

ADAPTING TO CLIMATE CHANGE THROUGH BUILDING WATER SECURITY

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Water security underlies many aspects of human security, including food security, some aspects of energy security (especially hydropower), health security (especially drinking water and sanitation), and economic security (water for industry, water for agriculture). The increasing scarcity of water in many places threatens human security across all these fronts. In many shared river basins and shared aquifers, threats to water security have transboundary implications.

Water security also demands an adequate level of protection for people, property and livelihoods against water-related disasters, especially floods and drought. Through climate change, increasing climate variability, extreme weather conditions, as well as more direct anthropogenic drivers such as land-use change, societies are facing more frequent disasters, and higher levels of risk.

The converse of all these threats to water security is that they provide opportunities for more intense collaboration, better partnerships, and strategic investment to safeguard the future. Building water security is an early and effective strategy for adaptation to climate change : a “no-regrets” strategy since there are great social and economic benefits to making these investments in water security, regardless of the actual future climate.

Ours is a blue planet – so why should water be scarce? 97.5% of water is saline. In an energy and carbon-constrained society, desalination of seawater is usually an unsustainable option. Only 2.5% of the world’s water is fresh water, and nearly 70% of this freshwater is stored in solid form, as glaciers or permanent snow cover. Most of the remainder is groundwater, so in fact only 0.000075% of the world’s water is stored in lakes and rivers.

Water scarcity is an existing reality for some societies. Unsustainable practices, pollution and overuse are threatening others with future crises, as shown by the evidence of dropping groundwater levels in several large and critical aquifers. Early gains can be made in many places by investments in improving water use efficiency, reducing losses, and implementing water recycling and water reuse strategies.

On the other hand, under-investment in water infrastructure is hampering many African countries from developing and diversifying their economies. Where a country relies heavily upon rain-fed agriculture, its economy is vulnerable to climate shocks. Increased water storage provides a buffer to protect the economy, and to build more resilient communities. Investments in improved flood protection and disaster risk reduction measures are also investments that build resilience – an early adaptation to climate change. Again, both “hard” and “soft” investments are needed. Stronger collaboration on building water security within and between countries is an essential component of adaptation to climate change.