

THEME PAPER

Proposal for Creation of a Water Vertical in the BRICS CCI

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1. Background and Context

Water is emerging as one of the most strategic resources of the 21st century. The increasing variability of climate, changing precipitation patterns, rising frequency of extreme weather events, growing urbanization, food security requirements, industrial growth, and expanding energy demands are placing unprecedented pressure on water resources globally. The challenge is particularly significant for emerging economies such as BRICS nations, which collectively account for a major share of the world's population, agricultural production, energy demand, and economic activity.

In India and several other BRICS countries, the impacts of climate change are already visible through altered rainfall cycles, changing hydrological regimes, increasing droughts and floods, glacier retreat, groundwater stress, saline intrusion, and uneven temporal and spatial distribution of water resources. Such changes pose a direct threat to agricultural productivity, energy security, industrial development, ecological sustainability, and social well-being.

Water, therefore, can no longer be viewed merely as a sectoral issue; rather, it is a strategic enabler connecting the **Food–Water–Energy Nexus**, climate resilience, economic growth, and national security. Efficient and professional management of water resources, supported by conventional wisdom as well as new-age technologies, has become indispensable.

2. Strategic Imperative for a Water Vertical

Effective water management requires a multi-dimensional approach encompassing:

- **Integrated Water Resources Management (IWRM)** for basin-scale planning and optimization of available water resources;
- **Climate-resilient infrastructure development**, including reservoirs, river basin management, groundwater recharge systems, pumped storage, and multipurpose hydraulic structures;
- **Temporal and spatial redistribution of water**, through storage development, flood moderation systems, inter-basin transfers, and improved conveyance mechanisms;
- **Technology-led interventions**, including remote sensing, GIS, digital twins, AI-driven hydrological forecasting, IoT-based monitoring, SCADA systems, smart irrigation, water accounting, predictive analytics, and decision-support systems;

- **Efficient utilization and circular water economy**, including wastewater recycling, desalination, reuse technologies, industrial water efficiency, and demand-side management;
- **Hydropower and pumped storage development**, which are increasingly critical for clean energy transition and grid balancing.

While these concerns are particularly relevant to India, similar challenges are experienced across BRICS countries. Fortunately, many BRICS nations possess rich technical expertise, institutional experience, engineering capability, and innovative models in water governance and development.

A structured mechanism for cooperation among BRICS nations in the water sector could therefore unlock substantial opportunities for knowledge exchange, technology transfer, investments, collaborative research, and policy innovation.

3. Need for a Dedicated Water Vertical in BRICS CCI

The BRICS Chamber of Commerce and Industry has already demonstrated leadership by creating focused verticals such as Energy, Technology, Education, Women Empowerment, and Trade Promotion. However, despite water being foundational to economic productivity, industrial growth, agriculture, sustainability, and energy transition, there exists **no dedicated institutional platform within BRICS CCI for water-related collaboration**.

This represents a significant gap as water intersects with nearly every strategic sector.

Creation of a **Water Vertical** within BRICS CCI would provide a focused institutional mechanism to:

(a) Promote Water Diplomacy and Cooperation

Facilitate dialogue among BRICS nations on common water challenges, resilient planning, transboundary learnings, and sustainable water governance.

(b) Foster Technology Partnerships

Enable exchange and deployment of advanced technologies related to hydrology, flood forecasting, smart water systems, water treatment, desalination, irrigation efficiency, dam safety, sediment management, hydropower, and digital water management.

(c) Encourage Investments and Industry Participation

Promote public-private partnerships, financing frameworks, infrastructure investments, and business collaboration in water-sector projects.

(d) Build Capacity and Knowledge Networks

Organize technical conferences, workshops, executive forums, research collaborations, training programs, and expert exchanges among BRICS nations.

(e) Strengthen the Food–Water–Energy Nexus

Develop integrated approaches for agricultural sustainability, clean energy generation, water conservation, and climate adaptation.

(f) Promote Climate Resilience

Support collaborative efforts for drought management, flood mitigation, basin resilience planning, water storage enhancement, and disaster preparedness.

4. Proposed Scope and Mandate of the Water Vertical

The proposed Water Vertical may focus on the following thematic areas:

1. Water Security and Climate Adaptation
2. Integrated River Basin and Water Resources Management
3. Water Infrastructure and Storage Development
4. Inter-Basin Water Transfer and Optimization
5. Hydropower and Pumped Storage Systems
6. Urban and Industrial Water Management
7. Water Technologies, Digitalization and Innovation
8. Wastewater Reuse and Circular Water Economy
9. Agricultural Water Efficiency and Irrigation Technologies
10. Dam Safety, Reservoir Management and Risk Mitigation
11. Capacity Building, Research and Knowledge Exchange

The Water Vertical may also establish a panel of eminent experts, policymakers, researchers, industry leaders, and technology providers from BRICS countries.

5. Way Forward

It is proposed that the Executive Council of BRICS Chamber of Commerce and Industry may consider the establishment of a **Water Vertical** as a strategic institutional initiative.

As an initial step, the Chamber may convene a **BRICS Water Conclave** involving experts, policymakers, academia, industry, financial institutions, and technology organizations from member countries to deliberate on a collaborative roadmap.

A dedicated Water Vertical would not only strengthen cooperation among BRICS nations but also position the Chamber as a thought leader in one of the most critical developmental priorities of our times.

Conclusion

The future of food security, clean energy transition, industrial growth, ecological sustainability, and climate resilience is intrinsically linked to how efficiently water resources are managed. For nations of the BRICS grouping, which collectively represent a substantial share of humanity and economic output, collaboration in the water sector is not merely desirable—it is imperative.

The creation of a **Water Vertical within BRICS CCI** is therefore both timely and strategically necessary. It can become a powerful platform for cooperation, innovation, investment, and collective action to address one of the defining challenges of the century.

Water is not merely a resource; it is the foundation of sustainable development, economic resilience, and shared prosperity.