



Putting Water Security to Work

KEY POLICY MESSAGES

- Water security entails securing a safe and reliable water supply for people and the environment, now and in the future.
- It is closely related to other water policy areas, such as sustainability, justice, water quality, cross-border cooperation, and nexuses.
- Water security policy requires new metrics.
- It also requires new modes of collaboration at all levels.

■ Community spring, Garhwal, India.
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SUSTAINABILITY, YES, BUT ALSO SECURITY

'Water security' has largely eclipsed 'sustainable water management' over the past decade as the central organising principle for water policy among global institutions.

Whereas sustainability is associated with intergenerational equity and the 'triple bottom line' ('people, planet, profit'), water security is about security of water supply, [security against floods](#)¹, security of access and equity in distribution. It is not the same as political or military security. Water security, like [water justice](#)², is based on the notion that everyone deserves equal economic, social and political rights and opportunities.

IMPROVE THE METRICS OF WATER SECURITY

Equity in distribution

Equity can be measured through layered cost/benefit analysis from transboundary to

household scales. At each scale, who bears the costs and who enjoys the benefits of adequate access to clean water? Is one group's water security at the expense of another's? Equity challenges vary geographically so solutions in one location can not be exactly replicated in others.

Community diversity

All stakeholder groups must be involved in making decisions. Contextually specific metrics may provide further insight into the challenges facing different groups, such as the time spent collecting water or laws requiring inclusion of marginalized groups in decision-making.

Participation

Institutions need to support community education and involvement in collaborative water management and services. For example, NGOs promoting rainwater harvesting drive increased uptake of this simple yet effective household strategy to secure more water.

Power dynamics

Gather information on power dynamics, being alert to its diverse manifestations: hard (coercive), soft (persuasive) and selective (exclusionary). This information can be used to identify the most and least powerful participants, drivers or processes creating injustice.

■ *Kampala flooding. © Chad Staddon.*

Water security entails securing a safe and reliable water supply for people and the environment, now and in the future.
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Water security is a key theme of IWRA's XVII World Water Congress in Daegu, Korea, 11-15 May 2020.
www.worldwatercongress.com

1. See IWRA Policy Brief #1 at iwra.org/policybriefs.
2. See WI Policy Brief #11 at iwra.org/policybriefs.



■ Testing water quality in Uganda © Chad Staddon.

FIND COMMON GROUND ACROSS BOUNDARIES

Almost invariably, borders complicate water security even in catchments without the potential for international (or armed) conflict. Water allocation between jurisdictions can be contentious even within nations. A just outcome in one region can create or exacerbate injustices in another.

A key challenge is finding water diplomacy mechanisms that go beyond jurisdictional imbalances. For example, cross-border coordination along the Rio Grande River is difficult between the centralized Mexican water management system and the decentralized, often fragmented, US system. This challenge is compounded when the pace of economic and infrastructure development diverges across borders, and environmental impacts are unevenly distributed.

Political relationships between national governments can evolve over time, but may be slow to transition from conflict to cooperation. Organizations such as the International Boundary and Water Commission, established by Mexico and the US under the 1944 Water Treaty, can play a crucial intermediary role.

Intermediaries can facilitate cooperation through informal, cross-border, cooperative scientific research; social movements that inspire national legal frameworks; and, brokering binational frameworks between historically contentious neighbours.



Satellite image of Lake Naivasha, Kenya © NASA, 2008.

LAKE NAIVASHA, KENYA: ILLUSTRATING CHALLENGES TO WATER SECURITY METRICS

Kenya grows 38 per cent of cut flowers imported into the European Union each year. Most are grown around Lake Naivasha, a region struggling with water availability and quality.

Equity: Locally, smallholders, fishermen and unreticulated households lack water access. Injustice is less intense nationally, where the lake benefits the Kenyan economy. Proportionately little of Naivasha's produce is sold overseas, commercial farms account for 87 per cent of the lake's blue-water footprint.

Diversity: While recognition locally seems to favour agricultural and registered water users, national water user associations try to rectify the imbalance by representing all users equally. Nonetheless, weak regulation and enforcement mean some users are still absent.

Participation: Locally and internationally, flower growers dominate the associations involved in decision-making. International and local NGOs work with local smallholders and growers' groups to improve their participation at national level.

Power: Competing narratives are promoted. Some media, development and conservation organizations see flower farming as detrimental to water security. International agribusinesses threaten to leave Kenya if water prices rise.



THE NEXUS OF WATER-ENERGY-FOOD³ SECURITIES IS KEY TO JUST AND EQUITABLE HUMAN SECURITY

The water-energy-food (WEF) nexus recognises the interdependence of resources: a) water to produce food and generate energy; b) energy requirements to manage water, agriculture, food processing and transport; and, c) food trade-offs linked to water or energy allocations.

The nexus operates through laws, policies, and practices guided by agencies, ministries, non-governmental organizations, user groups, and other actors. Water-energy-food nexus interactions are central to the pursuit of just and equitable human security.

While food and energy security are long-recognised global challenges, water security as an organising principle only emerged in the early 21st century, notwithstanding that scarcity, competition, degradation and flooding are centuries-old challenges. The proclamation of the Millennium Development Goals in 2000 and the Sustainable Development Goals in 2015 galvanized global decision-making around water security as an independent thematic.

Water security is now used as an analytic framework, with different foci depending on geographic location. For example, in unstable regions, water security concerns may include 'water grabs', while in emerging economies water quality for human consumption and ecological health may be at the fore. Social conflict – violent and non-violent – among competing users is also increasing.

The WEF nexus considers water, energy and food as interdependent, yet the diversification options for water are more limited than for energy or food, in part due to real constraints on long-distance conveyance.

Water governance is also more deeply rooted in public institutions, compared with the more private or commercial endeavour of supplying food and energy.

Governing the nexus must be founded on institutional collaboration, often difficult in siloed decision-making. The way forward requires pressure from all sides: pressure from 'below' (popular demand), from 'above' (public-private coordination), and from 'within' (water, energy and food sector collaboration).

TAKE WATER SECURITY FORWARD

Water security is often seen as having a limited purview and an implied emphasis on controlling the resource. It does not play a central role in the Sustainable Development Goals, even SDG6, the 'water goal'.

Yet water security must account for generational and social equity. This should be made explicit. The global water community must make security-related concepts such as the 'human right to water' and 'ecological flows' workable through appropriate metrics.

Power strongly shapes who has access to and control over water and decision-making. A judicious mix of institutions in the right locations with appropriate powers, prerogatives and checks on authority will be critical to achieving socially-just and water-secure outcomes.

■ River terrace farming, Kumaun, India.
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3. See IWRA Policy Brief #2 and WI Policy Brief #6 at iwra.org/policybriefs.