



Watering the NDCs: Key Messages

Water insecurity—where people have too much, too little, and/or too dirty water—is already a significant problem in many parts of the world and is likely to increase due to climate variability. It can no longer be assumed that water for agriculture, energy, cities, and ecosystems will be available when, where, and in the right quality as needed. Access to a reliable water supply is equally critical for all sectors involved in mitigating and adapting to climate change. Nevertheless, many institutions and individuals are only loosely aware that water management is a key cross-sectoral aspect of climate change adaptation and mitigation work.

Because water is inherently cross-sectoral and tied to economic prosperity and development, national climate change planning is strengthened when all aspects of climate action are based on **resilient water management**, herein defined as the practice of working to address climate impacts that have already occurred or are highly likely to occur (robust policies and actions), as well as maintaining the ability to respond to less-certain impacts over time envisioned through alternative futures (flexible policies and actions).¹ Failure to integrate water throughout the formal processes of the Paris Agreement puts many of the actions and targets described within the NDCs at significant risk of failure.

The key guiding principles of resilient water management are

- Climate change uncertainty means water uncertainty – *Climate change will continue to fundamentally alter the hydrological cycle for decades, which requires the systematic inclusion of climate resilience into water decision making.*
- Robustness and flexibility are the best strategies to address uncertainties within and between sectors – *Given ongoing changes to water demand and availability, trade-offs between water uses must be addressed with robustness and flexibility when determining the how, where and when of water allocation.*
- Meeting our mitigation and adaptation goals demands cross-sectoral water management – *Resilient water management can provide coherence within and across sectoral, regional, and institutional goals.*
- Robust and flexible water management solutions enable economic growth – *Resilient water management implemented across sectors can provide an “adaptation dividend,” ensuring resilient economic growth even as the climate continues to shift.*

The paper also highlights six recommendations for applying these four principles of resilient water management to adaptation and mitigation activities in national climate plans and policies.

1. **Analyze explicit and implicit water commitments across and within sectors at the national level and determine how to systematically evaluate water consumption, allocation, and tradeoffs.** This analysis can help those drafting NAPs and NDCs understand where surface and ground water is currently budgeted nationally and where it might need to be shifted to support climate change mitigation and adaptation activities.

2. **Invest in design and management policies and systems for water-intensive energy infrastructure that enable energy system resilience.** Decision makers should incorporate robustness and flexibility across a wide range of credible future projections for climate change impacts on water supply into their energy plans and designs.
3. **Integrate basin-level mechanisms to evaluate the robustness and flexibility of water commitments within and between catchments.** Regardless of the geographical or political layout, the entire basin must be considered when it comes to water allocation. Due to uncertainty around future demand and availability of freshwater, we need water allocation mechanisms and infrastructure that can be successfully adjusted as conditions change while also withstanding such changes that could impact their efficiency and effectiveness.
4. **Introduce measures to monitor and manage water demands and to buffer increased unpredictability in water availability due to climate change.** These measures will typically include new water storage, distribution, and treatment infrastructure and methods and measures for water demand reduction like price-based reductions in major cities.
5. **Respect and enhance integrated ecosystems, particularly for vulnerable populations, most of whom are directly dependent on ecosystem services for livelihoods.** Freshwater ecosystem services are an asset to national climate planning because they provide several climate regulating services and help communities thrive. These efforts are often labeled as part of ecosystem-based adaptation (EbA) or ecosystem-based management (EbM).
6. **Enforce sustainable and cooperative water allocation within and across basins.** Water boundaries exist not only between countries but often within them; greater coordination and cooperation is needed at all levels.

The guiding principles and recommendations enumerated here represent a starting place for incorporating water into national climate planning; more detailed resources for implementation are available and listed in the brief's *Resources and Examples* section.

Learn More

This document and the associated policy brief are products of the Alliance for Global Water Adaptation (AGWA). For the full policy brief, please download at <https://www.wateringthendcs.org/>.

If you have any feedback, questions, or if you would like to join the “Watering the NDCs” movement, you can email us at: policy@alliance4water.org.



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¹ Mendoza, G., Jeuken, A., Matthews, J.H., Stakhiv, E., Kucharski, J., Gilroy, K. 2018. *Climate Risk Informed Decision Analysis (CRIDA): Collaborative Water Resources Planning for an Uncertain Future*. UNESCO and ICIWaRM: Paris, France and Alexandria, VA, USA.