**Dakar working paper for interactive Dialogue D: Water for cooperation: transboundary and international water cooperation, including scientific cooperation, and inclusive governance[1].**

**I. Headlines on Progress to Date**

- **There has been progress on water cooperation, but significant acceleration is needed to fully capitalize on its economic, environmental, cultural, social and political benefits.** Transboundary cooperation is essential for advancing sustainable development, peace and addressing the triple planetary crisis. However, only around one-third of countries sharing transboundary rivers, lakes and aquifers have operational arrangements covering all or most of their shared waters, and at least 20 countries lack any arrangements. SDG indicator 6.5.2 data reveals that progress between 2020–2023 was limited: only eight countries improved their coverage of operational arrangements, which is far below what is needed to achieve SDG 6 by 2030[2]. While there are opportunities for improvement, Africa, Europe and North America enjoy relatively high levels of coverage. However, despite notable exceptions and the existence of other forms of cooperation, coverage of operational arrangements across Latin American and Asian countries remains relatively low.
- **Geopolitical tensions increasingly influence cooperation, yet water often remains a channel for dialogue.** In several basins, broader political and security dynamics, along with population growth, rising water demands for economic development, humanitarian crises and ecosystem degradation influence transboundary water relations, heightening the strategic sensitivity of water issues. At the same time, pre-existing water, scientific and economic cooperation often remain among the few sustained forms of dialogue between riparian States, underscoring their potential stabilizing role. This trend reveals a need for cooperation frameworks that are resilient to political change and capable of contributing to stability-alongside broader development objectives.
- **Global legal and institutional frameworks continue to gain momentum.** As a global platform promoting water cooperation, the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (UN Water Convention) has for three decades supported basin agreements, joint institutions, data sharing and coordinated climate and environmental action. It is complemented by a unique Protocol on Water and Health, fostering intersectoral cooperation. Since 2023, ten countries have acceded to the 1992 Water Convention and three to the 1997 Watercourses Convention, with around 20 additional countries in accession to one or both of them.
- **Scientific and technical cooperation show tangible progress, but gaps persist.** International water cooperation, including scientific cooperation, continues to progress, through expanded research networks and collaborative initiatives. However, gaps remain in data availability and accessibility, strucutured knowledge-sharing and the integration of scientific outputs into decision-making. While capacity development and collaborative mechanisms are expanding, their impact remains uneven due to fragmented science–policy linkages. Ensuring continuity in scientific and technical cooperation requires long-term investment in education, professional training and knowledge transfer, including support for youth engagement, early-career professionals and intergenerational renewal.
- **Progress on inclusive water governance remains limited.** SDG indicator 6.5.1 data shows that while coordination and participation mechanisms exist in around half of countries, fewer than

[1] This document covers SDG targets 6.5, 6a and 6b, and linkages with SDG16 and 17.

[2] UNECE, UNESCO and UN-Water (2024). Progress on Transboundary Water Cooperation: Mid-term status of SDG Indicator 6.5.2, with a special focus on Climate Change – 2024.

20% report engagement of vulnerable groups and less than 25% report gender mainstreaming[3]. According to SDG indicator 6.b.1 data levels of participation vary markedly across income groupings. Persistent capacity, data and accountability gaps remain, which are compounded by insufficient monitoring, limited sex-disaggregated data and continued underrepresentation of women, youth and Indigenous perspectives.

**II. Emerging Issues / Areas of Action**

- **Strengthen the coverage, adaptability and resilience of cooperative frameworks**
  Significantly expanding the coverage, adaptability and effectiveness of transboundary arrangements and basin organizations, and ensuring their close alignment with national governance systems, remains essential. These cooperative frameworks can help respond to climate variability, environmental degradation and uncertainty, while promoting institutional continuity and trust. Complementary instruments—such as protocols, climate adaptation plans or ecosystem strategies — can also enhance the adaptability of these frameworks. Good national water governance and cross-basin learning networks, are key enablers of adaptive practice. Increasing accession to the two UN Water Conventions supports governance and resilience.
- **Close financing, technical and institutional capacity gaps**
  Financing and capacity constraints remain among the most frequent barriers to effective cooperation, affecting both joint bodies and national institutions. According to SDG indicator 6.a.1 data, following a small rebound in 2022, ODA commitments and disbursements for the water sector decreased in 2023. Short-term, fragmented and unpredictable funding undermines continuity, while limited human and institutional capacity constrains implementation. Addressing these challenges requires national funding, coordinated efforts to strengthen technical and institutional capacity, improve cross-sector coordination and mobilize more predictable and targeted financing, including innovative funds and climate finance. Sustained resourcing is essential to operationalize cooperation frameworks and enable meaningful public participation, strengthen inclusiveness, legitimacy and effectiveness.
- **Advance knowledge of and cooperation on groundwater as well as conjunctive management**
  Despite growing recognition of groundwater's importance, significant gaps remain in both understanding aquifer dynamics and pollution risks, and in establishing cooperative frameworks for their protection. Strengthening joint monitoring, assessment and research collaboration, pollution prevention and mitigation, and conjunctive surface water–groundwater management are critical to improving governance, resilience and sustainability from local to transboundary levels. Where appropriate, countries should develop aquifer agreements guided by the Draft Articles on the Law of Transboundary Aquifers.
- **Developing the technical foundations for evidence-based cooperation and reinforcing science–policy–governance interfaces**
  The limited development and integration of scientific knowledge into governance and operational practice at multiple levels continues to constrain effective international water cooperation, particularly as water-related climate risks are addressed in a fragmented manner. Key priorities include interoperable data systems, shared methodologies, improved open access to water data, the integration of Indigenous and local knowledge, and the effective use of digital tools and emerging technologies, including artificial intelligence used responsibly, to support forecasting and decision-making. At the transboundary level, gaps in joint monitoring, data exchange and early warning systems remain major barriers to operational cooperation. Overall,

[3] United Nations Environment Programme (2024). Progress on implementation of Integrated Water Resources Management. Mid-term status of SDG indicator 6.5.1 and acceleration needs, with a special focus on climate change.

realising the full benefits of scientific cooperation, including trust-building and science diplomacy, depends on appropriate governance arrangements that promote transparency and inclusive knowledge production, supported by sustained investment in capacity-building and education, as reflected in the UNESCO Recommendation on Open Science.

**Questions for discussion:**

- Looking toward 2030 and beyond, what are the most critical priorities for strengthening transboundary water cooperation in a context of climate variability and change, environmental degradation, water-related risks and competing demands?
- How can the international community better support transboundary water cooperation and implementation of international water law, particularly in politically complex or fragile contexts, where trust between riparian States may be declining,?
- What approaches have proven effective in strengthening cooperation on groundwater resources, including in relation to transboundary aquifers, pollution prevention and conjunctive management of surface water and groundwater?
- How can funding and financing for water cooperation be improved and better targeted – for example, to trigger and capitalise on new forms of coperation, to leverage climate finance, and to support the long-term financial stability of basin organisations?
- Which legal, institutional and technical approaches should be prioritised to enable timely, evidence-based and scalable international water cooperation, and under what conditions can data sharing, joint assessments, interoperable digital tools and responsible use of emerging technologies most effectively support such cooperation?
- Which tools, mechanisms and practical experiences have proven effective in enabling women, Indigenous Peoples, youth and local communities—particularly where they are directly affected by pressing water-related challenges—to move beyond consultation and assume a meaningful and accountable role in the production and use of knowledge, as well as in decision-making on water management?