Water Institute

**Jaime Melo Baptista** President of LIS-Water, Lisbon International Centre for Water

**Moderator: Catarina de Albuquerque** Chief Executive Officer of Sanitation and Water for All

Interventions from the floor:

**Ran Amir** Director of the Division of Marine and Environment Protection, Ministry of Environmental Protection, Israel

**Carlos Mucapera** Secretary-General of the National Association of Municipalities of Mozambique

### High-Level Roundtable 3

**Keynote: Vivian Balakrishnan** H.E. Minister for Foreign Affairs of Singapore

**Gilberto Correia Carvalho Silva** H.E. Minister of Agriculture and Environment of Cabo Verde

**Vladimir Ryabinin** Executive-Secretary of the Intergovernmental Oceanographic Commission and Assistant-Director-General of UNESCO

**Abdelaziz Derouiche** President of the Prefectural Council of Rabat and President of the Moroccan Association of the Councils of Prefectures and Provinces

**Hartwig Kremer** Head of UNEP Global Environment Monitoring Unit

**Moderator: Madhushree Chatterjee** Secretary of UN-Water

Interventions from the floor:

**Sulton Rahimzoda** Special Envoy of the President of the Republic of Tajikistan on Water Affairs, Chairman of the Executive Committee of the International Fund for Saving the Aral Sea

**Ayman Tharwat** Ambassador, Deputy Director of the Climate, Environment and Sustainable Development Department, Egypt

**Ibrahim E. M. Mohamed** Minister of Environment at the Government of National Unity, Lybia

**Ursell Arends** Deputy Prime Minister and Minister and Minister for Integrity, Transport, Nature and Elderly Care of Aruba, Kingdom of the Netherlands

**Thomas Klein** Head of the Department of Environmental Analysis, Swedish Agency for Marine and Water Management

**Sara Reis** AqualnSilico

**Vedant Kulkarni** One Shared World

### High-Level Closing Session

**Peter Thomson** United Nations Secretary-General Special Envoy for the Ocean

**António Costa Silva** H.E. Minister for Economy and Sea of Portugal

# HIGH-LEVEL SYMPOSIUM ON WATER

Lisbon, 27<sup>th</sup> of June 2022



Bridging SDG 6 and SDG 14  
Fresh and salt water communities working together

## Concept Note for the Ministerial Roundtable 1 of the High-Level Symposium on Water

Lisbon, 27<sup>th</sup> of June 2022

*Ministerial Roundtable 1: Synergies between SDG6 and SDG14 - an integrated vision of the whole hydrological cycle: strengthening cross-sectoral approaches to accelerate implementation of related targets, including financing and governance*

### Topics to be addressed:

- River Basins -Integrated Water Resources Management (IWRM)
- Wetlands Resilience
- Sediment Flux Management
- Marine Litter and Microplastics

### A. Introduction

The hydrological cycle depends on the oceans, which health depends on the way coastal and inland waters - including associated ecosystems, such as wetlands - are managed.

The water management instruments must take into consideration the impacts that river discharges have on the ocean's health, as well as other pressures such as the diffuse pollution from agriculture and wastewater discharges or the large-scale loss and destruction of coastal wetlands and pollution of soil and water due to the expansion of aquaculture. Indeed, losses in ecosystem services provided to people from

wetlands (e.g., protection from flooding, water purification) represent significant social and economic impacts.

Anthropogenic infrastructure barriers (e.g., damming, flood and coastal protection structures, settlements, and critical infrastructures) reduce the availability of accommodation space and sediment supply, which affect the resilience of environmental, economic and social systems. Adequate flows of water and sediments to feed estuaries, deltas, coastlines, and downstream ecosystems are crucial for the protection of coastal and marine ecosystems.

The trend for damming and reservoir construction to address water scarcity, energy demand, and flood risk, influences the sediment influxes from land to the oceans, trapping global sediment fluxes.

Such a trend contributes to the erosion of riverbeds and the coastline and the reduction of riverine sediment inputs. It also influences the water quality, namely suspended solids, turbidity, and water flows, crucial for preserving healthy ecosystems. Future expansion of coastal development can also bring risks to iconic and threatened species. Combined with sea-level rise and other effects of climate change, the consequences of these trends can be serious.


This kind of dilemma must be solved through productive dialogue between practitioners, researchers and policy makers on both sides, from freshwater to saltwater interests, in the framework of management plans.

## **B. River Basins - Integrated Water Resources Management (IWRM)**

An IWRM approach helps reduce the fragmentation and minimize environmental, economic and social conflicts. It can help reduce the fragmentation of freshwater and saltwater policies by coordinating international, national and local regulatory frameworks. Further, it can support inclusive water governance i.e. equitable access to water by reducing pressure on water resources through e.g. co-management regimes for collaborative water management and to foster equity between water users while maintaining, enhancing, and restoring ecosystems and biodiversity. Finally, it can help mitigate environmental and social impacts by increasing water storage either by facilitating groundwater recharge, wetlands protection and restoration and alternative storage techniques in urbanised environments or by enforcing restrictions on groundwater abstraction.

IWRM also helps mainstream practices that reduce soil erosion, sedimentation, and pollution run-off.

The implementation of an IWRM approach cannot be separated from land use planning. The integration of these two is paramount to address the impacts of fragmentation caused by dams and diversions namely on coastal areas and increase the protection and restoration of aquatic ecosystems, including natural or human-made wetlands that reduce the impacts of floods, coastal storms and high temperatures as an alternative to 'grey' solutions. Furthermore, the integration of IWRM and land use planning will improve transboundary water cooperation and management and help foster global and



regional analyses of the water cycle, which will become increasingly pressing to cope with droughts and desertification problems (e.g. in communities that are based on resource-dependent livelihoods) due to ongoing and projected global warming and climate change.

### **C. Wetlands Resilience**

While wetlands serve the very important function of working as a natural filter (mitigating pollution), they also help reduce flooding and prevent shoreline erosion. According to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Assessment Report (2022), protecting coastal wetlands could save the insurance industry around €50 billion annually by reducing flood damage losses. They also host a great biodiversity.

Furthermore, coastal wetlands - salt marshes, seagrasses, and mangroves - play a major role in carbon burial and sequestration globally, with some studies indicating their higher areal carbon sequestration potential compared to terrestrial forests. According to the IPCC Assessment Report (2014), under increased atmospheric carbon dioxide, the productivity of wetlands vegetation is expected to increase in the future.

Despite these benefits, the IPBES Assessment Report (2022) indicates that nature across most of the globe has now been significantly altered by multiple human drivers, with the great majority of indicators of ecosystems and biodiversity showing rapid decline. More specifically, it indicates that 75% of the land surface is significantly altered, 66% of the ocean area is experiencing increasing cumulative impacts, and over 85% of wetlands (area) have been lost. Urbanisation is considered a major cause of losses wetlands in multiple countries. In addition, land reclamation is linked to the degradation of wetlands, seagrass beds and decreased coastal water quality, with negative impacts on regional groundwater regimes discharges to the coasts.

Although coastal wetlands are dynamic ecosystems that can adapt, climate change effects in the form of global warming, sea level rise and increased extreme events may further increase the vulnerability of these ecosystems in the future.

Facing such pressures, the Ramsar Convention on Wetlands of International Importance is a global intergovernmental mechanism for wetlands protection of utmost relevance. To date 169 countries participate, having designated over 2,200 wetlands of international importance (Ramsar Sites) which together cover an area of 215 million hectares, an area that is equivalent to the size of Mexico. Yet it remains uncertain whether these commitments by national governments to the Ramsar Convention have actually had impacts in significantly reducing rates of wetlands loss (IPBES, 2022).

In the Convention's 4th Strategic Plan (2016-2024) four goals are established: addressing the drivers of wetlands loss and degradation (Goal 1); effective conservation and management of the Ramsar Site network (Goal 2); wise use of all wetlands (Goal 3); and enhanced implementation of the Convention (Goal 4). To date, the progress towards those goals is assessed as poor to moderate.

### **D. Sediment Flux Management**

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Sediment management remains a key parameter for managing climate risks and planning adaptation in coastal areas. Thereby a key parameter to guarantee the safety and wellbeing of coastal communities.

Since the DG Environment of the European Commission launched the project EUROSION (2002-2004), vulnerability and coastal resilience emerged as key concepts in defining the adaptation-safety relationship, from local to global scales. The project that aimed at developing coastal erosion policy recommendations suggested that stressed coastal systems, depleted biological resources, and risks from global climate change all require human adaptation and institutional change if future beneficial use is to be secure and sustainable.

In particular, EUROSION highlighted the role of the balance between the demand and the supply of sediment to the coast in the process of maintaining an equilibrium in the interaction at the interface between the sea and land.

In this context, the sediment flux management in the river basin framework with measures that can reduce this impact in the next decades (for new and existing dams) needs to be better analysed and implemented.

## **E. Marine Litter and Microplastics**


Since the first mention of marine litter in the scientific literature in the 1960s, research efforts on this topic have steadily grown, so has the amount of litter in the oceans. Many studies show that about 80% of the litter found in the oceans originates on land and is transported by rivers to oceans. The remaining 20% is input directly from marine sources such as shipping and fishing activities. Marine litter monitoring shows that more than 85% of the litter identified on beaches is plastic and of this around 50% is single-use plastics.

According to the United Nations Environment Programme (UNEP) Report (2021), it is estimated that 7,000 million of the 9,200 million tons of cumulative plastic production between 1950 and 2017 became plastic waste. Three-quarters of which were discarded and placed in landfills, and the rest became part of uncontrolled systems and poorly managed waste streams, or have been dumped or abandoned directly in the environment, including in the oceans. Micro plastics can enter the oceans through the breakdown of large plastic items, leachate from landfills, sludge from wastewater treatment plants, overflows from combined sewer systems, airborne particles, runoff from agriculture, ship dismantling, and accidental loss of cargo at sea. Also, extreme events such as floods, storms, and tsunamis introduce significant volumes of debris into the oceans and accumulations of litter along riverbanks, coasts, and in estuaries.

All these findings have contributed to the fact that in recent decades, ocean pollution by anthropogenic waste has come to be recognized as a serious global environmental concern.

Although the oceans have been the subject of study for many years, little research has been devoted to plastics accumulated on land and in freshwater systems. In 2017, a report, conducted by the Helmholtz Centre for Environmental Research in Germany estimated that ten rivers transport 88-95% of the global riverine plastic load into the sea, with eight out of those ten located in Asia (the other two being located in Africa).

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According to a 2016 European Joint Research Centre report, marine litter can impact organisms at distinct levels of biological organization and habitats in several ways, namely: through entanglement in, or ingestion of, litter items by individuals, resulting in death and/or severe suffering; through chemical and microbial transfer; as a vector for transport of biota and by altering or modifying assemblages of species.

Marine litter is a threat not only to marine species and ecosystems, but also poses a risk to human health and has significant implications for human well-being, negatively impacting vital economic sectors such as tourism, fisheries, aquaculture, or energy supply, bringing losses to individuals, businesses, and communities.

Since 2020, humanity has been suffering unprecedented challenges and devastating losses. The Covid-19 pandemic has forced the entire world to constantly reorient resources and priorities and has reminded us of how interdependent our systems are. The pandemic has demonstrated that no country alone can address problems of cross-border nature. Today the world is interconnected, therefore, global, and cross-border problems require multilateral solutions. Marine plastic pollution is one of such transboundary problems.

The annual discharge of plastic into the ocean is estimated to be eleven million tons according to the 2020 released “Breaking the Plastic Wave” report. According to that study, without meaningful action, by 2040 municipal solid plastic waste is set to double, plastic leakage to the ocean is set to triple and plastic stock in the ocean is set to quadruple.


In recent years, public attention to the problem of plastic pollution has rapidly increased. At the same time, discussions between countries on how the international community should respond to this problem have also intensified, either in the form of multiple Resolutions of the United Nations Environment Assembly or through expert group discussions.

Existing legislation and regulatory tools have proven inadequate, demonstrating that more must be done. In recent years, a growing number of stakeholders, including an extensive list of states, have considered that a viable way could be the development of a new global agreement specifically dedicated to solving the problem of plastic pollution. This commitment culminated in the presentation of a resolution to the second part of the UNEA 5 session that took place from the 28th of February to 2nd of March 2022. The historic resolution, titled “End Plastic Pollution: Towards an internationally legally binding instrument” was adopted.

Finally, we must realize that all these inter-relationships and interactions between inland waters and the oceans assume an even more relevancy in the context of climate change. Ocean acidification, sea level rise and extreme water-related events, droughts and floods, are some of the impacts of climate change, and the society need to work together to adapt and mitigate their effects. Despite the progress made so far, the actions for the achievement of SDG 14 and SDG 6 are insufficient, in part due to limited coordination between the ocean and freshwater communities, therefore collaborative action is pivotal if these goals are to be met, especially in a context of climate change.

**Among many others, the following challenges/questions arise:**

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1. In the framework of climate change, water scarcity for human activities and for ecosystems is a growing trend which requests diversified adaptation measures. What strategic approaches can be adopted in the interface water and ocean to face such challenges?
  2. Given that over three billion people rely on oceans for their livelihoods and recognizing that the sustainability of oceans is under severe threat due to, namely, plastic/marine pollution, fishery collapse, ocean warming, acidification, and eutrophication, erosion, flooding, what kind of cooperation/collaboration can be considered between the communities of inland water and sea resources decision makers? Will it be possible to implement some measures for sediment flux management in a short period? What can be the role of nature areas restoration (like wetlands) in this context?
  3. Almost 40 per cent of the world's population lives in coastal areas, which face growing risks from contamination to safety (resulting from erosion, climate change, storms, etc.) of coastal environments resulting from human activities. The primary drivers are known as well as the problems. What political instruments can be improved to address such a complex cross-sectoral framework?
  4. The adoption of the resolution for the negotiation of a legally binding international instrument on plastic pollution by UNEA 5.2, including in the marine environment, was a particularly important milestone in the fight against plastic pollution. Considering that plastic pollution control will have to be tackled on very many different fronts, what should be the contributions of integrated water resources management approaches for that purpose?

# HIGH-LEVEL SYMPOSIUM ON WATER

Lisbon, 27<sup>th</sup> of June 2022

Bridging SDG 6 and SDG 14  
Fresh and salt water communities working together

## Concept Note for the Ministerial Roundtable 2 of the High-Level Symposium on Water

Lisbon, 27<sup>th</sup> of June 2022

### Ministerial Roundtable 2: Water and Sanitation Services bridging SDG6 and SDG14


#### Topics to be addressed:

- The impact of human behaviour in reducing marine pollution
- Wastewater and stormwater management on pollution control
- The circular (blue) economy

Oceans are the last receiver of sediments, waste and pollution generated upstream on rivers and on mainland overall. Everything ends washed up in the oceans and humans have a huge responsibility in the reduction of this type of marine pollution through changes in consumption patterns, reduction of waste production, recycling and many other practices that are harmful to the amount of waste reaching the oceans.

Water services, which comprise wastewater and stormwater management, are fundamental actors to manage the quality of wastewater treated and reduce pollution downstream in rivers and oceans. Effective wastewater treatment plants can now reduce pollution up to residual values, greatly improving the quality of inland and coastal waters, boosting economic development and other blue economy activities, such as tourism or fishing, but also the environment and quality of life.

Storms also play a relevant part in washing this waste to rivers and from there to the oceans. Stormwater management through active and passive interventions in urban context can have an important effect in reducing flooding events and in better managing wastewater flowing to wastewater treatment plants, hence, allowing for even more effective and resilient systems.



Climate change is having a huge impact in water resources availability worldwide. Water reuse is another way water utilities can benefit water bodies, by avoiding the need for further water abstraction, especially in water scarce areas where water quantity is relevant to reduce the likelihood of saline intrusion episodes which could further deplete water resources.


As renewable energy production costs are getting consistently lower, sea water is increasingly seen as an important alternative to create resilience to water supply. Desalination plants are more and more common worldwide, especially in water scarce areas, where other water sources are difficult to find and water transport costs are increasingly higher. It is important, however, to promote adequate environmental impact assessment for this type of investments, since by-products of these processes can significantly impact on marine life.

Increased cooperation between different national institutions responsible for managing water services, for regulating and monitoring quality of service provided, for ensuring environmental protection and monitoring of quality of inland and coastal waters can generate better practices and ensure a more effective monitoring of pollution sources and intervene to reduce and penalize the responsible for its production. Since in most cases, water bodies pollution impacts mostly other countries which were not responsible for producing that pollution cooperation at the international level is fundamental not only to ensure reduction of sea water pollution, but to reduce distortions in competition between countries and externalities on downstream economic activities.

Finally, we must realize that all these inter-relations and interactions between inland waters and ocean assume even more relevance in the context of climate change. Ocean acidification, sea level rise and extreme water-related events, droughts and floods, are some of the impacts of climate change, and the society need to work together to adapt and mitigate their effects. Despite the progress made so far, the actions for the achievement of SDG 14 and SDG 6 are insufficient, in part due to limited coordination between the ocean and freshwater communities, and collaborative action as established in SDG 17 is imperative if these goals are to be met, especially in a context of climate change.

### **Topics to be discussed:**

1. Water services are instrumental to ensure adequate water resources management. Water losses control, water reuse, rainwater harvesting, desalination / reduction of point and diffuse pollution / saline intrusion control, and change consumption patterns through awareness and education. What can be done at the international level to create common guidelines to ensure the adoption of best practices in these areas?
2. Managing of urban wastewater pollution is a responsibility of each country's water services, but their impacts are mostly felt downstream in rivers or oceans. How can Governments and national institutions collaborate to ensure

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- the reduction of pollution sources upstream and what economic instruments can be created to reflect these externalities?
3. Urban stormwater management is in many cases a local responsibility but in order to be effective it requires a regional, national or even international joint strategy. What can be done at the political level to foster the creation of these joint strategies?
  4. Climate change is increasingly impacting freshwater resources availability, but economic instruments are still inefficient in reflecting the actual cost of freshwater, especially in water scarce areas. What practices should be implemented to foster water savings by consumers and on promoting water circularity through treated wastewater for reuse? What is the role of water abstraction fees and what economic instruments can be used to promote the use of treated wastewater for non-potable uses?
  5. Seawater is also an increasingly relevant source of potable water in some areas of the world with desalination being seen as a more resilient source of water. However, this option has considerable environmental impacts in terms of rejects and, despite efficiency has greatly improved, it has nonetheless significant energy costs. How can these environmental impacts be reduced and how to impute an economic value on the use of these resources?

# HIGH-LEVEL SYMPOSIUM ON WATER

Lisbon, 27<sup>th</sup> of June 2022



Bridging SDG 6 and SDG 14  
Fresh and salt water communities working together

## Concept Note for the Ministerial Roundtable 3 of the High-Level Symposium on Water

Lisbon, 27<sup>th</sup> of June 2022

*Ministerial Roundtable 3: Existing successful and innovative partnerships to support the implementation of SDG6 and 14: challenges, opportunities and actions*

### Topics to be addressed:

- Coastal waters and ecosystems
- Surface and groundwater resources
- Drinking water, wastewater, and stormwater services
- Governance and partnerships

### • Introduction

The United Nations, with the support of the Governments of Portugal and Kenya, will host the UN Oceans Conference in Lisbon from 27 June to 1 July 2022. As part of this Conference, there will be a High-Level Symposium on Water “Bridging SDG6 and SDG 14” which will comprise a ministerial roundtable on “Existing Successful and innovative partnerships to support the implementation of SDG 6 and 14: Challenges, opportunities and actions”.

The 2030 Agenda for Sustainable Development, adopted in the General Assembly of the United Nations in 2015, is an urgent call for all countries to come together and achieve sustainable development in its three dimensions. Key among the goals were SDGs 6, 14 and 17, which sought to “ensure availability and sustainable management of water and sanitation for all”, “conserve and sustainably use the oceans, seas and

marine resources for sustainable development”, and “strengthen the means of implementation and revitalize the global partnership for sustainable development”, respectively. These goals are integral to the achievement of the 2030 Agenda and they require increased attention on the global political agenda and urgent need for global action.

- **The Sustainable Development Goals**

It is important to recall the main targets within SDGs 6, 14 and 17.

**SDG 6** aims to ensure availability and sustainable management of water and sanitation for all. Targets include the following: achieve universal and equitable access to safe and affordable **drinking water** for all; achieve access to adequate and equitable **sanitation and hygiene** for all and end open defecation; improve water quality by **reducing pollution**, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally; substantially increase **water-use efficiency** across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity; implement **integrated water resources** management at all levels, including through transboundary cooperation as appropriate; protect and **restore water-related ecosystems**, including mountains, forests, wetlands, rivers, aquifers and lakes; expand **international cooperation and capacity-building** support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies; and support and strengthen the **participation of local communities** in improving water and sanitation management.

**SDG 14** seeks to **conserve and sustainably use the oceans, seas and marine resources for sustainable development**. Targets which are particularly relevant to inland water and water services include the following: prevent and significantly **reduce marine pollution** of all kinds, in particular from land-based activities, including marine debris and nutrient pollution; sustainably manage and **protect marine and coastal ecosystems** to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans; **increase the economic benefits to small island** developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism; and **increase scientific knowledge**, develop research capacity and transfer marine technology.

**SDG 17** intends to **strengthen the means of implementation and revitalize the global partnership for sustainable development**. Targets which are particularly relevant to coastal waters, inland waters, and water services include the following: developed countries to implement fully their official **development assistance commitments**; mobilize **additional financial resources** for developing countries from multiple sources; enhance **regional and international cooperation** on and access to science, technology and innovation and enhance knowledge sharing; promote the development, transfer, dissemination and diffusion of environmentally sound **technologies** to developing countries; fully operationalize the **technology bank and science, technology and innovation capacity-building mechanism** for least developed



countries and enhance the use of enabling technology, in particular information and communications technology; enhance international support for implementing effective and targeted **capacity-building** in developing countries to support national plans to implement all the sustainable development goals; enhance the **global partnership** for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, and encourage and promote effective **public, public-private and civil society partnerships**.

- **Interlinked challenges**

Through SDGs 6, 14, and 17, we can understand that inland water resources and water services, coastal waters and partnerships are interrelated in multiple ways, particularly:

**Impact on coastal waters** due to inland waters:

- Pollution of coastal waters caused by **discharges of untreated urban, livestock and industrial wastewater**, runoffs from agricultural fields (diffuse pollution), and non-treated storm water and diffuse topic sources, contribute to eutrophication, lowered water quality and health problems, and affect ecosystem services and related economic activities, such as fisheries and tourism.
- Coastal waters affected by variations in **sediment** transport flow, contribute to coastal erosion and affect maritime structures stability and economic activities like tourism, and cultural ecosystem services.
- Imbalance in the coastal **ecosystems** due to changes in the inland water resource management affect the flora and fauna of coastal and marine ecosystems.

**Impact on inland waters** due to coastal waters:

- **Groundwater resources** can be affected by rising water levels due to climate change, poor groundwater quality and high withdrawal from demand in the agricultural sector and community.
- **Surface water resources** can be affected by rising water levels of coastal waters and higher frequency of extreme events due to climate change in downstream areas, reducing surface water quality and its potential to be used for drinking water and agriculture.

**Impact on water services, urban and agriculture** due to coastal waters:

- **Drinking water services and infrastructures** can be affected by rising water levels due to climate change, which can cause reduced treatment performance standards and structural damage.
- **Wastewater and stormwater services and infrastructures** can be affected by the coastal water tide cycle, saline intrusion in the soils and rising water levels due to climate change. Saltwater entering the sewer system can reduce treatment performance standards, decrease hydraulic performance, and cause potential structural damage. Saline wastewater can also decrease the potential for wastewater reuse.



- **Action areas**

To minimize those impacts, we need to:

- Reinforce skills to **protect coastal waters** from urban, livestock, industrial wastewater, agriculture effluents and stormwater.
- Reinforce skills to **protect surface and groundwater** from rising of coastal waters due to climate change.
- Reinforce skills to **protect drinking water, wastewater, and stormwater services** from rising coastal waters due to climate change.
- **Manage water services**, water supply, wastewater, and storm water in the territory in a holistic manner.
- **Reinforce governance** of waters, with a whole-of-government approach to ensure coherence in policies that govern coastal waters, inland water resources and water services.
- Manage waters in **coastal cities**, with high population density and facing environmental pressures, by introducing circular economy approaches to maximize water resources, minimize waste, and valorise subproducts from the urban water cycle, while incorporating desalination as a new water source.
- Enhance **innovation** and technology to better manage coastal waters, inland water resources and water services.
- Galvanize **effective and innovative partnerships** at local, sub-national, national, regional, and global levels.

- **Questions to be addressed:**

- How can we reinforce **local partnerships**, at the city level, to better manage coastal waters, inland waters, and water services, while employing a circular economy approach? How can we improve water governance and promote multistakeholder involvement that is aligned to the different interests? What type of instruments are required to achieve these objectives? Can we identify some successful case studies?
- How can we reinforce **subnational partnerships**, at the water catchment basin level, to better deal with joint management of coastal water, inland waters, and water services? How can we improve water governance at this level and promote multistakeholder involvement that is aligned to the different interests? What type of instruments are required to achieve these objectives? Can we identify some successful case studies?
- How can we reinforce **national partnerships**, at the country level, to better deal with and integrate public policies on coastal waters, inland waters, catchment areas, and cities? How can we improve water governance at this level and promote whole-of-government involvement aligned to the different policy strategies? What type of instruments are required to achieve these objectives? Can we identify some successful case studies?

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- How can we reinforce **regional partnerships**, namely at the transboundary level, to improve cooperation to solve shared problems? How can we align the different interests? What type of instruments and commitments are required to achieve these objectives? Can we identify some successful case studies?
  - How can we reinforce **global partnerships** at the international level, to better share successful experiences? How can we align the different interests? What type of instruments and commitments are required to achieve these objectives? Can we identify some successful case studies?
  - How can partnerships with **civil society** help solve these challenges, and contribute to increased public awareness, accountability and transparency of public policies and investments in this area? How can we raise public awareness of the tangible and intangible value of water, including the social aspects?