7th Karachi International Water Conference

Water, People, Health – Coping with Floods

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Intersecting Challenges and Pathways for a Decolonized Water Future

Background Paper

Introduction

Water is the lifeblood of ecosystems and human societies: it sustains life, shapes landscapes, and underpins economic and social well-being. Yet the world is in the throes of a worsening water crisis. Over 2.2 billion people lack safely managed drinking water at home, and 3.5 billion, nearly half of humanity, live without safe sanitation facilities. This crisis is not merely about physical scarcity; it is a crisis of inequality and justice. The burden of water insecurity falls hardest on those least responsible for it. Poor and marginalized communities, especially in the Global South, face the brunt of water shortages and contamination even as wealthy nations and elites enjoy relatively secure access. And climate change is intensifying this injustice. The climate crisis is fundamentally a water crisis, disrupting the hydrological cycle through more frequent droughts, extreme rainfall, floods and sea-level rise. These water-related catastrophes disproportionately impact low-income countries and vulnerable groups, deepening existing inequalities.

By 2030, almost half the world's population will be living in areas of high water stress, as demand outstrips supply and climate impacts worsen. In the same timeframe, water scarcity and drought could displace up to 700 million people worldwide. Such numbers reflect a planetary emergency that is already unfolding and will only worsen with time. Water insecurity is projected to hit developing regions hardest. According to the World Meteorological Organization, Africa could see 250 million people in high water stress with tens of millions forced to migrate. These are not just ecological or hydrological problems; they are inherently political and ethical. Access to safe water and sanitation is recognized as a fundamental human right, yet billions are denied this right due to poverty, under-investment, and power asymmetries in water governance.

The global water crisis is tied up with issues of poverty, gender, and colonial history. The regions facing the worst water stress today often carry histories of colonial resource extraction and unequal development that have left infrastructure and institutions ill-prepared for current challenges. Communities in South Asia, sub-Saharan Africa, and Latin America struggle with water access not only because of climate and population pressures, but also because of who controls water and whose needs are prioritized. These systemic inequalities are no accident, they stem from decades (even centuries) of policies that favored certain regions and groups over others. Thus, any meaningful solution must address water not just as a physical resource but as a matter of justice, governance, and rights.

This paper explores the intersections of water with people, health, and justice, taking a global view with a focus on Pakistan as a case study. We begin by examining community and social dimensions "Water and People," then the public health implications of water insecurity "Water and Health", and the governance and equity challenges "Water and Justice". We delve into Pakistan's Indus River basin to illustrate how these themes converge in one of the world's most water-stressed countries. Finally, we critique existing water governance paradigms, many inherited from colonial systems, and propose pathways toward decentralized, community-led water stewardship and climate adaptation. Throughout, we highlight the knowledge and leadership of local communities especially women, youth, and indigenous groups as central to reimagining a more equitable water future. We conclude with a call to action for decolonizing water governance and present the idea of a "Living Charter for Water and People" as a roadmap for collective action.

Water and People: Community, Indigenous Knowledge, and Gender

Water is fundamentally a people's issue, its availability and management shape daily life, social structures and cultural practices in communities around the world. However, mainstream water governance mechanisms often sideline the very communities who depend on local water sources and possess centuries-old knowledge to manage it. A community-centric approach to water management is crucial for sustainability and justice. Around the globe, many indigenous and local communities possess deep reservoirs of knowledge on living in harmony with water ecosystems. They treat water not as a commodity, but as a sacred commons to be shared and stewarded. For example, the riverine Kehal people of Pakistan's Indus Valley had for generations sustained a semi-nomadic culture closely entwined with the ebb and flow of the river. Their livelihoods in fishing, boat-building, and small-scale trade follow the seasonal rhythms of the Indus, demonstrating a profound ecological understanding passed down over centuries. Such indigenous practices of water stewardship, seen in communities from South Asia to the Andes to the Pacific, emphasize respect, reciprocity and collective benefit. They stand in stark contrast to centralized, extraction-oriented models of water use we see prevalent today.

Yet, too often, the knowledge and rights of local communities get undermined. Historically, colonial administrations and modern states alike have imposed top-down control over water, disrupting community-led systems. Large dams, canals, and privatization schemes have frequently proceeded without the consent of affected populations, leading to displacement and loss of traditional livelihoods. This exclusion of local voices has also meant missing out on valuable community solutions for conservation and adaptation. At the same time, within communities the impacts of water stress are not felt equally. Gender roles heavily influence who bears the brunt of water scarcity. In many cultures, water procurement and management are seen as women's responsibilities. Globally, women and girls spend a collective 200 million hours *every day* collecting water for their families. This immense, unpaid labor burden keeps countless girls out of school and women out of paid work, perpetuating cycles of poverty and disempowerment. In two-thirds of households worldwide, women are the primary water-fetchers, often walking long distances with heavy vessels. The time and physical effort lost to water collection is, as UNICEF

bluntly states, “a colossal waste of their valuable time” that could be invested in education or livelihoods.

The gendered nature of water insecurity goes beyond workload. When water is scarce or disasters strike, women and children’s well-being is uniquely at risk. During floods and droughts, women commonly sacrifice their own needs, eating less and forgoing hygiene to prioritize children and elders. Lack of safe water and toilets especially imperils women’s health, safety and dignity. In insecure environments like refugee camps or disaster zones, women and girls face higher risks of violence when they must venture out to fetch water or practice open defecation. In Pakistan, the social fabric around water is clearly gendered. Women in rural areas form about 69% of the agricultural labor force, tying them intimately to water-dependent farm work. They also tend livestock, collect fuel, and manage household water use, making them key managers of natural resources. But as water grows scarce, women’s burdens multiply. For instance, in the drought-prone coastal communities of Sindh province, water shortages have devastated fisheries and agriculture, shrinking economic opportunities for women and forcing them to travel even farther for water. The physical toll of carrying water in searing heat, combined with the emotional stress of trying to secure family livelihoods, pushes many women’s bodies to the brink.

Disturbingly, climate-induced water crises are even giving rise to new forms of gender injustice. After the catastrophic 2022 floods in Pakistan, families have felt compelled to arrange marriages for their underage daughters in exchange for bride price, a phenomenon dubbed *“monsoon brides.”* According to a report by Al Jazeera, a single village in Sindh reported 45 cases of child marriages in the year after the floods. Many of these marriages were contracted just before the next monsoon season, indicating families’ anticipation of further climate disasters. Local activists stress that this is not a cultural tradition but a direct response to climate and economic stress. A tragic trade-off where girls’ futures are sacrificed for a short-term financial reprieve. Such stories underline how water-related disasters can exacerbate gender inequality, reversing progress on girls’ education and rights. They also highlight that protecting water security is about protecting the most vulnerable people’s lives and dignity.

Amid these challenges, empowering communities, especially women and indigenous groups, is increasingly recognized as key to sustainable water management. Research and on-the-ground experiences show that when communities lead water governance, outcomes often improve. For example, involving women in water user committees has been linked to more reliable and equal water distribution, as women tend to prioritize household and community needs. Indigenous concepts of water stewardship, treating rivers and aquifers as living relatives rather than inert resources, can foster conservation ethics that modern resource economics fails to instill. Around the world, we see inspiring moves to legally acknowledge the rights of nature and traditional custodians; From New Zealand granting legal personhood to the Whanganui River based on Māori cosmology, to parts of South Asia where local water councils are reviving customary rules to allocate water fairly. These approaches reinforce that water governance rooted in local culture and knowledge can be both ethical and effective.

In summary, “water and people” are inextricably linked: how we manage water reflects social values and power dynamics. A people-centric approach calls for uplifting the voices of those most affected in decisions about water allocation and infrastructure. It means valuing indigenous knowledge of living with rivers and rains. And it demands addressing gender biases so that women are not just water bearers but water leaders with equal say in shaping solutions. As we face a more erratic and water-scarce future, tapping into community resilience and wisdom will be essential for adapting to change and ensuring no one is left behind.

Water and Health: Sanitation, Disease, and Nutrition

Access to clean water and sanitation is foundational to public health. Where water is unsafe or insufficient, diseases flourish, food insecurity worsens, and human bodies, especially children’s, cannot thrive. Today’s water crisis is therefore also a health crisis, manifesting in millions of preventable deaths and illnesses each year. Contaminated water and poor sanitation directly contribute to waterborne diseases such as diarrhea, cholera, typhoid, and hepatitis. The World Health Organization estimates that unsafe water, sanitation, and hygiene cause over 500,000 diarrheal deaths annually worldwide, mostly of young children. In Pakistan, over 50% of diseases are transmitted through contaminated water. Diarrhea remains a leading killer of children under five, and in Pakistan an estimated 53,000 children die of diarrhea every year. Beyond these acute illnesses, chronic exposure to poor water and sanitation underlies a slower-moving health disaster: widespread child undernutrition and stunting.

One of the most insidious impacts of poor water and sanitation is child stunting, a condition of chronic malnutrition in early life that leads to irreversibly reduced growth and impaired cognitive development. Medical research now shows that repeated bouts of diarrhea and intestinal infections (even mild, asymptomatic ones) in infancy contribute heavily to stunting by damaging the gut’s ability to absorb nutrients, a syndrome known as environmental enteropathy. This means that even if a child has access to food, a contaminated environment can prevent them from gaining nourishment. Pakistan unfortunately illustrates this tragic link. With a national stunting rate of about 38% of children (and over 50% in worst-affected provinces like Sindh), Pakistan ranks among the countries with the highest prevalence of stunted growth. Progress in reducing stunting has been painfully slow, in part because interventions have traditionally focused narrowly on food and clinical care while overlooking the environmental causes. In recent years, attention is turning to the WASH (water, sanitation, hygiene) sector as a crucial piece of the nutrition puzzle. In Pakistan’s poorest districts, surveys find that most drinking water sources are contaminated with fecal bacteria. The result is a vicious cycle: infants continually ingest pathogens that keep their bodies in a state of inflammation and malnourishment, leading to stunting and a weakened immune system. These children enter life at a significant disadvantage, with higher risks of poor school performance and lower productivity later on, perpetuating poverty across generations.

Water-related health risks are not limited to infections and undernutrition; they also extend to maternal and reproductive health. Inadequate water and sanitation magnify the dangers of pregnancy and childbirth, particularly in crisis situations. During the 2022 Pakistan floods, as health facilities were inundated, an estimated 650,000 pregnant women in the affected areas

were left without access to proper maternal healthcare. Over 70,000 of them were due to give birth within weeks, facing the prospect of delivering in unhygienic conditions or unsafe locations. Even outside of disaster periods, many women in rural South Asia must give birth at home without clean water or a sterile environment, increasing risks of childbirth complications and infections. The lack of sanitation also complicates menstrual hygiene management, causing discomfort and health issues for adolescent girls and women, and sometimes leading to girls missing school during their periods. In Pakistan's flood relief camps, thousands of women and girls struggled to manage menstruation with privacy and cleanliness, highlighting an often overlooked aspect of dignity in humanitarian response.

Periodic disasters showcase how quickly water and health emergencies can intertwine. Floods and cyclones leave behind stagnant water, which becomes a breeding ground for mosquitoes and water-borne pathogens. Following heavy floods, spikes in malaria, dengue, and cholera are commonly reported. In Pakistan's 2022 floods, cases of malaria surged fourfold (from 0.4 million to 1.6 million) in the hardest-hit districts as vector breeding exploded in the aftermath. Meanwhile, droughts creep in as a silent killer: they diminish water supply and food production, leading to poor hygiene and malnutrition which in turn exacerbate disease vulnerability. Drought-related crop failures have been linked with higher rates of anemia and low birth weight in affected communities, as pregnant women get less nutrition and more physical stress.

Another critical but less visible aspect of water insecurity is its toll on mental health. The constant stress of not knowing if you will have enough clean water, or of dealing with the aftermath of losing your home and livelihood to a flood weighs heavily on individuals and families. Women, who frequently shoulder the responsibility of securing water and caring for sick family members, report high levels of anxiety and depression tied to water scarcity. For example, a mother who must ration water among her thirsty children, or a pregnant woman trekking miles daily for a bucket of water, experiences chronic stress that can lead to perinatal depression or trauma. In Pakistan's drought-hit Thar Desert or the floodplains of Sindh, local non governmental organizations have noted rising incidents of psychosocial distress, including among children, as communities face an uncertain future of water availability. However, such mental health dimensions are rarely addressed in water management policies.

The connections between water and health underscore that investments in clean water and sanitation are investments in public health and human capital. Recognizing this, the United Nations' Sustainable Development Goal 6 calls for universal access to water and sanitation, and SDG 3 calls for health for all. In Pakistan, some efforts have been made (e.g. the Clean Green Pakistan initiative aiming to end open defecation), but huge gaps remain in rural sanitation coverage and water treatment. Holistic approaches are needed: for instance, combining nutrition programs with sanitation improvements, or integrating maternal health services with water supply projects, to tackle multiple facets of the problem at once.

Water is a determinant of health as important as any hospital or medicine. Securing safe drinking water, proper sanitation, and hygiene is among the most effective ways to improve community health outcomes, from reducing child mortality to improving nutrition and education (since

healthier children learn better). The health impacts also highlight the urgency of climate adaptation: as climate change intensifies floods and droughts, we must climate-proof water and health systems to prevent a rollback of progress. Ensuring clean water for health is not just about pipes and wells – it is about protecting the right to life and well-being for the most vulnerable populations, today and for future generations.

Water and Justice: Governance, Inequality, and the Indus Basin

Issues of water often boil down to questions of power: Who controls water? Who has the right to access it, and who is left out? Thus, water is fundamentally a justice issue. Around the world, inequitable governance of water resources has produced stark disparities in who gets water, whose needs are prioritized in times of scarcity, and who is exposed to water-related hazards. These inequities are shaped by both historical forces and contemporary policy choices. Nowhere is this more evident than in the case of the Indus River basin in Pakistan, a river system that has sustained civilizations for millennia but is now at the center of severe environmental stress and social contestation.

Pakistan is often cited as among the most water-stressed countries in the world. The country's fertile plains and 220 million people depend almost entirely on the Indus River and its tributaries. The Indus basin irrigation system is the largest contiguous irrigation network on the planet, watering over 18 million hectares of farmland. However, this system carries a heavy legacy of colonial engineering and post-colonial mismanagement that has contributed to today's crises. Historically, the Indus flowed freely across a vast floodplain, with agro-pastoral communities adapting to its seasonal flood–recede rhythms. This changed drastically under British colonial rule in the 19th and early 20th centuries. The British undertook massive irrigation projects in Punjab and Sindh, constructing barrages and canals to divert water year-round for commercial agriculture (notably cotton and wheat for export). In Punjab, the British established "canal colonies," bringing arid lands under cultivation by allocating plots to settlers, often rewarding elites and loyalists with the best, most water-abundant lands. Headwaters and canal headworks were controlled by these large landholders, while downstream communities (often indigenous riverine peoples) were relegated to tail-end canals receiving minimal flow. This physical re-engineering of the Indus to serve colonial interests went hand-in-hand with social engineering: it created new hierarchies of land and water rights that persist to this day. Wealthy farmers at the head of canals enjoy reliable water, whereas tail-end smallholders and fisherfolk face chronic shortages. As one illustrative figure, canal head farmers in Pakistan receive on average 32% more water than those at the tail-end of the same canal, a systematic inequity rooted in the colonial canal layouts.

The consequences of these engineered inequities have been dire. By stretching the Indus beyond its natural carrying capacity and interrupting its flows, the irrigation infrastructure has caused ecological degradation and heightened disaster risk. Because the canals siphon off water, very little flow reaches the Indus Delta near the coast. In fact, downstream flow into the delta has decreased by 80% since the 1950s, leading to rampant seawater intrusion. Without freshwater to hold back the sea, the once-lush delta has turned saline; fertile land has been lost (over 16% of delta farmland made barren) and fishing communities have seen their catches collapse. The

delta is literally sinking and shrinking as sediments are trapped upstream by dams and barrages. Meanwhile, the closed canal network impeded the Indus's natural flood drainage routes. When extreme rains hit, as in 2010 and 2022, water breaks out, but cannot safely drain, contributing to massive floods that inundate settlements and farmland. The devastating floods of 2022, which submerged a third of Pakistan, were partly a result of heavy rainfall but also exacerbated by these structural factors. That disaster affected 33 million people, displaced around 8 million, and caused economic losses exceeding $30 billion. Many experts pointed out that had the Indus's wetlands and floodplains not been so constricted by dikes and canals, the floodwaters might have been absorbed more naturally. Instead, engineered infrastructure became bottlenecks that burst.

Governance problems within Pakistan further complicate the picture. Water management has historically been centralized in government agencies (e.g. provincial irrigation departments, the Indus River System Authority) that often lack accountability to local stakeholders. Policies have tended to favor large-scale infrastructure (dams, canals) and powerful constituencies (agribusiness, urban industry) over the needs of rural communities and the environment. Pakistan's 1991 Water Apportionment Accord, which allocates river water shares to provinces, itself becomes a source of inter-provincial disputes, with downstream Sindh accusing upstream Punjab of overdrawing its share, hence the saying "everyone is downstream" in a closed basin where one region's use is another's shortage. These disputes reveal the power asymmetries at play: politically stronger actors can influence water distribution, while marginalized groups (small farmers, fishers, women) remain voiceless in decision-making forums. There is also a glaring gap in inclusion: women and indigenous communities have virtually no representation in formal water governance, despite bearing the impacts of water scarcity as discussed earlier. The result is policies that often miss local realities – for instance, ignoring traditional water-sharing arrangements or failing to consider climate adaptation at the community level.

Justice in water governance also has a temporal aspect: it is about *intergenerational* justice. The current path of over-extraction of groundwater, pollution of rivers, and unchecked urban/industrial water use is stealing from future generations. In Pakistan's case, per capita water availability has plummeted from about 5,000 cubic meters in 1950 to around 1,000 cubic meters today, pushing the country from water abundance to the threshold of absolute scarcity. If present trends continue, the Pakistan Council of Water Resources warns that the country could effectively "run dry" in coming decades, with severe implications for food security and social stability. Thus, achieving water justice means making hard choices now to ensure sustainability tomorrow, for example, regulating groundwater pumping, pricing water to curb wastage by powerful users, and cutting pollution so that water sources remain usable. These are politically challenging reforms, but necessary ones. It is often observed that water crises are governance crises. Tackling them requires not just engineering and finance, but building institutions that are transparent, participatory, and accountable.

In conclusion, water and justice intersect at every level: global (North vs. South disparities in climate impacts and capacity), regional (transboundary river sharing), national (urban vs. rural, head vs. tail, rich vs. poor), and local (community inclusion, gender equity). The case of the Indus

Basin exemplifies many of these layers. To move towards water justice, countries like Pakistan must reckon with their history and current power imbalances, and consciously shift towards more inclusive and ecologically attuned governance. Justice also demands recognizing water as having intrinsic rights; a notion gaining ground with the idea that rivers, forests, and other natural entities could be granted legal rights, thereby compelling humans to steward them responsibly. Ultimately, a just water future would mean that no one is deprived of the water they need for a life of dignity, that no group's development is privileged at the expense of another's well-being, and that healthy rivers and aquifers are preserved as a common heritage for all. Achieving this will require profound changes in policy, but also in mindset, treating water not as a tool of power, but as a sacred trust for humanity and nature collectively.

Toward Decolonized and Community-Led Water Governance

Confronting the water crisis in a meaningful way calls for a paradigm shift, from a worldview of water as a resource to be controlled, to one of water as a *shared commons* to be protected. The analyses above point to a common thread: top-down, technocratic solutions alone will not solve the deeply human and ethical problems at hand. What is needed is a decolonized, community-led approach to water governance and climate adaptation. Decolonized governance means unpacking and reforming the inherited systems that concentrate water power in the hands of a few (whether colonial authorities of the past or bureaucratic and corporate elites of the present). It means returning agency to local communities and recognizing the validity of their knowledge systems. Community-led approaches, in turn, ensure that solutions are grounded in local realities and have buy-in from those most affected.

A critical starting point is to decentralize water governance structures. Instead of decisions being made only in capital cities or ministry boardrooms, platforms should be created at the watershed and district level for stakeholder participation. For example, river basin councils that include farmers, fishers, urban consumers, and local officials can collaboratively decide water allocations, timing of releases, and conservation measures. Where such participatory bodies have been tried, in South Africa, for instance, they encountered challenges but also showed that diverse stakeholders can come together to negotiate trade-offs when given the institutional space.

Similarly, empowering women's leadership in water governance is a game-changer. If women had equal representation in local water committees, their practical experience in water management would lead to more informed and inclusive decisions (for instance, prioritizing drinking water in addition to irrigation, or designing sanitation facilities that women feel safe using). The conference that this paper is prepared for, the 7th International Water Conference, aptly centers women and youth, acknowledging that *"a people-centric model co-created with women at its core"* is essential. Realizing this model requires capacity-building, legal reforms for inclusion, and shifting cultural attitudes about who is seen as an "expert" on water.

Another key shift is integrating nature-based solutions and indigenous practices into mainstream policy. Rather than defaulting to mega-dams and concrete canals (which often have high social and ecological costs), governments should invest in restoring wetlands, protecting watersheds, and implementing sustainable agriculture. These nature-based approaches can enhance water

storage and flood control while also supporting livelihoods (e.g. ecotourism, fisheries). For example, reforesting upstream catchments in the Himalayas can regulate flows and reduce siltation of dams. Protecting mangrove forests in the Indus Delta provides storm protection and nurseries for fish, benefiting coastal communities. Indigenous practices such as rainwater harvesting, terraced farming, and sacred groves for source protection have stood the test of time and climate variability. In many parts of South Asia, traditional small-scale rainwater storage ponds (called *tankas* or *hauz*) used to buffer droughts; reviving and modernizing these could greatly enhance local resilience. A holistic approach means blending the best of modern science with traditional wisdom. For instance, using satellite data to monitor glacier melt and river flows, but consulting local mountain communities on their observations of changes in snowfall and springs.

Climate change adaptation must be a pillar of any future water strategy. This means planning for extremes, building flood-resilient infrastructure (e.g. homes on stilts, movable bunds, improved drainage in cities like Karachi to handle monsoon downpours) and drought-proofing vital systems (e.g. solar-powered piped water supply in villages, improved water storage like small dams or groundwater recharge zones). It also means cutting climate pollution to prevent worst-case scenarios: reducing greenhouse gas emissions from the water sector (for example, energy-efficient water pumps, capturing methane from wastewater) and more broadly advocating for climate action to limit warming. Water-centric climate policy recognizes that many climate adaptation actions are essentially water actions – protecting glaciers, designing cities to manage stormwater, etc. Pakistan's national climate change policy, for instance, is being updated to emphasize integrated water resource management as a key adaptation measure.

In sum, protecting and regenerating ecosystems is not a luxury but a necessity for water security. Forests, rivers, aquifers, and soils are the "green infrastructure" that complements grey infrastructure (dams, pipes). Governments should invest in preserving wetlands, rivers' natural floodplains, and forests – akin to how they invest in dams or canals. This could involve creating protected areas for key watersheds, enforcing pollution controls on industries and agriculture (so that water sources are not poisoned), and working with upstream communities on sustainable land management. The co-benefits (biodiversity, carbon sequestration, cultural preservation) align with global goals for sustainable development.

The conference envisions a "Living Charter for Water and People," as a compendium of guiding principles and commitments emerging from dialogues among communities, experts, and policymakers. The idea is to draft a *living* (evolving) document that enshrines the rights of people to water, the rights of water (rivers and nature) to be protected, and the duties of stakeholders at all levels to uphold these rights. By co-creating this charter with the very communities it will serve, farmers, fisherfolk, women, slum dwellers, the process itself can empower participants and raise awareness of water as a common cause. Such a charter could serve as a roadmap for integrated action, laying out targets such as achieving universal safe drinking water, ending open defecation, restoring a certain percentage of river flow for ecosystems, ensuring women's participation in all water committees, and so forth. Importantly, being *living* means the charter can be updated as conditions change or as we learn from successes and failures.

Transitioning to community-led, justice-oriented water governance involves multiple shifts: from centralization to decentralization, from exclusion to inclusion, from exploitation of nature to coexistence with nature, and from short-term reactive measures to long-term planning. These shifts resonate with the principle "Think Local, Act Global" emphasized at this conference, local initiatives and knowledge can drive wider change, and global solidarity and learning can bolster local efforts.

Implementing such a vision is undoubtedly challenging. It requires political will, funding, capacity building, and in many cases, conflict resolution mechanisms to navigate the differing interests around water. But the cost of inaction or half-measures is far greater. The status quo path leads to a future of water wars between communities and nations, widespread hunger, and ecological collapse. The transformative path, by contrast, offers hope: it aligns environmental sustainability with human development and social justice. It is about building water democracy, where every voice counts and water is managed as a public trust for all.

Conclusion: A Roadmap for Water Justice and a Living Charter

The challenges explored, spanning people, health, and justice, make clear that water is much more than a commodity or a sectoral issue. It is the mirror of society's values and priorities. A crisis in water reflects crises in governance, equity, and sustainability. Conversely, solving the water crisis can generate co-benefits across social well-being, economic development, and environmental integrity. This calls for an integrated and justice-centered approach as outlined in this paper.

In practical terms, we must simultaneously ensure *everyone* has access to safe water and sanitation (leaving no one behind), *and* ensure that water use remains within the limits of what rivers and aquifers can sustain (respecting planetary boundaries). Achieving this dual objective is a defining challenge of the 21st century. It compels us to break down silos; between water and health policy, between economic planning and environmental protection, between the knowledge of experts and the wisdom of communities.

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