



11. Conclusions

To effectively tackle the water crises, we need to consider the full implications of the hydrological cycle, the combination of green and blue water, that has consequences for communities and economies around the world and all the earth's ecosystems, affecting our collective ability to achieve local, national and global agendas in relation to dignified lives, food security, sustainable development, and more.

This report supports a new perspective on the way we value and govern water as a global common good. A perspective that recognises a stable hydrological cycle as a condition to achieve our most important social, economic and environmental goals. A perspective that combines economic efficiency, social and economic equity, and environmental sustainability, knowing that achieving each of these pillars requires that the other two are realised as well.

The GCEW has identified 5 critical mission areas, which together can guide action towards addressing a growing water crisis and stabilising the hydrological cycle so as to secure its benefits. They are open for further deliberation and adaptation, to favour ownership in diverse jurisdictions:

- A. Launch a new revolution in food systems to improve water productivity in agriculture while meeting the nutritional needs of a growing world population.

- B. Conserve and restore natural habitats critical to protect green water.
- C. Establish a circular water economy, including changes in industrial processes, so that every drop of used water generates a new drop through reuse.
- D. Enable a clean energy and AI-rich era with much lower water intensity.
- E. Ensure that no child dies from unsafe water by 2030, by securing the reliable supply of potable water and sanitation for underserved communities.

A distinctive feature of missions is the emphasis on the role and capacities of governments to shape markets so that they become radically more sustainable in the way they affect the hydrological cycle through water and land use. Governments – national and local – can do so by mobilising a range of instruments and designing partnerships that deliver public value.

The solution space mapped in this report considers the role of innovation across missions, and the conditions for the expected benefits of innovation to materialise. Partnerships have the potential to mobilise the capacities of a range of agencies, with risks and rewards that are shared fairly. There is in particular a critical need to combine policy, financial and social instruments to unlock investments for water security, catering to each country's needs.

Indeed, finance is part of the solution, with the need for both early-stage and patient finance, and for public and private finance to be brought together to contribute to our critical water missions. More must be achieved through public and development finance, through country-tailored, programmatic (not only project-based) approaches, in line with national development strategies – with particularly important roles for public development banks.

Water service providers are key institutions to deliver on the five missions. They deliver best if a wide range of technological, organisational and governance options are considered, which put public value and those most in need centre stage.

The GCEW recognises the role of publicly available and interoperable data to underpin policy and investment. Corporate finance and financial markets would benefit from robust assessment and disclosure of the physical and financial materiality of water risks, taking account of the full hydrological cycle. The GCEW recommends a global water data architecture as one of the key components of new global governance arrangements for the hydrological cycle. So far, international collaboration has focused on the management of transboundary rivers and lakes, a most needed endeavour. Consideration for the full hydrological cycle calls for similar efforts on green water flows. Could inspiration stem from efforts to mitigate long-range transboundary air pollution, an area with more than 40 years' experience in international cooperation to manage clouds and rainfall?

Beyond Dublin. A set of principles to value and govern water for the common good

The work of the Global Commission on the Economics of Water builds on a prior recognition of the economic value of water. In 1992,

participants in the International Conference on Water and the Environment endorsed the Dublin Statement, which is famous for acknowledging that economic value of water. The Dublin statement entails other messages, which resonate with the work of the GCEW. For instance, it refers to water and land resources conjointly: “management links land and water uses across the whole of a catchment area or groundwater aquifer”. It requests “a greater recognition of the interdependence of all peoples, and of their place in the natural world”. It calls for action programmes on water and sustainable development.

The Dublin statement offers a lot of food for thought. It also faces some imitations highlighted by the work of the GCEW. Consider the 4 principles below, from the Dublin statement (ICWE, 1992):

- ***Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment.*** This includes “the basic right of all human beings to have access to clean water and sanitation at an affordable price.” This is one step towards the human rights to water supply and sanitation, which were recognized by the UN General Assembly and the Human Rights Council in 2010. This however does not provide for a dignified life, as multiple water needs - for food and more - are not considered.
- ***Water development and management should be based on a participatory approach, involving users, planners and policy makers at all levels.*** The emphasis is set at local level, with decisions “taken at the lowest appropriate level.” While the multiscale approach is appropriate, the reference to the global level is missing.
- ***Women play a central part in the provision, management and***

safeguarding of water. This recognition is welcome. The GCEW emphasises that similar recognition should be awarded to communities that play a decisive role in green water management – most notably indigenous people – and generations that are affected by decisions made today; hence the youth and intergenerational agenda that accompanies the work of the GCEW.

- ***Water has an economic value in all its competing uses and should be recognized as an economic good.***

Managing water as an economic good “is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.” The GCEW acknowledges that robust economics for water management can deliver economic efficiency, social equity and environmental sustainability (the 3Es). It emphasises however that new economics is required, that considers the value of both green and blue water, and that informs a mission-oriented, water system justice approach to water.

Going beyond the Dublin statement, and informed by the latest characterisation of the hydrological cycle and refinement in water economics in this report, the GCEW offers a suite of principles that are fit for current and future challenges. They provide the basis for further discussion and refinement.

- The hydrological cycle, encompassing both blue and green water, has to be governed as a global common good, through concerted action in every country and collaboration across boundaries and cultures.
- There are absolute limits to the total amount of water that can be safely and sustainably consumed globally.

- Water must be an organising principle for the transformations required to achieve collective ambitions on sustainable development and global environmental ambitions, regarding climate change, biodiversity and desertification.
- Economic efficiency, social equity, and environmental sustainability are mutually supportive. They can only be achieved through a range of policy packages, because no single policy alone can achieve the three of them.
- Water must be priced, subsidies allocated, and regulations shaped to support both efficient water use and access for all. Further, the full value of water’s ecosystem benefits, including those deriving from green water, must be built into decisions on land use and protection of natural habitats.
- We should also shift from fixing externalities after the fact to shaping economies, so that green and blue water is used efficiently, equitably, and sustainably from the start.
- An outcomes-focused approach centred on our most important and interconnected water missions, must drive coordinated actions by governments, the private sector, and communities.
- Every human being needs water for a dignified life, estimated at 4000 litres per person per day. This estimate needs to be refined, promoted and achieved.

In line with the ambition of the GCEW, these principles are set to address the water crisis and – beyond - contribute to our global agendas. We hope they can inspire discussions and debates, that inform the preparation of forthcoming UN 2026 Water Conference.

Future work

The GCEW offers a process to continue the work initiated during its 2-year mandate, building on the momentum achieved through multiple conversations, active engagement and participation in diverse international fora on water and beyond. In particular, the five missions sketched in the report are meant to be actionable and inspiring, and to rally support across policy communities and communities of practice. Work can continue along two mutually supportive avenues:

- Further engagement with distinctive communities
- A research agenda.

Further engagement with distinctive communities

Beyond the report, the GCEW was always keen to engage with agencies that have the capacity to move the agenda further, in line with some of the analytics and recommendations in this report. We consider the communities below as essential to move the needle and take action at the appropriate scale.

- **Youth.** The solutions to the issues laid out in this report need to factor in the preferences and capabilities of people who will be affected by the consequences of the decisions made today: the youth and, as much as possible, future generations. There will be trade-offs. Decision making is more effective when it reflects that intergenerational dimension. For these reasons, the GCEW engaged with youth movements to contribute that intergenerational perspective. It supported the Youth Water Agenda Campaign (Global Commission EW, 2024), launched at the 10th World Water Forum in Bali, Indonesia. Distinctive contributions relate to the modalities to achieve intergenerational justice and to bolster Youth empowerment.
- **Indigenous communities.** The diagnosis and the solutions need to factor in the preferences and capabilities of people and communities that are at the front line of managing green and blue water, and the ecosystems that support the hydrological cycle. While the GCEW has documented the distinctive role and capabilities of

indigenous people, it did not have the resources to meet these conditions in its 2-year mandate. It is however committed to initiate and encourage further engagement, which should be part and parcel of developments, refinement and implementation of the principles and recommendations offered in this report. Preliminary engagement with potential partners paves the way towards valuable developments.

A research agenda

The work initiated over the last two years calls for further research and refinement. A research agenda can pave the way for another decade of valuable, policy-relevant research. Some of the distinctive features include:

- Data, on total water storage, exposure to water stresses and hydrological imbalance, socio-economic data. Chapter 3 emphasised the relevance of the concept of total water storage, to support evidence-based policies. The accuracy, granularity and comparability of available data across regions are conditions for place-based and just responses.
- The economics of moisture, with a view to better characterise action to preserve moisture in soils. This report sheds light on the value of keeping moisture in soils, from a water, climate mitigation and biodiversity perspective. More work is required to support effective action at the appropriate scale, including evaporation-sheds.
- More work is required on what the operationalisation and application of the Water Systems Justice framework, as outlined in Chapter 4, would look like, for example regarding the renegotiation of existing water contracts and incorporating different perspectives in policy responses.
- The benefits of innovation in each sector for the hydrological cycle, and the conditions needed to ensure they can succeed and be scaled up. Chapter 5 in particular documents a burgeoning field of innovation to deliver on the five missions that can help address the water

crisis, as characterised in this report. Empirical work can help document the conditions to speed-up deployment, while avoiding unintended consequences.

- Allocation regimes that ensure a just allocation of water resources, and the conditions to transition towards their implementation. The reform of water allocation regimes is notoriously complicated, because of vested interest and political economy issues. Lessons from practical experience can be beneficial for a wide audience.
- Refinement of the projection of water needs for a dignified life. The calculation in Chapter 4 is based on assumptions that can be refined. This would help define and document justice issues in relation to access to water globally, and support the need for global responses.
- Towards principles for Just Water Partnerships. Just Water Partnerships have the potential to support the development of place-based transitions towards policies and practices that contribute to stabilising the water cycle. In essence, they provide the platform for the iterative design of such transitions, their implementation, with the support of financing strategies. More work is required to characterise Just Water Partnerships. Typically, it would seem appropriate to develop a set of principles to guide the development and replication of such partnerships. It would be particularly appropriate to explore how such Just Water Partnerships could operate at the level of evaporation-sheds, supporting cooperation along the hydrological cycle.
- Aligning trade with the ambition of restoring a broken hydrological cycle. Trade, most specifically the trade of goods and rely on freshwater for their production, can contribute to effective water reallocation globally. The conditions are well known. Vested interests and political economy issues make the realisation of these conditions complex. Informed by new economics of water,

and inspired by the recent agreement on fisheries, an international effort can move the needle and illustrate the possibility of international cooperation in that domain.

Work towards implementation of the recommendations, or operationalisation of some of the principles sketched in this report, would benefit from an experimental attitude. We recognise how context-specific solutions can be, typically when it comes to driving behavioural change for farmers, water or land managers. Trial and error are part of the experimental process, when lessons are learned from successes and failures.

A related suggestion: narratives are powerful mechanisms to inform and drive policy and behaviour change. While the GCEW has focused on facts and evidence to inform such narratives, culture is the ultimate medium to form and disseminate them. This piece of work would benefit from attempts by story tellers to transform it into vernacular art forms that reach communities around the world. This would demonstrate a fascinating alliance between science, policy and culture to drive change.

Recommendations

The GCEW offers a set of recommendations, to value and govern water so as to stabilise the hydrological cycle, enable food security and human dignity, and keep the Earth system safe for humanity. Underpinning all our recommendations is the need for justice and equity to be key principles intrinsic to managing water more efficiently, dynamically and sustainably, and not merely an add-on.

1. We must **govern the hydrological cycle as a global common good**, recognising our interdependence through both blue and green water flows; the deepening interconnections between the water crisis, climate change, and the loss of the planet's natural capital; and how water flows through all our 17 Sustainable Development Goals.

2. We must **recognise the minimal water requirements of water for a dignified life. This report offers 4,000 l/p/d as a reference for further discussion.**

- New water provision should focus on those left behind first.

3. We must **value water, the Earth's most precious resource, to reflect its scarcity, ensure its efficient and equitable use, and preserve its critical role in sustaining all other natural ecosystems.**

- We must price water properly to incentivise its conservation, particularly by the largest users. Today's massive subsidies that contribute to water's overuse in many sectors and environmental degradation should be redirected towards water-saving solutions, protecting and restoring freshwater ecosystems, and ensuring access to clean water for vulnerable communities.
- We must account for the impacts of industrial, national and global development on both blue and green water resources.
- We must also embed the value of green water systematically in decisions on land use so as to better protect evapotranspiration hotspots such as forests, wetlands, and watersheds. Measuring green water's benefits, including its co-benefits, can also enable schemes for Payment for Ecosystem Services.

4. We must **shape markets to spur a wave of mission-oriented innovations, capacity-building and investments across the entire water cycle**, including blue and green water, to radically transform

how water is used, supplied, and conserved. These investments must be **evaluated not in terms of short-run costs and benefits, but for how they can catalyse dynamic, long-run economic and social benefits.**

5. We must **forge partnerships** between all stakeholders, from local to global, **around five missions that address the most important and interconnected challenges of the global water crisis**, and must drive innovation in policies, institutions and technologies:

- **Launch a new revolution in food systems** to improve water productivity in agriculture while meeting the nutritional needs of a growing world population.
- **Conserve and restore natural habitats critical to protect green water.**
- **Establish a circular water economy**, including changes in industrial processes.
- **Enable a clean-energy and AI-rich era with much lower water intensity.**
- **Ensure that no child dies from unsafe water by 2030**, by securing the reliable supply of potable water and sanitation for underserved communities.

6. We must **forge symbiotic partnerships between the public and private sectors to deliver efficient, equitable, and environmentally sustainable use of water from the start.**

- Governments should incorporate conditionalities in contracts and property rights to ensure high standards of water use efficiency and environmental protection, including corporate responsibility for watershed and water basin conservation programmes. They should also provide certainty for investors through clear and consistent regulation and policies, including realistic tariff adjustments.

- For utilities, collaborative decision-making and contract design can steer the private sector toward public value creation with appropriate risk and reward sharing. The focus of partnerships should be on outcome-based performance for operational efficiencies and long-term system resilience.

7. We must raise the quantity, quality and reliability of finance for water in every sector.

- **Government budgets themselves must reprioritise investments in water, and repurpose today's environmentally harmful subsidies**, estimated at over US\$700 billion per year in agriculture and water and sanitation alone. The discount rates used to assess investments in water infrastructure and ecosystem preservation should take into account their long term - including intergenerational - social, economic and environmental benefits.
- **Development finance institutions (DFIs) – national, regional, and multilateral – must be regeared to provide catalytic finance** to unlock vastly greater amounts of private finance, including more patient finance for water infrastructure projects.
- **Just Water Partnerships involving DFIs and national authorities should be established to build capacity and mobilise investments for low and lower-middle income countries.** There is large untapped potential for doing so, such as by leveraging concessional finance and pooling risk through bundling projects across sectors. Also key in creating an enabling environment for financing is to build a pipeline of bankable projects, consistent with holistic, programmatic approaches and national development strategies.

8. We must harness data as a foundation for action by governments, businesses, and communities.

- We should work towards **a new global water data infrastructure, building on and strengthening capacities for data collection on blue and green water at every level of the water cycle**, from local to river basin to global. It should include local and Indigenous knowledge,

and aim for interoperability of data reporting.

- We must **accelerate efforts toward market-based disclosure of corporate water footprints, and expedite work towards regulatory standards for mandatory disclosure**, so as to steer action toward sustainable water practices. The aim must be providing transparency on the double materiality of water risks posed by companies' operations – including both their own vulnerabilities, and the impact of their operations on blue and green water resources. We recommend that **water disclosure be integrated in carbon transition plans** and be an integral part of sustainability-related disclosures.
- We must develop pathways to **value water as natural capital to enable responsible stewardship of freshwater ecosystems**, including enabling governments and all stakeholders to evaluate the costs and benefits associated with land use changes.

9. We must build global water governance that values water as an organising principle, recognises that water is both a local and global issue, and that the hydrological cycle encompassing both blue and green water is a collective and systemic challenge.

- The **ultimate ambition should be the establishment of a Global Water Pact** that sets clear and measurable goals to stabilise the hydrological cycle and safeguard the world's water resources for a sustainable and just water future.
- To achieve such a Pact, we need a **multi-stakeholder approach that provides for a clear action agenda, institutional innovation, and capacity building.**
- The five critical water missions offer a starting framework for developing public-private-people coalitions, drawing on diverse expertise and engaging with all sectors and voices, including Indigenous Peoples and local communities, women, and youth.
- Water and its values should be anchored in every convention, including climate, biodiversity, wetlands, and desertification, and UN agreement, with clear goals and targets.

¹This is a rough while extremely conservative threshold for the minimum green water requirement per person, given that it is not possible, in the real world, to achieve 100% transpiration efficiency.

²The redistribution of mass on Earth's surface (such as the movement of water) causes measurable changes in its gravity field. GRACE measures Earth's gravity field, making it possible to estimate the total amount of water stored on and below the surface.