

World Basin Summit 2026 Interactive Workshop 3 Report

Negotiated water allocation in semi-arid contexts: experience from Ceará State (Brazil) and dialogue with African and European experiences



June 16th - 19th 2026, Rio de Janeiro, Brazil

Workshop Report

Designed to be highly interactive, the workshop was structured in two main parts. The first featured a collaborative dialogue on Ceará's water governance and negotiated allocation process. The second part examined two international cases with long-standing tradition of managing water scarcity and strong parallels to Ceará: the Organisation for the Development of the Senegal River (OMVS), which added a transboundary river management perspective, and Spain's experience of Integrated Water Resources Management. These presentations led into an extensive Q&A session among the speakers and with the audience.

The session was moderated by Ms. Rosana Garjulli Sales Costa (Senior Consultant in Participatory Public Policy Management in Brazil) and Mr. Patrick Laigneau (Secretariat of INBO).

The workshop opened with remarks by Mr. Patrick Lecante (Chair of the French Guiana Water and Biodiversity Committee). Representing a European territory located in South America, his introduction emphasized the value of intercontinental collaboration in improving water management practices. He also highlighted the specific challenges of managing transboundary rivers, praising the joint efforts between France and Brazil to co-manage the Oyapock River.

Water governance and negotiated water allocation in Ceará State, Brazil:

During the first segment of the Ceará presentation, Mr. Francisco dos Santos Teixeira (from Ceará's Water Resources Secretariat) outlined the region's historical vulnerability and structural adaptations. Situated in Northeast Brazil's semi-arid "Drought Polygon", Ceará faces extreme hydrologic unpredictability, driven by thin soil cover, low natural water storage, and recurring multi-year droughts, including a severe six-year dry spell from 2012 to 2017. To counter these conditions, the state shifted from reactive emergency relief toward an extensive structural network consisting of 157 public reservoirs, thousands of small dams, and hundreds of kilometers of interconnecting canals and pipelines.

Following the establishment of state water laws in 1992 and the founding of Ceará's Water Resources Management Company (COGERH) in 1993, the state divided its territory into 12 basins managed through 12 River Basin Committees and 40 Reservoir Users Commissions. This decentralization set the foundation for the "negotiated water allocation" strategy.

Ms. Clara de Assis Jeronimo Sales (Manager of Participatory Management at COGERH), detailed the operational execution of Ceará's negotiated water allocation mechanism. This process is structured as an annual, multi-stage governance cycle.

1. The cycle begins with technical preparations led by COGERH. Engineers and hydrologists conduct comprehensive diagnostic studies of the state's monitored strategic reservoirs, assessing current volume, evaporation rates, and forecasted inflows. Using these variables, COGERH generates various

water-release scenarios to project water availability for the upcoming dry season.

2. These technical scenarios are then brought directly to the local River Basin Committees and Reservoir Users Commissions. In these participatory forums, local stakeholders review the data, debate competing priorities, and collectively vote on a binding water-release strategy. This negotiated consensus determines specific discharge rates and sector allocations, balancing economic needs against essential human consumption.
3. Once a scenario is approved, it becomes an official commitment monitored throughout the allocation period. COGERH tracks real-time reservoir levels, river flows, and withdrawal rates, regularly reporting back to the user commissions. This continuous feedback loop ensures transparency, allows for adaptive management if weather conditions worsen, and reinforces shared accountability among all water users in the basin.

Mr. Aridiano Beck de Oliveira (President of the Baixo Jaguaribe Sub-Basin Committee and a local rural producer), shared his experience of participating in Ceará's negotiated water allocation process over many years. He described the devastating impacts of the severe 2012–2017 drought, during which acute water shortages forced the shutdown of critical economic activities, resulting in widespread unemployment and compelling producers like himself to rethink their production and water use. He emphasized that transparency, access to reliable information, and open dialogue were essential to build trust among diverse water users, as well as between community members, technical experts, and public officials.

Experience of the Senegal River Basin Development Organization (OMVS):

Dr. Thierno Ndour (Director of the Environment and Sustainable Development at the Senegal River Basin Development Organization), highlighted the OMVS as a benchmark model for transboundary water governance and joint infrastructure management. Operating since 1972 across four member states (Guinea, Mali, Mauritania, and Senegal), the OMVS manages shared water resources through an integrated framework designed to guarantee equitable allocation, regional integration, and sustainable economic development. Collective ownership of major infrastructures, such as the Diama and Manantali dams, enables coordinated regulation for multi-sectoral uses including drinking water supply, irrigated agriculture, energy production, and ecosystem preservation.

OMVS' decision-making mechanisms ensure flexible and negotiated allocation during periods of water scarcity, especially through the Permanent Water Commission, an advisory and arbitration body where technical experts, State representatives, and key stakeholders collaborate to model hydrologic scenarios and negotiate seasonal water distribution.

This intervention drew parallels between the OMVS experience and Ceará's negotiated allocation framework, pointing out that both systems rely heavily on robust data, institutional transparency, and structured dialogue among users. It

insisted on the fact that regional cooperation and shared governance tools are essential to mitigating conflicts and building long-term climate resilience across international river basins.

Experience of Spain:

Mr. Ramiro Martínez (Jucar Hydrographic Confederation) presented the Spanish model of integrated water resources management (IWRM), focusing on the historical and legal framework of the Hydrographic Confederations. Established in 1926 as public entities based on the natural hydrological cycle, these basin authorities manage river basins that span multiple Autonomous Communities. These organizations are part of the Spanish water governance that operates through a structured organizational model comprising governing, planning, and management bodies including the User Assembly, Basin Council, and Dam Discharge Commission. This architecture allows public authorities and diverse water users to collaboratively define action plans, manage infrastructure, set reservoir fill and discharge regimes, and submit Hydrological Basin Plans to the government.

This intervention focused on the deployment of a Special Drought Plan, establishing an indicator-based diagnostic system with defined thresholds, drought phases, and clear operational measures for each stage. To reconcile competing demands across supply, irrigation, energy, industry, and leisure, the Spanish model relies on negotiating a balanced "water mix". This approach combines natural surface and groundwater with artificial alternatives like desalination and wastewater reuse.

Overall, this presentation reflected on the strong parallels connecting the Ceará and OMVS models with the Spanish experience, emphasizing that effective governance in water-stressed regions depends on structured, participatory decision-making and institutional transparency. It stressed that sharing best practices among basin organizations across Africa, Latin America, and Europe accelerates the development of non-infrastructural solutions such as indicator-based drought planning and negotiated allocation mechanisms. INBO and the Mediterranean Network of Basin Organisations (MENBO) are vital for fostering collective learning, helping river basins worldwide adapt to long-term climate pressures and manage shared water resources sustainably.

Q&A and conclusion:

The workshop concluded with a Q&A session, which highlighted the complex and long-term construction of governance frameworks tailored to local contexts. 3 topics raised interrogations:

1. **Is consensus delaying urgent decision-making?** For OMVS, consensus guarantees solutions acceptable to every state, preventing any member, even a minority one, from being sidelined. Another notable OMVS practice involves hosting each institutional body in a different member country,

with the rule that its director cannot be a national of the host State, illustrating how structural balance and mutual trust are built over time.

2. **How crucial are local political culture and social expertise for effective water management?** In Brazil, Ceará's negotiated water allocation relies on a tradition of representative democracy and a dense network of community organizations. Furthermore, participants emphasized that COGERH's operational success is deeply tied to its multidisciplinary approach: the active presence of sociologists within the agency's staff ensures meaningful community engagement, proving that technical solutions must be matched by robust social leadership.
3. **How can long-established basin management systems adapt, in the face of unprecedented pressure from climate change?** The session demonstrated that whether in the Mediterranean, South America, or West Africa, confronting the reality of climate change requires moving beyond traditional engineering and towards adaptive, inclusive, and climate-resilient governance.



Credits: INBO