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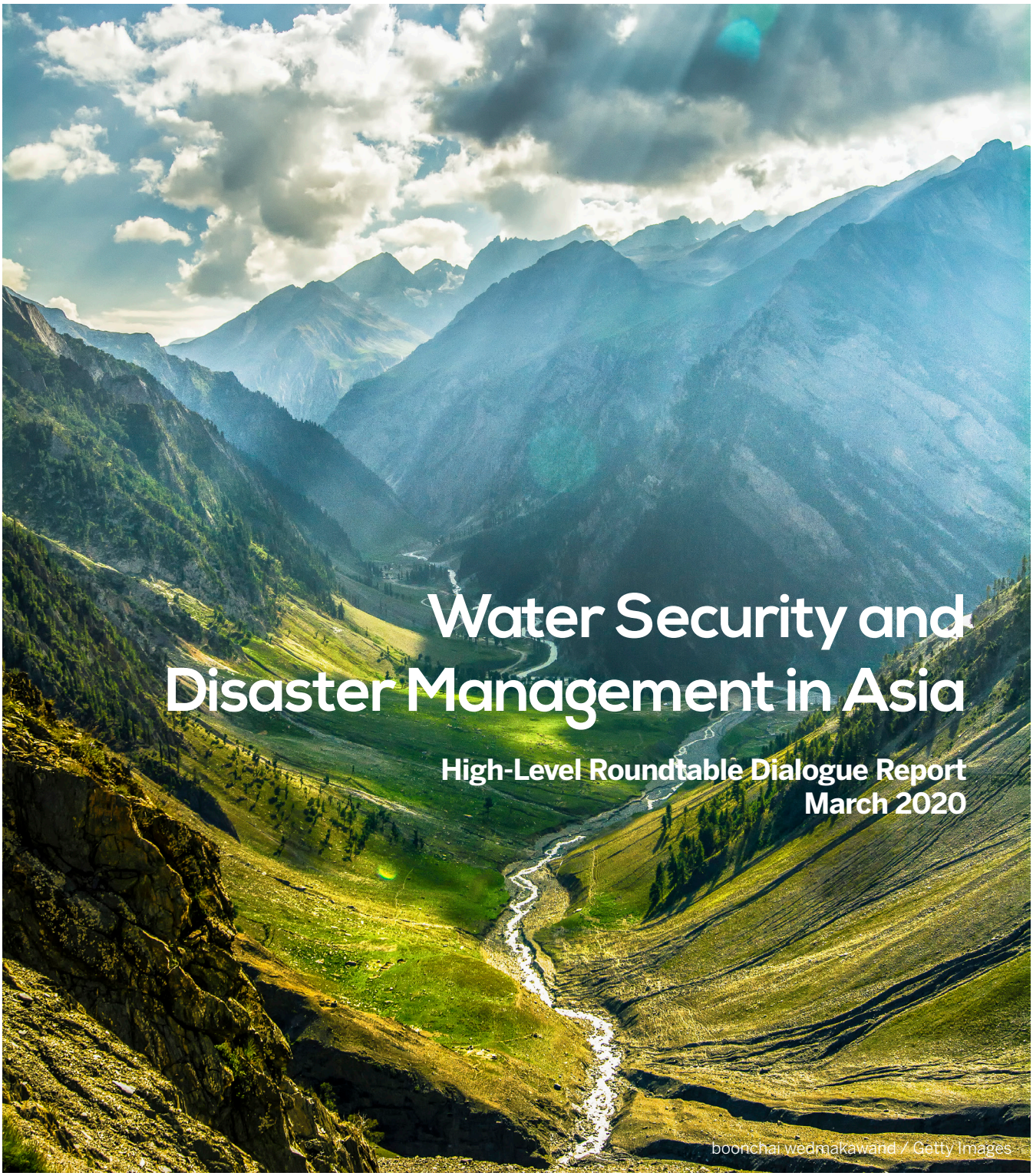

Water Security and Disaster Management in Asia

High-Level Roundtable Dialogue Report
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On March 2-4, the EastWest Institute (EWI) and Konrad-Adenauer-Stiftung (KAS), in concert with the Institute of National Security Studies Sri Lanka (INSSSL) and Consortium of South Asian Think Tanks (COSATT), convened a high-level dialogue entitled: "Water Security and Disaster Management in Asia" in Colombo, Sri Lanka.

By Farwa Aamer, EastWest Institute

The dialogue, second in the project series, brought together experts from both the public and private sectors in India, Pakistan, Bangladesh, Nepal, Sri Lanka and the Maldives to jointly analyze threats to water security in Asia in the face of worsening hydro-meteorological disasters due to climate change. The two-day dialogue consisted of six panel discussions on varied topics related to the politicization of water security, including the economic vulnerabilities of the water crisis and stakeholder engagement, among others.

Introduction

Water, the most vital source of life, is inextricably connected to all major global challenges: climate change and the energy crisis, to food security and economic development.

Asia—one of the fastest growing regions in the world, with an exponentially rising population of 4.6 billion—is poised to experience increased stress on its already dwindling water resources. This impact is particularly profound in the Himalayan region, home to the economic powerhouses of China, India, Pakistan, Nepal and Bangladesh. The majority of the continent's great rivers—including the Indus, Ganges and Tsangpo-Brahmaputra, and myriad smaller, "marginalized" tributaries and streams—flow from this aptly designated "Water Tower of Asia." The sub-region's megacities—including Beijing, Chennai and Karachi—are already crippling with acute water scarcity and rapid urbanization, coupled with rising socio-economic challenges, will only exacerbate this scarcity.

Additionally, climate change's contribution to the regional hydrology remains consequential. Global warming, erratic monsoon systems and extreme weather events create added water stress, paving the way for water-related disasters. The intensity and uncertainty of the current situation is alarming indeed, particularly in a region like South Asia where political tensions and disintegration has led to lack of inter-governmental exchange, multi-stakeholder engagement and the creation of a common platform for information sharing and collaborative policymaking to tackle water security effectively. To this end, consensus-driven, candid and multilateral dialogue is imperative for devising sustainable and long-term solutions.

Conceptualizing Water Security and Disaster Management in the Context of Climate Change

Climate change is a dominant issue in creating an uncertain future for global water management, in Asia. As emphasized by participating experts—the climate crisis is a water crisis. Himalayan glaciers, often touted as the world's "Third Pole,"

Island of Kandy Lake, Sri Lanka (mariusz_prusaczyk / Getty Images)

have experienced an unprecedented decline in the past few years, owing to rising temperatures. Participants agreed that the rapidly shrinking glaciers pose an immense challenge to the population fed by the Indus River who rely heavily on the Himalayan glacial melt for their extensive irrigation and agricultural needs. As pre-monsoon and post-monsoon seasons increase and floods and droughts become a normalized, permanent regional phenomenon, experts agree there is a need to create a new hydrology, adequate adaptation strategies and effective resource management to sustain livelihoods and make farmers more resilient.

Furthermore, the rapid urbanization and the growth of megacities, especially in Asia, have led to highly-vulnerable urban communities. As a result, providing safe and sustainable water resources, as well as executing effective disaster management strategies, has become increasingly challenging. Notable developments, such as the continuing water crisis in the city of Chennai—one of India's largest metropolitan areas—demonstrate a woeful lack of governmental and institutional preparedness to properly plan for and remedy severe water scarcity compounded by the changing climate. In the face of such climate and water-related disasters, the level of engagement needed to mitigate risks effectively is absent; experts emphasized the need to question the region's adaptation and disaster management capabilities, including revisiting available technologies and inviting stakeholders from across the region to help combat the crisis.

Climate change and water scarcity also have widespread security implications. This is mainly apparent in the increased threat of competition over scarce water resources and the potential issue of internal migration and climate refugees. All participants agreed that given Asia's vulnerability to water-related disasters, it is crucial for regional stakeholders to jointly work on strengthening their disaster-warning systems and management frameworks.

Navigating the Politicization of Water Resources

In Asia's Himalayan region, water is an intrinsically political subject and distribution and management of transboundary water resources is obscured by non-inclusive and bureaucratic decision-making. The region's hydropolitics is localized within the context of individual river-basins where hydropolitical power is contingent on several national factors: (1) geographic riparian position (i.e., upstream vs. downstream), (2) comprehensive national power (hard and soft power) and (3) exploitation potential (technological ability and hydrological potential). These power imbalances determine the level of cooperation among regional players over shared water resources. Any existing bilateral conflict, as in the

case of India and Pakistan, along with an added burden of water scarcity, further leads to politicization of any decision-making regarding the allocation of water and involvement of external stakeholders. An expert pointed out that one way to navigate the politicization of water issues is to view shared rivers as a conduit for cooperative opportunities. The expert added that a "knowledge society" that studies the region in terms of its geography, instead of borders and security, can provide fresh perspectives for hydrodiplomacy. Until the South Asian Association for Regional Cooperation (SAARC) becomes operational, regional players can more easily set power dynamics aside and discuss collaborative policies for transboundary water issues at platforms like the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).

Another expert flagged the issue of regional "water-mongering" where non-water actors in urban spaces securitize water based on ownership rather than upholding it as a common good. All experts agreed that water resource management is better conceived, understood and analyzed through the theoretical framework of environmental security and science rather than through the conventional paradigms of cross-border relations.

Uncovering Economic Vulnerabilities to Water Scarcity

The impacts of climate change-induced water shortages have widespread economic repercussions across the globe. Stressing the economic significance of water security in the Himalayan region, an expert pointed out that approximately 4.3 trillion USD of GDP is generated in the region's 10 main rivers; given the transboundary nature of these water sources, any decision-making on a national revel will have economic implications for the neighboring riparian states in terms of agriculture, energy and food security. The expert encouraged rethinking regional economic and development models through the lens of "water-nomics" and better basin-level information sharing between states.

In Asia, burgeoning populations and rapidly evolving socio-economic conditions are widening the demand-supply gaps and this, coupled with poor water management policies, make it even more challenging for the region's water insecure and agrarian countries to sustain their GDP growth and development trajectory. For example, in Pakistan, the heavily water-reliant agriculture sector contributes to 24 percent of the country's GDP; likewise, India's monsoon-driven agriculture sector accounts for around 16 percent of the country's economy.

Another expert underlined that the inequitable water distribution and dwindling water supplies most prominently affect the poor households and farming communities of the region's water intensive economies, as they rely on rain-fed agriculture to support their livelihoods. The study of the food-water-energy nexus, hence, becomes even more crucial and per an expert, for the region to achieve Sustainable Development Goals (SDGs), fair and effective water management policies are required to ensure food production, poverty alleviation and maintenance of health standards.

All experts agreed that water security and climate change risks can be best managed through research-oriented understanding of extreme weather events, private sector intervention, sequenced investments in water infrastructure and institutions and strong water stewardship.

Stakeholder Engagement and Institutionalizing Cooperative Norms in Water Governance

The growing water scarcity challenge in Asia creates a strong case for multidimensional and multi-level intervention by means of convening a wide range of stakeholders who influence or are affected by water decision-making in a region. Stakeholders include all government officials, policymakers, the private sector, multilateral institutions, nonprofit organizations and households whose health and livelihoods rely on the given region's water resources and services.

Globally, it is increasingly being recognized that the traditional approach to water management, where the government devises water policies, demands remodeling. There is an urgent need to address the role of multi-stakeholders and institutions for the successful implementation of such policies on the ground.

For effectively engaging these stakeholders, the foremost step is to identify who they are—via a careful mapping process—and how each of them are involved in the usage and management of available water resources in the region. This is a particularly taxing task in Asia, as flagged by an expert, where lack of political will makes water a state-centric issue leading to a state-centric response—filtering out most stakeholders. The expert added that water security and water governance in the region should be approached using the "hydrosocial" cycle where both the social and political natures of water are taken into regard. The expert also encouraged a greater role for academics and scientists, as well as marginalized groups such as the youth and women.

Another expert also voiced that in South Asia, owing to the imbalance of power between actors and the transboundary nature of water resources, the term stakeholders could be deceiving. There are either "stakewinners" or "stakelosers" since the engagement of all actors does not always ensure equitable participation in water-related, decision-making processes. Also, despite the region's efforts to navigate transboundary issues by creating joint mechanisms, such as the Indus Water Treaty of 1960 and the Ganges Water Sharing Treaty of 1996, the intransigent nature of internal disputes have put these agreements to test time and again. Looking forward, as the strain on shared water resources increases, water governance in the region would need to be implemented by adopting a benefit-sharing/win-win ideology between member countries, as well as by developing appropriate institutions that can provide strong intellectual and legal foundations for implementing cooperative water sharing norms.

There was general consensus that water management is a shared responsibility and in order to ensure long-term sustainability of water resources, there is a need for more transparent, harmonized and holistic decision-making models involving both state and non-state actors, at the national and regional levels.

Enhancing Scientific Perspectives in Water and Climate Policy

Scientific perspectives from multiple disciplines—from hydrology to ecology—and the interaction between humanitarian and environmental factors must be at the forefront of all future water dialogues to provide a more holistic assessment of water resource policy and governance in the Asian Himalayan region. An expert emphasized that creating, enhancing and reforming domestic linkage institutions (e.g., dialogues, consultations, environmental impact assessments) is particularly necessary in creating strong synergies between scientific and policymaking communities on water and climate policy.

Given the interlinkages between the water, energy and food sectors, availability of accurate regional hydrological data will enable more effective transboundary water sharing, as well as more adequate planning of food and energy resources. Experts agreed that science-driven data analysis can facilitate the cohesive understanding of the region's ecosystem, the overlapping factors between the water and climate crisis and the exposure and vulnerability of the dependent populations to disaster-related risks. This, in turn, can lead to prevention-oriented policies and better water resource governance.

Takeaways

Highlights and recommendations garnered from discussions during the high-level dialogue include the following:

- Each of the Himalayan countries have their own sub-national and transboundary water issues, but they are all connected by the overarching water and climate crisis, as well as the subsequent impact on the food and energy sectors in the region. Hence, there is an urgent need for a shared effort in securing the region's water future.
- Policymakers in Asia must build greater capacities to engage in hydrodiplomacy efforts; instead of reinventing the wheel, they should adopt best practices and guidelines from external, regional water agreements that have proven to be prime examples of mediation to resolve water-related conflicts and adaptation to sustainable water management policies.
- Attention must be paid to the management of the region's ecosystems—and to identify and demonstrate the potential of mutual gains in water and energy via hydropower—through stronger cooperative institutions and regional integration.
- Conduct imperatively needed joint research into the new hydrology of the region, in light of the increasing instances of droughts and floods.
- Identify knowledge and research gaps in the area of climate and water policies, and set up portals that can provide free and easy access to region-wide hydrological data.
- Encourage private sector involvement and sequenced investment in disaster management centers, water infrastructures and water management technologies.
- Consideration for collaborating with more international and regional organizations such as the BIMSTEC Centre for Weather and Climate.
- Establish an advisory body or council to serve as a platform for the major Himalayan countries, to convene competing solidarities for the collection of data, information sharing and to encourage debate and derive policy recommendations.

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