From source to sea: following every flow, including waste, to secure water for people and nature

The value of source-to-sea lies in its systemic approach

Floods and droughts, declining ecosystems and pollution do not stop at sectoral or administrative boundaries. They spread along the entire land–freshwater–coastal–ocean continuum. Yet governance, planning and finance remain largely organised by sector and segment, so problems are shifted downstream rather than solved.

The source-to-sea approach responds by following the key flows that connect the system – water, sediments, pollutants, materials, biota and ecosystem services – from where they originate to where their impacts are felt. Its strength is to look at the whole system and the whole life cycle, so that action targets root causes rather than symptoms.

Solid waste: the root cause?

Applied consistently, this logic places solid waste management at the heart of source-to-sea action. Waste is a material flow generated on land, carried by rivers and deposited on coasts and in the ocean: today, around 80% of marine plastic pollution comes from land-based sources[1], 2.7 billion people lack access to waste collection[2] and 38% of waste is mismanaged[3]. Along the way, mismanaged waste:

- blocks urban drainage and worsens flooding,
- contaminates groundwater through leachate,
- releases macro- and microplastics into freshwater and marine ecosystems,
- undermines investments in water, sanitation and hygiene (WASH).

The “source” of this flow lies further upstream than the riverbank. It lies in how products are designed, produced, consumed, discarded and managed once they become waste. A source-

[1] EEA. (2022). *Marine Litter: the untold story* [online]. European Environment Agency. [Last consulted: 18 February 2026]. Available at: https://www.eea.europa.eu/en/analysis/publications/from-source-to-sea-the-untold-story-of-marine-litter#:~:text=Marine%20litter%20is%20defined%20as,85%25%20of%20it%20is%20plastic.

[2] Lenkiewicz, L. et al. (2024). *Global Waste Management Outlook 2024: Beyond an age of waste. Turning rubbish into a resource*. UNEP and ISWA. Available at: doi.org/10.59117/20.500.11822/44939

[3] Idem.

to-sea approach that addresses water but not the full life cycle of materials would treat only the end of the chain.

Two complementary levers follow:

- **Environmentally sound management of waste**, as defined under the Basel Convention[4], ensures collection, treatment and disposal that protect health and the environment, including water resources. Local waste and sanitation systems are the first line of defence for rivers and seas.

- **Circular economy approaches**, in line with the 13 actions defined by the ISO Norm 59004:2024[5] and ensuring the protection of health and the environment, act at the true source. Refusing, reducing, reusing and repairing before recycling lowers waste volumes and infrastructure costs, eases pressure on ecosystems, and saves the water embedded in wasted food and short-lived products.

Our calls to the Conference

The Platform calls on Member States and all stakeholders to:

1. **Recognise source-to-sea management** in the Conference outcomes as an integrating framework linking land, freshwater, coastal and marine governance, and covering all key flows, including solid waste and material flows.

2. **Embed source-to-sea approaches in national commitments and plans**, including NDCs, National Adaptation Plans, NBSAPs and IWRM plans. They should also ensure coherence with:

- the Kunming-Montreal Global Biodiversity Framework and the Ramsar Convention,
- regional seas frameworks,
- the Basel, Rotterdam and Stockholm Conventions,
- the negotiations on a global instrument to end plastic pollution.

3. **Address pollution across the value chain**, by integrating solid waste management, wastewater management and circular economy measures into water and sanitation

[4] See article 2(8) of the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal: "'Environmentally sound management of hazardous wastes or other wastes' means taking all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes"

[5] The 13 actions are the following: refuse, rethink, source, reduce, repair, re-use, refurbish, remanufacture, repurpose, cascade, recycle, recover energy, re-mine. Derived from the 10R principle, the norm is presented in the following PowerPoint: https://www.pfd-fswp.fr/IMG/pdf/2025_circular_economy_presentation_en.pdf

planning. Ministries responsible for waste, agriculture, industry and urban development should be involved alongside water and environment ministries.

4. **Align finance with the whole system**, by integrating source-to-sea criteria into investment frameworks. Preventive upstream measures – waste prevention and management, wastewater treatment, nature-based solutions – should be prioritised.

5. **Invest in shared data and monitoring**, including indicators that track pollutant and material flows, such as plastic leakage, from source to sea.