



ANNUAL POLICY DIALOGUE 2026

CASE STUDY

WATER AS A GLOBAL PUBLIC GOOD

CLUB DE MADRID

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY 2

1.1 Key findings 2

2. INTRODUCTION 3

3. THE PROBLEM: GLOBAL PROMISES ARE NOT TRANSLATING INTO DELIVERY 5

4. GOVERNANCE FOR WATER SECURITY 6

4.1 Global stewardship: setting norms, rights and shared standards 6
4.2 Regional and basin-level cooperation: turning shared risks into practical action 6
4.3 National and local delivery: making water security real for people 6
4.4 Connecting the levels: finance, data and accountability 7

5. FINANCING WATER SECURITY AS A PUBLIC GOOD FUNCTION 7

6. POLICY OPTIONS: PATHWAYS FOR REFORM 9

6.1 Adopt a functional approach to water security as a public-good issue 10
6.2 Strengthen regional and basin-level cooperation as an operational bridge 10
6.3 Create multi-level water-security delivery compacts 10
6.4 Align financing with water-security functions and long-term resilience 11
6.5 Apply rights-based safeguards to all financing models 11
6.6 Invest in green and nature-based resilience alongside essential infrastructure 11
6.7 Build accountability systems that measure delivery, equity and trust 12

7. RECOMMENDATIONS 12

7.1 Reframe water security as a system of public-good functions 12
7.2 Use service delivery, preparedness and ecosystem indicators as tests of delivery 12
7.3 Strengthen regional and basin-level cooperation without abandoning global stewardship 12
7.4 Align financing with long-term water security and resilience 12
7.5 Apply rights-based safeguards to all financing models 13
7.6 Rebuild trust through accountability, participation and inclusion 13
7.7 Protect water-security public goods from political and financial volatility 13

8. CONCLUSION: WATER AS A PRACTICAL TEST OF GLOBAL PUBLIC GOODS COOPERATION 13

Note

This paper was prepared by Emily Bamford at the request of Club de Madrid, as part of the preparatory process for its 2026 Annual Policy Dialogue, *Governing and Delivering Global Public Goods in a Fragmented World*. It is intended to provide analytical input to the Dialogue's discussions on the governance and financing of global public goods, using water security as a practical case study.

1. EXECUTIVE SUMMARY

Water is the foundation for all life on Earth. It underpins human survival, public health, food security, climate resilience, ecosystem stability, dignity and peace. Yet it does not fit neatly into the category of a pure global public good. In economic terms, they are usually described as non-excludable, meaning people cannot easily be prevented from benefiting from them, and non-rivalrous, meaning one person's benefit does not reduce what is available to others.[1] Specific water resources, such as rivers, aquifers, reservoirs and supply systems, can be overused, polluted, controlled or denied.

Water security, however, has strong public-good characteristics. The systems that can ensure water security, including hydrological monitoring, early warning, shared data, transboundary basin cooperation, pollution control and climate-resilient planning, when governed and financed correctly, all generate benefits that extend beyond one community, one country or one generation.

This paper argues that our current global water challenge is not only a question of scarcity, infrastructure or finance. It is a governance and accountability challenge. Safe drinking water and sanitation are human rights and basic public services, but they depend on wider systems that are often fragmented, underfunded and poorly aligned with long-term risk. Global commitments are not consistently translating into safe, affordable and reliable services, effective basin cooperation, flood and drought preparedness, ecosystem protection or public trust.

The paper uses water as a practical test case for how global public goods can be governed and financed in a fragmented world. It proposes a functional approach: identify which water-security functions generate shared benefits, govern them at the right scale, and finance them through instruments that match the function, protect rights and support long-term stewardship. The aim is not to create a new global water architecture, but to connect and strengthen existing global, regional, national and local systems so that commitments lead to the delivery of safe water services for everyone.

1.1. Key findings

a. Water security should be treated as a system of public-good functions, not as a single global public good: Water itself can be rivalrous and excludable, but many water-security functions generate shared benefits. Policymakers should focus on the functions that require collective action, including shared data, early warning, transboundary cooperation, pollution control, catchment protection and climate resilience.

b. Global promises are not translating into effective and equitable delivery: Despite decades of rights commitments, Sustainable Development Goal (SDG) targets and climate pledges, billions of people still lack safely managed drinking water and sanitation.[2] This delivery gap reflects deep failures in governance, financing, accountability and political power, not just a lack of infrastructure and technical capacity.

c. Governance must match the scale of the function: Water security can function as a global public good only when the right responsibilities sit at the right level. Global institutions should set norms, rights, standards, monitoring systems, financing principles and accountability expectations. Regional and basin-level mechanisms should coordinate shared waters, drought and flood preparedness, data-sharing, pollution control and dispute prevention, whilst national and local authorities must remain responsible for service delivery, regulation, affordability, implementation and public participation. The task is to connect these levels so that water security is not treated as a fragmented set of local projects, but as a shared system of protection delivered equitably and accountably.

[1] IMF (2021) What Are Global Public Goods? https://www.imf.org/en/publications/fandd/issues/2021/12/global-public-goods-chin-basics

[2] World Health Organization (WHO) and UNICEF (2023) Progress on Household Drinking Water, Sanitation and Hygiene 2000–2022. https://washdata.org/reports/jmp-2023-wash-households

d. Financing must shift from short-term projects to long-term water security: Current finance often favours visible infrastructure and short project cycles, while underfunding the systems that prevent failure, including maintenance, monitoring, preparedness, catchment protection and ecosystem resilience. This must change if universal safe water access is to be achieved and sustained. Financing should follow the function being delivered: public finance should remain the backbone of water security; grants and concessional finance should support shared public-good functions; climate and biodiversity finance should fund resilience and ecosystem protection; and private or blended finance should play only a complementary role where regulation, affordability and rights-based safeguards are strong.

e. Rights, accountability and trust must be central to all governance and financing models: Water finance shapes who decides, who pays, who carries risk and whose priorities are protected. All financing models should be tested against affordability, non-discrimination, transparency, participation, public-interest regulation and accessible accountability mechanisms. Without these safeguards, water finance can deepen exclusion rather than reduce it.

2. INTRODUCTION

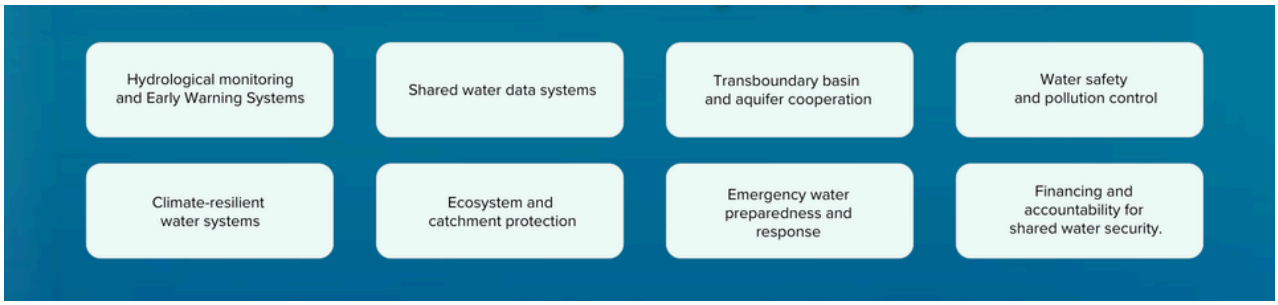
Global public goods are systems and benefits that protect people beyond borders and across generations.[3] In economic terms, they are usually described as non-excludable, meaning people cannot easily be prevented from benefiting from them, and non-rivalrous, meaning one person's benefit does not reduce what is available to others.[4] They include a stable climate, pandemic preparedness, financial stability, peace and shared knowledge. These goods depend on collective action because no single government can provide or sustain them alone. In an interconnected world, no country can fully protect its own people if the systems it relies on are being weakened elsewhere. Club de Madrid's 2026 Annual Policy Dialogue frames this as one of the central governance challenges of our time: how to govern and deliver shared goods in a fragmented world, when trust in cooperation is under strain and institutions struggle to keep pace with shared risks.[5]

One of the most critical public goods, for life on earth, is water. Strictly speaking, water itself is not a pure global public good. A river, aquifer, reservoir or water supply system can be overused, polluted, controlled or denied, making it potentially excludable and rivalrous. But water security has many public-good characteristics.[6] When societies protect shared rivers, restore catchments, monitor drought and flood risks, reduce pollution, share hydrological data and cooperate across borders, the benefits extend beyond one community or one country. These actions reduce shared risks and protect public health, food systems, ecosystems, climate resilience, peace and human dignity.

This means water security should be governed according to the function being delivered. Some water-security functions clearly require collective action because their benefits extend beyond one community, one country or one generation *(Fig.2)*. The right level of action depends on the function. For example, global governance is needed for climate frameworks, monitoring, financing principles and accountability, whilst regional cooperation provides the operational bridge for shared basins, aquifers, drought and flood preparedness.

[3] United Nations Development Programme (1999) Global Public Goods: International Cooperation in the 21st Century https://unesdoc.unesco.org/ark:/48223/pf0000116642
[4] IMF (2021) What Are Global Public Goods? https://www.imf.org/en/publications/fandd/issues/2021/12/global-public-goods-chin-basics
[5] Club de Madrid (2026) Policy Dialogue: Governing and delivering global public goods in a fragmented world https://clubmadrid.org/work/annual-policy-dialogues/2026/
[6] Roscioli, F. (2024) Water as a Global Public Good: Assessing the Cost of Inaction. University of Rome Tor Vergata and Fondazione Tor Vergata https://fondazionetorvergata.it/public/fondazioneceis/files/Attivita-Progetti/Progetto_Water/Water_as_a_global_Pubic_good.pdf

Fig.2 Which water security functions have regional or global public good characteristics?



Whilst national and local authorities remain the main duty-bearers for service delivery, regulation, affordability, accountability and community participation.

At the same time, safe drinking water and sanitation are human rights.[7] They are also basic public services, usually delivered through local and national systems. At the same time, many of the conditions that make water safe, reliable and affordable depend on wider systems, including public finance, strong institutions and global public goods such as climate stability, functioning ecosystems and public health preparedness.

Despite decades of rights commitments, development targets and climate pledges, billions of people still live without safe, reliable and affordable water and sanitation. In 2024, around 2.2 billion people lacked safely managed drinking water, while 3.4 billion lacked safely managed sanitation.[8] These figures show that global commitments are not yet translating into water security as a global public good. Water security is still shaped by income, geography, gender, disability, informality and political voice. Many people who are formally counted as "served" still face intermittent, unaffordable or unsafe water supply that remains highly vulnerable to climate shocks. This wider context makes the water governance challenge even more critical. In addition, the United Nations World Water Development Report 2024 links water directly to prosperity and peace, while the World Bank warns that climate-driven water scarcity could reduce economic growth by up to 6 percent of GDP in some regions by 2050.[9]

Yet governance and financing still remain poorly matched to the problem they are trying to help solve. Water systems are connected, but institutions often remain weak and fragmented. Rivers and aquifers cross borders, but finance is usually arranged country by country and does not always prioritize the most underserved.[10] At the same time, climate and water risks are long term, but political and budget cycles remain short. Prevention benefits many people, but costs often fall on local authorities, utilities or debt-stressed countries. Weak accountability, corruption, elite capture, poor regulation and limited public participation also leave many rights holders with few ways to challenge unsafe, unaffordable or unreliable services.

This paper aims to use water as a practical case study for rethinking how global public goods can be better governed and financed in an increasingly fragmented world. It does not argue that all water should be governed globally. Instead, it asks what water can teach us about delivery: how global commitments become safe and affordable access; how rights become working public services; and how financing can support long-term stewardship without deepening debt, exclusion or loss of public accountability.

[7] UN-Water (2026) Human Rights to Water and Sanitation https://www.unwater.org/water-facts/human-rights-water-and-sanitation
[8] World Health Organization (WHO) and UNICEF (2023) Progress on Household Drinking Water, Sanitation and Hygiene 2000–2022. https://washdata.org/reports/jmp-2023-wash-households
[9] UNESCO and UN-Water (2024) United Nations World Water Development Report 2024: Water for Prosperity and Peace https://www.unwater.org/publications/un-world-water-development-report-2024
[10] United Nations (2026) Finance and Justice https://www.un.org/en/climatechange/raising-ambition/climate-finance

3. THE PROBLEM: GLOBAL PROMISES ARE NOT TRANSLATING INTO DELIVERY

More than a quarter of the world's population still lacks access to safe drinking water.[11] At the same time, none of the SDG 6 targets for Water are on track to be achieved by 2030.[12] The gap is therefore not just technical. It shows that decades of commitments on the human right to water and sanitation, sustainable development, climate adaptation and disaster risk reduction are still not translating into safe, reliable, affordable and climate-resilient services for billions of people.

The global water crisis is often described through the governance and financing challenges that remain the most visible: fragmented governance, financing and incentive failures, power asymmetries and rights risks and low public trust and delivery gaps. These, however, are just the "tip of the iceberg" problems *(Fig.3)*. They are real and urgent, but they are only the surface expression of deeper systemic failures.

Beneath the surface, the problem is more structural. Water governance, in many cases, remains fragmented across institutions, mandates and levels of government, while financing remains far below what is needed. The World Bank estimates that developing countries alone need an additional USD 131 billion to USD 141 billion annually to achieve universal access to safely managed water supply and sanitation by 2030.[13,14] These figures point to a systemic failure in how water security is valued, funded and governed. Current financing is often too short-term, too dependent on traditional aid and loan-based models, and too weakly aligned with prevention, maintenance, monitoring, data systems, climate resilience and ecosystem protection. Power also matters: financing arrangements shape who decides, who pays and who ultimately benefits from the water services provided.

The root causes of these issues are deep political and accountability failures. Water is not only a service or a resource. It is a source of power. Some actors control infrastructure, pricing, allocation, pollution, finance and data, while affected communities often have limited voice, information or access to remedy. Worse still, states are withholding access to safe drinking water in conflict, constituting a serious violation of international law.[15] The UN Special Rapporteur on the human rights to safe drinking water and sanitation has also warned that the commodification and financialisation of water can threaten affordability, weaken public control and expose poor and vulnerable communities to speculative risks where regulation is insufficient.[16]



[11] World Health Organization (WHO) and UNICEF (2023) Progress on Household Drinking Water, Sanitation and Hygiene 2000–2022. https://washdata.org/reports/jmp-2023-wash-households
[12] UNESCO (2026) United Nations World Water Development Report 2026 https://unesdoc.unesco.org/ark:/48223/pf0000397506
[13] World Bank (2016) High and Dry: Climate Change, Water, and the Economy https://openknowledge.worldbank.org/handle/10986/23665
[14] World Bank (2024) Funding a Water-Secure Future: An Assessment of Global Public Spending https://www.worldbank.org/en/topic/water/publication/funding-a-water-secure-future
[15] Office of the High Commissioner for Human Rights (2023) Water and armed conflicts. https://www.ohchr.org/en/special-procedures/sr-water-and-sanitation/water-and-armed-conflicts
[16] Office of the High Commissioner for Human Rights (2021) Risks and impacts of the commodification and financialization of water – Report of the Special Rapporteur. https://www.ohchr.org/en/documents/thematic-reports/ahrc4828-risks-and-impacts-commodification-and-financialization

4. GOVERNANCE FOR WATER SECURITY

Effective, long-term water security requires a governance model that matches the way water actually works: across households, communities, ecosystems, sectors and borders. The starting point should not be to move all water governance to the global level. Most water services are delivered locally and nationally, and governments remain the primary duty-bearers for safe, affordable and reliable access. But many of the systems that make water security possible, including hydrological data, early warning, basin cooperation, pollution control, catchment protection and climate resilience, produce benefits beyond one jurisdiction. These functions need stronger connections between global stewardship, regional cooperation and national and local delivery *(Fig.4)*.

Fig.4 A governance pathway for water security



4.1 Global stewardship: setting norms, rights and shared standards

Global-level governance should provide legitimacy, common standards and accountability. This includes establishing and upholding the human right to safe drinking water and sanitation, SDG 6, climate adaptation commitments, disaster risk reduction frameworks and transboundary water norms. Global institutions are also needed to support shared monitoring and comparable data, so that progress is visible and governments can be held to account. For example, the World Meteorological Organisations Global Hydrological Status and Outlook System, HydroSOS, aims to strengthen country capacity to produce standardised information on current and future water conditions, supporting early warning, preparedness and local resilience.[17]

Global governance should set direction, but it cannot and should not deliver alone. Its value lies in defining rights, standards, responsibilities and financing principles that guide action across levels. It should also protect equity, so that cooperation does not only reflect the priorities of the most powerful states or funders.

4.2 Regional and basin-level cooperation: turning shared risks into practical action

Regional and basin-level cooperation remain a critical operational bridge between global commitments and national implementation. This is especially important for 60% of rivers, lakes and aquifers that cross borders, with at least 153 countries sharing at least one transboundary river, lake or aquifer system.[18] Yet cooperation, in many cases, remains weak or lacking. In 2024, just 43 of these countries had operational arrangements covering 90 percent or more of their shared waters, while more than 20 had no operational arrangements at all.[19]

[17] World Meteorological Organization (2024) Global Hydrological Status and Outlook System, HydroSOS. https://wmo.int/activities/hydrosos
[18] UN Water (2026) Transboundary Waters https://www.unwater.org/water-facts/transboundary-waters
[19] UNECE, UNESCO and UN-Water (2024) Progress on Transboundary Water Cooperation: 2024 Update. https://www.unwater.org/sites/default/files/2024-09/SDG6_Indicator_Report_652_Progress-on-Transboundary-Water-Cooperation_2024_EN.pdf

Regional cooperation can help countries share data, manage drought and flood risks, prevent disputes, coordinate investment and build trust before crises escalate. Basin organisations, regional development banks, regional climate platforms and coalitions of willing countries can all play a practical role here. The key is to treat regionalism as a delivery and coordination layer, not as a substitute for global responsibility. This means that regional arrangements should be transparent, inclusive and linked to global rights, standards and accountability.

4.3 National and local delivery: making water security real for people

Despite the importance of global and regional governance, water security ultimately succeeds or fails at the national and local level. Governments, utilities, regulators, municipalities and local authorities are responsible for ensuring effective service delivery, tariffs, affordability, water quality, maintenance, land-use decisions, emergency response and public participation. Communities also need meaningful ways to influence decisions, raise concerns and seek remedy when services fail. Without these effective local governance in place, the global water crisis will persist.

The effectiveness of global public-good functions for water security is only revealed when we can look at the impact on people's daily lives. Shared data only matters if it improves planning and prioritisation of resources at the local level. Early warning only works if communities receive real-time warnings and protect them from disasters. Finance only matters if it reaches the institutions responsible for implementation, and it trickles down to those who need it the most. A rights-based approach therefore requires more than just infrastructure. It requires public-interest regulation, accessible information, accountable utilities and participation from those with the least access to safe water. This includes especially women and girls, persons with disabilities and other marginalised communities, including informal settlements and climate-vulnerable populations.

4.4 Connecting the levels: finance, data and accountability

In terms of governance, the core task is to connect these levels so that they work as one effective delivery chain *(Fig.4)*. Global frameworks should set rights, standards and financing principles. Regional and basin-level institutions should coordinate shared risks and cross-border systems. National and local authorities should deliver, regulate and remain accountable to people. Each level has a different role, but none can succeed in isolation.

This requires clearer mandates, interoperable data systems, predictable finance and accountability mechanisms that track outcomes, not only commitments. The test is also highly practical: where governance and cooperation are effective, it leads to safer water, better preparedness, healthier ecosystems, reduced conflict risk and greater public trust. Water can therefore show how global public goods can be governed in a fragmented world: not through one central authority, but through connected institutions with clear functions, fair financing and shared responsibility.

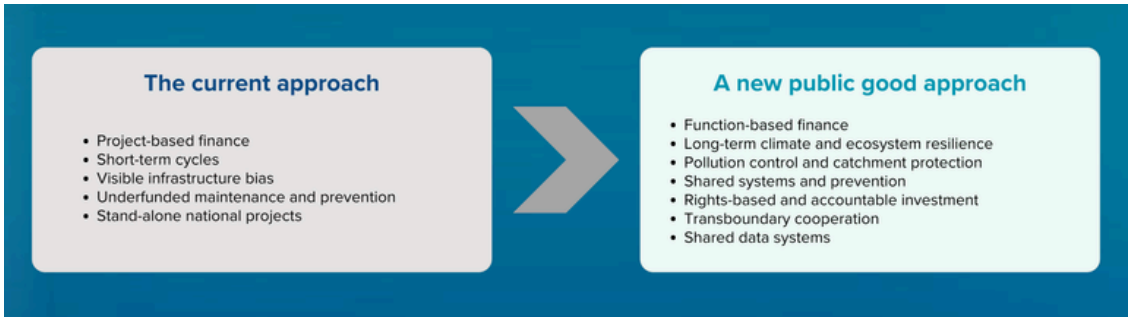
5. FINANCING WATER SECURITY AS A PUBLIC GOOD FUNCTION

Financing water security requires a shift from funding isolated projects to investing in the shared systems that make water safe, reliable and resilient for the people that need them the most. Water and sanitation infrastructure remain essential, but water security also depends on functions that are less visible and often chronically underfunded. These include: hydrological monitoring, maintenance, early warning, groundwater management, pollution control, catchment protection, flood and drought preparedness, and transboundary cooperation *(Fig.2)*. These functions generate benefits beyond one community, country or budget cycle and should therefore be financed as public good functions, not only as local service costs.

The scale of the financing gap is significant. The OECD estimates that achieving SDG 6 would cost more than USD 1 trillion per year globally.[20] The World Bank estimates that developing countries alone need an additional USD 131.4 billion to USD 140.8 billion annually to achieve universal access to safely managed water supply and sanitation by 2030, almost tripling current expenditure levels.[21] Current spending remains far below that level, with developing countries spending an average of just 0.5 percent of GDP.[22] Around 91 percent of water financing in developing countries currently comes from the public sector, while less than 2 percent comes from private finance.[23] This shows two things clearly: public finance remains the backbone of water security, and private finance cannot close the gap by itself.

The problem is not only the volume of finance. It is also the way finance is structured. Current water finance often favours visible infrastructure and short project cycles over long-term system resilience *(Fig.5)*. Monitoring, maintenance, data systems, rural service sustainability, catchment protection and preparedness are also often neglected because their benefits are preventive, widely shared and politically less visible. Yet these investments are central to water security. In many cases, it is cheaper to maintain systems, protect watersheds and invest in early warning than to respond after failure.

Fig.5 The vision for a new public good approach



The financing model should therefore follow the function being delivered. For example, using grants and concessional finance for public-good functions with shared benefits; domestic public finance for core service delivery and regulation; climate and biodiversity finance for resilience and ecosystem protection; and carefully governed private or blended finance only where revenue models, regulation and rights safeguards are strong *(Fig.6)*.

Fig.6 Matching water security functions to the right financing instruments: a public good approach to financing water security



[20] OECD (2022) Financing a Water Secure Future. https://www.oecd.org/en/publications/financing-a-water-secure-future_a2ecb261-en.html
[21] World Bank (2024) Funding a Water-Secure Future: An Assessment of Global Public Spending. https://www.worldbank.org/en/topic/water/publication/funding-a-water-secure-future
[22] Ibid.
[23] Ibid.

Many countries facing the highest climate-related water risks also face constrained fiscal space and rising debt pressures. UNEP estimates that developing countries will need USD 310 billion to USD 365 billion per year for adaptation by 2035, while international public adaptation finance reached only USD 26 billion in 2023.[24] Since climate change is increasingly experienced through water, including floods, droughts, sea-level rise, salinisation and shifting rainfall, this adaptation gap also represents a major water-security gap.[25] It is not equitable to expect vulnerable countries to borrow heavily for investments that produce wider regional or global benefits, such as flood protection, catchment restoration, shared monitoring systems or transboundary resilience. For these functions, grants, concessional finance, debt relief, debt-for-water or debt-for-nature swaps, and pooled regional funds should therefore be prioritised.

Private and blended finance may have a complementary role, but they should not be treated as a default, stand-alone solution. Private finance can support efficiency improvements, innovation, technology, commercially viable infrastructure and risk-sharing instruments. However, some financing models can also shift risk, influence priorities or weaken public accountability, especially where regulation is weak. The UN Special Rapporteur on the human rights to safe drinking water and sanitation has warned that the commodification and financialisation of water can undermine affordability, weaken the role of the state as guarantor of the public interest, and expose vulnerable communities to speculative risks.[26] Any use of private or blended finance should therefore be subject to rights-based safeguards, including affordability, non-discrimination, transparency, public-interest regulation, democratic oversight and accessible grievance mechanisms.

Financing water security also requires better alignment between water, climate and nature finance. The Global Commission on the Economics of Water argues that the hydrological cycle should be valued and governed as a global common good because it connects land use, climate change, biodiversity, food systems and progress on the SDGs.[27] This supports a broader investment approach that funds green and nature-based systems alongside grey infrastructure. Pipes, treatment plants, reservoirs and wastewater systems remain essential. But they cannot deliver water security if watersheds are degraded, wetlands are destroyed, aquifers are overdrawn and floodplains are built over. Climate finance, biodiversity finance, MDB windows, pooled regional mechanisms and debt swaps should therefore support catchment protection, wetland restoration, groundwater recharge, floodplain management and pollution control alongside core water and sanitation infrastructure.

A public good approach to water finance would therefore move the debate beyond "more money for water". It would ask which water-security function is being financed, who benefits, who pays, who carries risk and what safeguards are needed *(Fig.6)*. This approach is also consistent with emerging global public investment thinking, which argues that shared challenges require models where all benefit, all contribute according to capacity and all have a voice in decision-making. For water, this means financing arrangements that protect rights, reduce debt vulnerability, support long-term stewardship and strengthen accountability. Finance is not neutral. It shapes power, priorities and delivery.

6. POLICY OPTIONS: PATHWAYS FOR REFORM

The following policy options are designed to be implemented in our current fragmented geopolitical environment in which trust is uneven, large institutional reforms may be slow, and delivery needs to improve rapidly. They build on existing global commitments, regional and basin-level mechanisms, national systems and local accountability structures. The aim is not to create a new global water architecture from scratch, but to make the current system more coherent, better financed and more accountable for delivery.

[24] UNEP (2025) Adaptation Gap Report 2025. https://www.unep.org/resources/adaptation-gap-report-2025
[25] UN-Water (2024) Water and Climate Change. https://www.unwater.org/water-facts/water-and-climate-change
[26] OHCHR (2021) Risks and Impacts of the Commodification and Financialization of Water on the Human Rights to Safe Drinking Water and Sanitation. https://www.ohchr.org/en/documents/thematic-reports/a76159-risks-and-impacts-commodification-and-financialization-water
[27] Global Commission on the Economics of Water (2024) The Economics of Water: Valuing the Hydrological Cycle as a Global Common Good. https://watercommission.org/publication/the-economics-of-water/

6.1 Adopt a functional approach to water security as a public-good issue

Policymakers should promote a functional approach to water security. This means moving away from broad claims that "water" is a global public good, and instead identifying the specific water-security functions that generate shared benefits across borders, communities and generations. These include hydrological monitoring, early warning systems, shared water data, transboundary basin and aquifer cooperation, pollution control, ecosystem and catchment protection, flood and drought preparedness, and financing arrangements that support shared resilience *(Fig.2)*. This will help policymakers decide which functions need global stewardship, which need regional or basin-level cooperation, and which must be delivered nationally or locally. It would also reduce conceptual ambiguity and make the public-good framing more practical.

- Policy action: Develop a concise taxonomy of water-security public-good functions, distinguishing between global stewardship functions, regional and basin-level coordination functions, and national/local delivery functions.
- Policy action: Use practical delivery indicators, such as safely managed drinking water and sanitation, operational transboundary cooperation, early warning system coverage, water quality data, drought preparedness and other data on ecosystem health, to assess whether water-security functions are reaching people in a safe and equitable manner.

6.2 Strengthen regional and basin-level cooperation as an operational bridge

Regional and basin-level institutions should be strengthened as practical delivery platforms for shared water security. This does not mean replacing global governance or reducing national responsibility. It means recognising that many water risks are best managed at the level where countries share rivers, aquifers, rainfall systems, ecosystems, trade links and climate hazards. Basin organisations, regional development banks, regional climate platforms and coalitions of willing countries can help coordinate shared data, drought and flood preparedness, pollution control, investment planning, dispute prevention and peer learning. They can also build trust between countries before crises escalate.

- Policy action: Support regional and basin-level platforms for shared hydrological monitoring, early warning, drought and flood preparedness, and water-quality data-sharing.
- Policy action: Strengthen operational arrangements for transboundary rivers, lakes and aquifers, including clear rules on data exchange, dispute prevention, public participation and benefit-sharing.
- Policy action: Encourage cross-regional exchange between basin organisations and regional water-security platforms to share lessons on cooperation, financing, accountability and climate resilience.

6.3 Create multi-level water-security delivery compacts

A major weakness of the current system is the gap between global commitments and implementation. To address this, countries, regional bodies, basin organisations, local authorities, civil society, technical agencies and financing partners could establish multi-level water-security delivery compacts for priority functions. This does not require the creation of new institutions. They would be structured agreements that define roles, targets, financing commitments, data-sharing protocols and accountability mechanisms for specific water-security functions. For example, a compact could focus on flood early warning in a shared basin, climate-resilient groundwater management, pollution control, or drought preparedness across a vulnerable region.

- Policy action: Pilot delivery compacts for priority water-security functions, such as transboundary early warning systems, shared basin monitoring, groundwater protection, flood resilience and catchment restoration.
- Policy action: Require each compact to specify who provides political stewardship, who coordinates regionally, who implements nationally and locally, who represents affected communities, how finance is allocated, and how progress is verified.
- Policy action: Link delivery compacts to existing SDG 6, climate adaptation, disaster risk reduction and transboundary cooperation frameworks to avoid creating parallel systems.

6.4 Align financing with water-security functions and long-term resilience

Financing determines whether good governance arrangements can actually be delivered. As discussed previously, the current model often funds projects, infrastructure or short-term outputs rather than the systems that make water security possible over time. A public-good approach would align financing with the function being delivered *(Fig.6)*. Public-good functions with shared benefits, such as hydrological monitoring, early warning, transboundary cooperation and catchment protection, should be supported through grants, concessional finance, pooled regional funds, MDB support and climate finance. Core service delivery should remain grounded in domestic public finance, public budgets, regulated tariffs and targeted subsidies. Climate and ecosystem resilience should draw more systematically on climate finance, biodiversity finance, debt swaps and nature-based investment. Private and blended finance may have a complementary role, but only where regulation, affordability safeguards and public accountability are strong.

- Policy action: Shift from short-term project finance toward long-term investment in maintenance, monitoring, data systems, preparedness, catchment protection and institutional capacity.
- Policy action: Expand grant, concessional and pooled regional finance for water-security functions that generate wider regional or global benefits.
- Policy action: Avoid loan-heavy financing for debt-stressed and climate-vulnerable countries where investments produce shared benefits beyond national borders.
- Policy action: Align water finance more closely with climate finance, including through the Green Climate Fund, Adaptation Fund, MDB climate windows and regional development banks.

6.5 Apply rights-based safeguards to all financing models

Water finance is not neutral. It shapes who decides, who pays, who carries risk and whose priorities are funded. All financing models, including public, private, blended, climate and MDB finance, should therefore be assessed against human rights principles and public-interest safeguards. Private finance is not the same as privatisation, and it may support innovation, efficiency, technology and commercially viable infrastructure. However, some financing models can shift risk, weaken public accountability or increase pressure for tariffs that exclude poor households. Weak regulation can also allow the concentration of water resources, reduced transparency or limited public control over essential services.

- Policy action: Require all water-security financing to meet safeguards on affordability, non-discrimination, transparency, accountability, participation and public-interest regulation.
- Policy action: Protect people from exclusion for inability to pay, particularly in low-income, informal, rural, displaced and climate-vulnerable communities.
- Policy action: Ensure public authorities retain the ability to regulate water services, tariffs, quality, allocation and environmental protection in the public interest.
- Policy action: Build accessible grievance and accountability mechanisms into all major water investments, including public-private and blended finance arrangements.

6.6 Invest in green and nature-based resilience alongside essential infrastructure

Grey infrastructure remains essential for safe water and sanitation. Pipes, treatment plants, reservoirs, pumps, drainage systems and wastewater facilities are central to service delivery. But they cannot deliver water security alone if watersheds are degraded, wetlands are destroyed, aquifers are overdrawn and floodplains are built over. Instead, a public good approach should finance green and nature-based systems as core water-security infrastructure. Catchment protection, wetland restoration, groundwater recharge, floodplain management, pollution control and ecosystem restoration reduce shared risks and support climate adaptation, disaster risk reduction, biodiversity and long-term water availability.

6.7 Build accountability systems that measure delivery, equity and trust

Water security should be judged by whether people experience safer, more reliable and affordable water services, a reduced exposure to floods and droughts, healthier ecosystems and greater trust in institutions. Current accountability systems often measure commitments, spending or infrastructure delivery, but pay less attention to long-term service quality, equity, participation, grievance mechanisms and ecosystem outcomes. A stronger accountability approach would connect global reporting, regional cooperation, national regulation and local participation. It would also make data more accessible to the people most affected by water insecurity.

- Policy action: Build accountability frameworks that measure delivery, equity, affordability, service reliability, ecosystem health, institutional performance and public trust.
- Policy action: Make water-quality, service-performance, tariff, investment and climate-risk data publicly accessible wherever possible.
- Policy action: Require structured participation by affected communities, especially women, marginalised groups, informal settlements, rural communities, Indigenous peoples where relevant, and climate-vulnerable populations.
- Policy action: Create periodic learning exchanges among water-security actors to reduce duplication, share lessons and align standards across regions and sectors.

7. RECOMMENDATIONS

7.1 Reframe water security as a system of public-good functions

Policymakers should move beyond broad declarations that "water" is a global public good and instead identify the specific water security specific functions that must be produced and sustained: hydrological monitoring, early warning, shared data systems, transboundary cooperation, pollution control, catchment protection, preparedness, financing and trust. This makes the concept operational, measurable and easier to govern.

7.2 Use service delivery, preparedness and ecosystem indicators as tests of delivery

Safely managed drinking water and sanitation, operational transboundary cooperation, early warning coverage, water quality, drought and flood preparedness, groundwater sustainability and ecosystem health should be used as practical indicators of whether water-security functions are reaching people. These outcomes reveal whether global commitments are being translated into safe services, reduced risks, equity and protection.

7.3 Strengthen regional and basin-level cooperation without abandoning global stewardship

Regional and basin-level institutions should be empowered to coordinate water-security functions where proximity matters, particularly shared rivers and aquifers, drought and flood preparedness, data-sharing, pollution control, dispute prevention and peer learning. Global institutions should focus on norms, rights, standards, legitimacy, monitoring, financing principles and equity guarantees.

7.4 Align financing with long-term water security and resilience

Financing should prioritise supporting long-term impact, including through improved governance, rather than short-term projects alone. Development banks, climate funds, bilateral donors, domestic budgets and regional financing mechanisms should align around water-security functions, including maintenance, monitoring, early warning, catchment protection, ecosystem resilience and institutional capacity. Predictability, debt sensitivity, affordability and long-term stewardship should be treated as financing goals.

7.5 Apply rights-based safeguards to all financing models

Public, private, blended, climate and MDB finance should be assessed against affordability, non-discrimination, transparency, accountability, participation and public-interest regulation. Private finance may have a complementary role, but it should not be treated as a default solution where regulation is weak or where tariffs, exclusion, resource concentration or loss of public control could undermine the human right to water and sanitation.

7.6 Rebuild trust through accountability, participation and inclusion

Trust cannot be restored through rhetoric alone. Governance mechanisms should include affected communities, civil society, local governments, technical institutions, academia, utilities, regulators and implementers. Accountability should measure whether water-security functions are delivered, whether benefits are equitable, and whether institutions respond to local realities.

7.7 Protect water-security public goods from political and financial volatility

Water-security functions need governance and financing models that can withstand political cycles, donor retrenchment, climate shocks and conflict risks. Options include diversified financing, pooled regional funds, contingency finance, debt relief or swaps, transparent data systems, clear emergency protocols and stronger rules for protecting water access and infrastructure during crises.

8. CONCLUSION: WATER AS A PRACTICAL TEST OF GLOBAL PUBLIC GOODS COOPERATION

Water shows why global public goods cannot be judged by commitments alone. Safe drinking water and sanitation are human rights and basic public services, but water security also depends on wider systems that no single government can secure alone. The central challenge is therefore not simply to declare water a global public good, but to identify the specific water-security functions that produce shared benefits and govern them at the right scale.

The current delivery gap reflects a deeper governance and financing failure. Water systems are connected, but institutions, incentives and finance remain fragmented. Climate risks are long-term, but budgets and political cycles are short. Prevention is cheaper than failure, but maintenance, monitoring, preparedness and ecosystem protection are persistently underfunded. Financing arrangements also shape power: who decides, who pays, who carries risk and whose priorities are protected. Without rights-based safeguards, stronger accountability and meaningful public participation, water finance can deepen exclusion rather than reduce it.

Policymakers should treat water as a practical entry point for rebuilding cooperation in a fragmented world. This means moving from rhetorical commitments to operational delivery: governing water security by function, strengthening regional and basin-level cooperation without weakening global responsibility, aligning finance with long-term resilience, and protecting affordability, equity and public accountability in every financing model.

Water is therefore a stress test for whether global public goods systems are fit for purpose. The call to action is clear: finance and govern the shared systems that protect water security now, or allow fragmented governance, rising climate risks and unequal power to deepen a crisis that no country can solve alone.