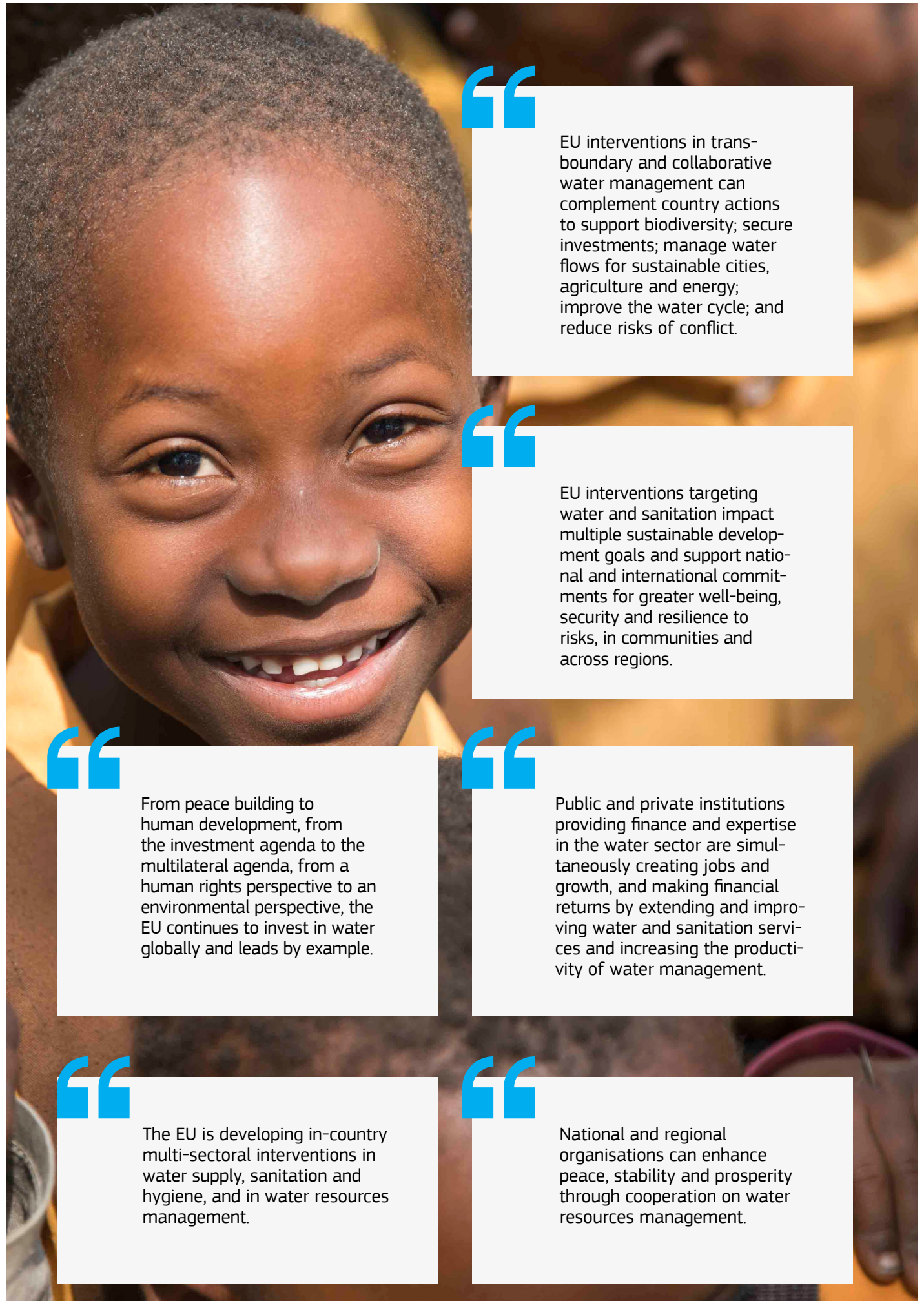




water and beyond

Elements for a strategic
approach on global and
EU external action in
the water sector

*International
Partnerships*



EU interventions in trans-boundary and collaborative water management can complement country actions to support biodiversity; secure investments; manage water flows for sustainable cities, agriculture and energy; improve the water cycle; and reduce risks of conflict.

EU interventions targeting water and sanitation impact multiple sustainable development goals and support national and international commitments for greater well-being, security and resilience to risks, in communities and across regions.

From peace building to human development, from the investment agenda to the multilateral agenda, from a human rights perspective to an environmental perspective, the EU continues to invest in water globally and leads by example.

Public and private institutions providing finance and expertise in the water sector are simultaneously creating jobs and growth, and making financial returns by extending and improving water and sanitation services and increasing the productivity of water management.

The EU is developing in-country multi-sectoral interventions in water supply, sanitation and hygiene, and in water resources management.

National and regional organisations can enhance peace, stability and prosperity through cooperation on water resources management.



Jutta Urpilainen

European Commissioner,
International Partnerships

Foreword

The EU has long championed international cooperation on water, committing more than €2.5 billion in EU partner countries since 2014¹. But the European contribution goes far beyond financial support. It offers partnership, empowerment and ambition.

Firstly, partnership. We know that shared waters, from the world's great transboundary rivers to the smallest springs, can bring countries and communities together. The EU has committed to using water diplomacy as a tool for peace, security and stability. Stronger water partnerships, whether across geographic or sectoral boundaries, depend on good partners – among national and local authorities, civil society, business and investors. Strong partnerships are a catalyser to mobilise governance, skills and finance together, with the aim to close the dramatic water financing gap towards reaching SDG 6.

Empowerment matters more than ever. Opportunity – for education, health, dignity and economic advancement – is often limited by inadequate water and sanitation, especially for women, girls and marginalised people. The EU Gender Action Plan III and EU Human Rights Guidelines on Safe Drinking Water and Sanitation highlight the crucial importance of addressing inequalities in this regard. Yet they also affirm that all people, however vulnerable or marginalised, are active participants and leaders in positive change. Empowerment is

also central to building resilience through water; from helping flood-prone communities to adapt to climate change, to enabling handwashing to reduce the spread of infections and save lives.

Finally, there is need for greater ambition. It is not enough to recognise that water is essential to life and to our global commitments from the Paris Agreement to the 2030 Agenda for Sustainable Development. It is not enough to focus on safe and sustainable water and sanitation as an end in itself. We must look beyond water to achieve a step-change in how we use this vital resource to tackle the great challenges of our time. Greater ambition means helping to forge green partnerships that harness the power of water ecosystems and nature-based solutions. It means multi-sector responses to the root drivers of conflict and forced migration, including water scarcity and disasters. It means working at the digital frontier, so that data-driven water governance and investments support an inclusive, green recovery.

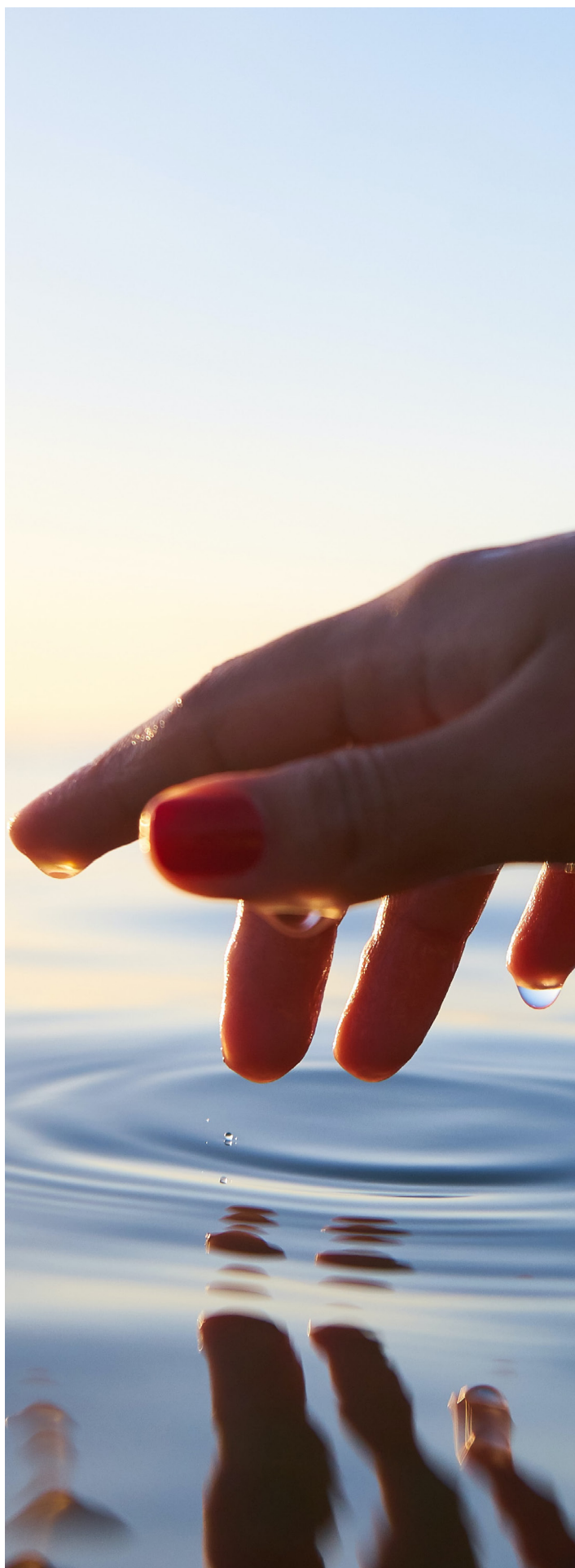
This publication charts a course for EU international partnerships on water, identifying not just what a 'water and beyond' approach entails, but how it can be achieved. As we build back better, we must make every drop count, more than ever.

Contents

Foreword	03
Contents	04
Introduction	05
Why water matters for sustainable development	05
Why water matters for EU policy priorities	06
Seizing opportunities	07
From priorities to practice: unlocking positive change through water	08
Water for green cooperation	10
Water for digital, science and technology	20
Water for sustainable growth and jobs	22
Water for migration partnerships	23
Water for governance, peace and security	25
Water for human development	27
Summary: integrating water across sectors, stakeholders and scales	28

Acknowledgements

This publication was prepared by the European Commission Directorate-General for International Partnerships (DG INTPA) Unit F2 Water Team, with the support of its Water Facility. It builds on a paper discussing trends, challenges and opportunities for EU development cooperation in the water and sanitation sector, developed in 2018/19 by DG INTPA with key development partners, as listed on page 29. This publication takes forward the issues discussed in that paper, within the framework of EU priorities for external action.



Introduction

Purpose

This publication aims to contribute towards efforts to achieve global sustainable development objectives by integrating water-and-sanitation-related interventions into multi-sector strategies and programmes designed for partner countries and regions.

How to use this document

The document first introduces the policy context for water and sanitation, and how action in these areas is essential for achieving globally agreed sustainable development objectives and EU policy priorities. It then considers how water and sanitation can support priorities for EU external action: the European Green Deal; digital, science and technology; sustainable growth and jobs; migration partnerships; governance, peace and security; and human development. In each case, the document sets out opportunities, challenges and examples of operational strategies.

Why water matters for sustainable development

Water is essential to life. Without water, we cannot achieve the 2030 Sustainable Development Agenda, our climate ambitions or our many other aspirations for a prosperous, peaceful and sustainable world.

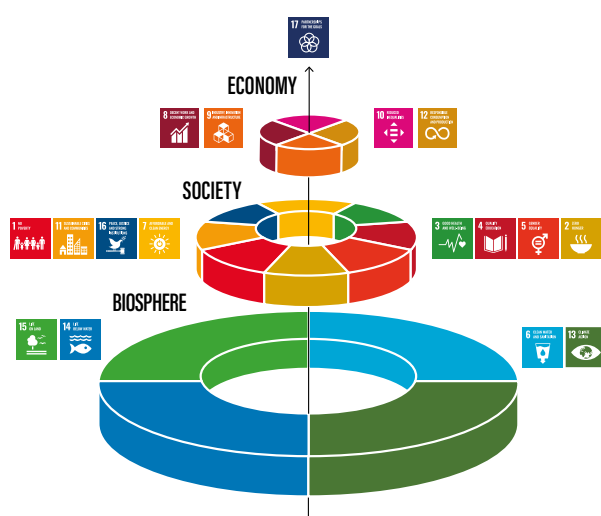


Figure 1.
How SDG 6 relates to other SDGs.

Source: Azote Images for Stockholm Resilience Centre.

Water flows throughout **Agenda 2030**. As well as featuring as a dedicated goal, SDG 6, it interacts with and underpins the other sustainable development goals and targets (Figure 1).

The EU is a signatory to many other multilateral agreements which stress the need to support and advocate for sustainable water resources management and universal access to water and sanitation.

Under the **Paris Agreement** nearly all countries prioritised water-related adaptation actions in their Nationally Determined Contributions (NDCs), confirming that water and sanitation are critical to climate resilience ([UNFCCC, 2016](#)). Water and sanitation also have a crucial role in mitigating climate change, for example through energy recovery from wastewater and using water management to enhance carbon sequestration, e.g. in wetlands. ([UNESCO and UN-Water 2020](#)).

The **Convention on Biological Diversity** recognises “aquatic ecosystems and the ecological complexes of which they are part” as a key source of biological diversity ([CBD, 1992, Art. 2](#)).

The **Sendai Framework for Disaster Risk Reduction** depends on enhanced water management and resilient water and sanitation services to achieve its action priorities and targets ([UN, 2015](#)). Water-related disasters accounted for 79% of deaths from disasters globally in 2019 ([HELP, 2020](#)).

The **New Urban Agenda** recognises that sustainable, efficient and inclusive water and sanitation services are vital to future cities and communities where “no one is left behind” ([UN, 2017](#)).

Nonetheless, despite the strong positive contribution of partnerships involving water, the scale of the challenge is enormous. At present, cascading water crises weaken nature, wither economies, erode peace and threaten people's lives, wellbeing and dignity. There has never been a better moment to turn this around. Just as water has offered an essential first line of defence against the global pandemic, partnerships that recognise the many values of water can help us to build back better, not least by regenerating the natural world and reinforcing public health.

Why water matters for EU policy priorities

The EU has repeatedly recognised the importance of water and sanitation. As a human right and as a heritage, water can contribute positively to EU policies relating to external action.

- The **European Consensus on Development** confirms the commitment of the EU and Member States to increasing access to water, sanitation and hygiene services and promoting integrated water resources management, conservation of water resources, and enhanced water-use efficiency and recycling ([European Council et al., 2017](#)).
- The **European Council Conclusions on Water Diplomacy** call for enhanced EU diplomatic engagement on water as a tool for peace, security and global stability ([European Council conclusions, 2018](#)).
- The **EU Human Rights Guidelines on Safe Drinking Water and Sanitation** reaffirm the EU's commitment to the human right to safe drinking water and sanitation ([European Council conclusions, 2019](#)). The **EU Action Plan on Human Rights and Democracy 2020-2024** also commits to support universal access to safe drinking water and sanitation ([EC, 2020a](#)).
- The **European Council Conclusions on the Team Europe Global Response to COVID-19** highlight the strengthening of water and sanitation systems as a top policy priority ([European Council Conclusions, 2020](#)).
- The **Gender Action Plan III** calls for EU action to increase access to water, sanitation and menstrual hygiene management for women and girls, as part of promoting universal access to healthcare ([EC and HR/VP, 2020](#)).
- The **European Green Deal** and related strategies highlight the importance of water:
 - The **Farm to Fork Strategy** recognises the importance of water for agriculture and the need to ensure that the food chain has a neutral or positive environmental impact, preserving and restoring the freshwater on which the food system depends ([EC, 2020b](#)).
 - The **Biodiversity Strategy** insists on the importance of protected areas to restore essential ecosystem services such as water regulation ([EC, 2020c](#)).
- **EU development cooperation** has actively promoted universal access to drinking water, sanitation and hygiene (WASH), and enhanced water resources management (WRM) and governance. The EU committed €2.5 billion to the water and sanitation sector in partner countries between 2014 and 2020¹.

Seizing opportunities

The EU and its partners can look to three complementary strands of intervention to ensure water supports EU priorities for external action, as well as country and global objectives. These three strands of intervention can best enable wider economic, social and environmental benefits when applied together in ways that recognise the specificities of different contexts.

Sustainable water infrastructure (“investment”)

Water infrastructure underpins resilient food and energy systems, ensures thriving cities, and enables enterprise and jobs ([World Bank, 2017a](#)). Cooperation on water can improve the sustainability of infrastructure, make it more resilient to climatic and other shocks, and tackle the huge disparities in access, leaving no-one behind whether they are excluded by poverty, gender or any other cause. Providing water, sanitation and hygiene to the millions of people, public institutions, enterprises and farmers who remain unserved is vital, as is enhancing existing services, for example by reducing leakage. Wastewater re-use can extract more economic value from each drop. Nature-based solutions, such as restoring wetlands for flood protection, must play a larger role. There are also huge opportunities for digital technologies – from enhancing water and wastewater network performance, to improving water allocation.

Governance, policy and regulatory frameworks, including transboundary cooperation (“policy”)

Strong, participatory and transparent institutions and policies can preserve natural resources, build resilience and safeguard ecosystems and human rights. EU water policy and regulatory frameworks, including the EU Water Framework Directive and related directives², provide a vision to be adapted to individual country and regional contexts. In the 153 countries that share transboundary rivers, lakes and aquifers ([UN-Water et al., 2018](#)), the EU and its partners can promote sustainable water management through international framework agreements on water cooperation.³ Enhanced governance, policy and regulation for water can also unlock both public and private finance. Interventions can strengthen progressive tariffs that are affordable to all whilst recovering costs. They can also enhance water and sanitation services to reinforce the social contract and, in turn, the tax base.

Knowledge, education and skills (“capacity”)

Without investment in human resources for water management and services, infrastructure will be squandered and policy will be ineffective. COVID-19 is a reminder that water and sanitation workers safeguard public health and economic productivity ([World Bank, 2020a](#)). The EU and its partners can help to enhance the knowledge base, skills and capacity of individuals and organizations dealing with water issues – from shifting individuals’ hygiene behaviours to supporting community-based approaches to sanitation and empowering water managers to tackle future challenges including climate change. Addressing the generational and gender gap in many water workforces will help make them stronger and more effective.

The ‘methods of implementation’ all play a crucial role at different stages and in different contexts across these three strands of intervention: innovative financing, budget support, grants, technical assistance (including twinning) and policy dialogue.

- In countries with deficits in water and sanitation infrastructure, **policy dialogue** can enhance country and basin-level water strategies alongside **budget support** or **innovative financing** (e.g. the European Fund for Sustainable Development-plus) to enable sustainable water infrastructure investments.
- Across countries that have shared river basins, lakes or aquifers, but no operational transboundary agreements, **technical assistance** and targeted **grants** can help encourage such agreements through cross-country collaboration platforms and joint initiatives.
- Where individual water and sanitation utilities face financial and operational challenges, technical assistance, including **twinning** projects with European utilities, can help to build trust, foster learning and support changes in practice.

From priorities to practice: unlocking positive change through water

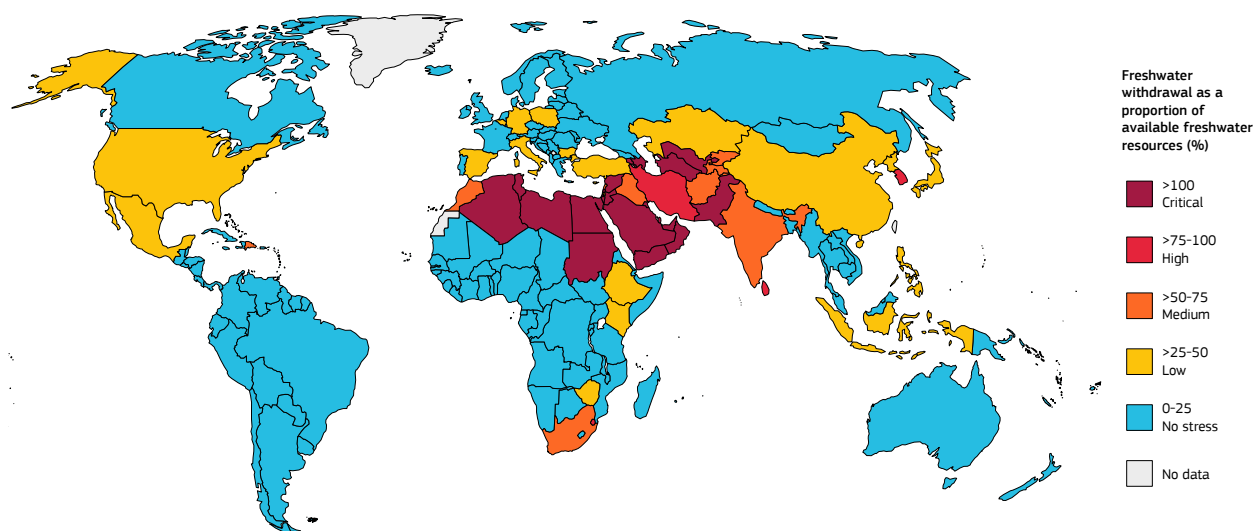
The following pages provide suggestions of operational strategies at all scales, from subnational to regional and global. These strategies, which utilise the three strands of intervention – investment, policy and capacity – and harness the five methods of implementation, are supported by examples taken from EU international cooperation and beyond. The strategies and examples are illustrative and many other interventions are possible.

Before turning to the 'how', there is the question of 'where'. Even as water flows throughout international agendas, including the SDGs and international partnerships, it cannot be prioritised everywhere to the same extent and in the same ways.

The EU and its partners can prioritise water-related action at all scales – from global to regional, national and subnational – on the basis of need, urgency and comparative advantage. Global snapshots of water-related data can provide a basis before more granular analysis at the region or country level. This should be sensitive to likely changes over time (e.g. arising

from climatic and demographic change), feedback loops (e.g. rural water stress leading to rural out-migration and pressure on urban services), and both administrative (e.g. country) and hydrological boundaries (e.g. river, lake and aquifer basins). Below we highlight some of the key geographic priorities anticipated from water-related and other trends and projections.⁴

Water stress and scarcity. Map 1 shows water stress, as captured in SDG indicator 6.4.2 – total freshwater withdrawn as a share of total renewable freshwater resources, after taking into account environmental requirements. Using this metric, many



Map 1. Freshwater withdrawals as a proportion of available freshwater resources.

Source: Authors, using data from UN-Water SDG 6 Data Portal (available at <https://www.sdg6data.org/indicator/6.4.2>). Based on data for 2009-2017, sourced from national line ministries, statistical offices and other institutions and collated by FAO. The boundaries used on this map do not imply official endorsement or acceptance by the European Commission.

countries in the **Middle East** and **North Africa** face critical levels of water stress. However, water stress and scarcity can also arise more locally and can depend on other socio-economic as well as biophysical factors. For example: comparing water availability, the global distribution of drylands and rural population (as a proxy for dependence on agriculture) reveals particular hotspot areas across **South East Asia, Southern China, India and Pakistan**, much of the **Sahel** and some **other parts of Africa**. In some of these areas, notably the **Sahel** and Central Africa, water stress combines with population growth – characterised by a high proportion of young adults – and low-income per capita to potentially increase incentives for migration to towns and cities. In these areas an urgent priority is to enhance water and land management, alongside economic diversification, for food security and livelihoods.

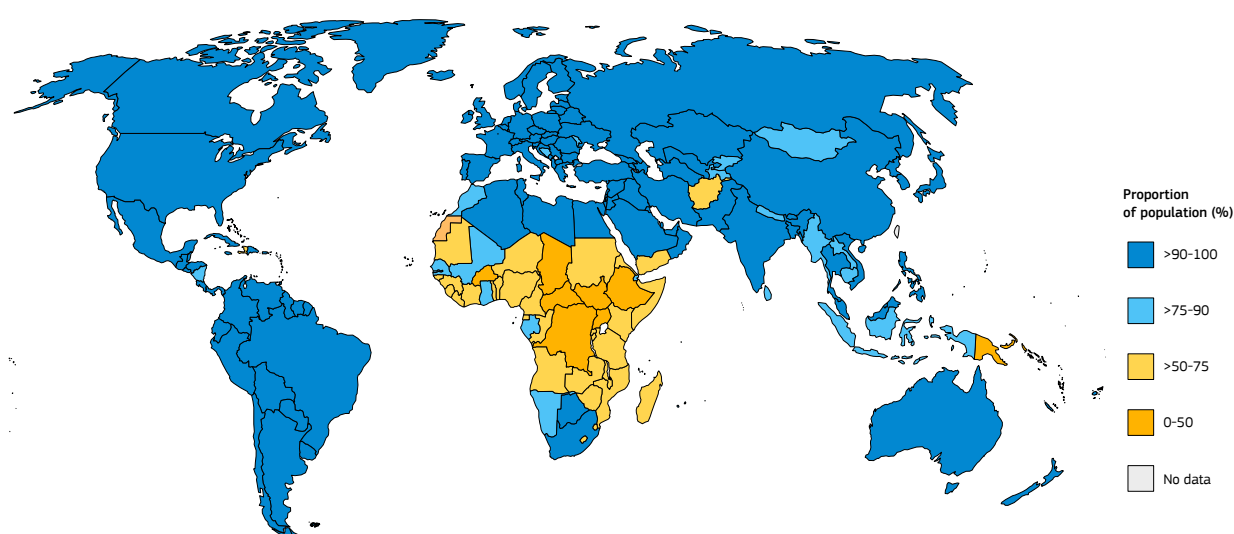
Water ecosystems. Closing agricultural yield gaps through enhanced water productivity could free up sufficient water to sustain ecosystems and biodiversity. However, absolute withdrawal must be reduced in some areas, such as the Indo-Gangetic Plain, consisting of stringent water allocation policies and a lower water footprint economy. Freshwater and marine ecosystems are also negatively affected by pollution and infrastructure development. Pollution of faecal waste is a particular consideration for **sub-Saharan Africa** and **South and East Asia**, where access to sewerage and wastewater treatment is projected to lag. Nutrient pollution of surface water is a significant problem in most global regions, but is likely to present a particular risk in **South Asia**. Tackling nutrient loading of coastal seas is a priority especially across **Asia**, as is reducing plastic waste discharged to rivers and therefore the world's seas.

Transboundary water systems. Dams can have significant implications for downstream users and ecosystems. Among the

major transboundary river systems, planned hydropower increase is especially high in the **Amazon, Mekong, Yangtze and Himalayan river basins**, as well as several basins in Africa (e.g. the **Nile and Congo**). In these areas there is a particular need for renewed effort to establish and strengthen institutions for water cooperation, such as river basin organisations and international water treaties.

Water and sanitation services. Persistent gaps in access to WASH remain in almost all global regions. Less than half the world's population use sanitation services that properly treat human waste, threatening both human and environmental health (WHO and UNICEF, 2020). One in three healthcare facilities lack adequate facilities for handwashing at point of care and nearly a billion children worldwide lack a basic hygiene service in their school (WHO, 2020; UNICEF and WHO, 2020). As Map 2 illustrates, many countries, especially in **sub-Saharan Africa**, are struggling to provide even a basic drinking water service to their citizens.⁵ Death rates from diarrhoeal disease – among the most devastating impacts of inadequate WASH – are especially high in **South Asia**, above all in **India**, and in **sub-Saharan Africa** (Dadonaite et al. 2019).

Water-related disasters. Most of the people currently at risk from flooding live in the **South Asia** and **East Asia Pacific** regions. The number at risk will increase here, but also notably in **sub-Saharan Africa**, mainly due to population and economic development, but also climate change. Rapidly growing cities are hotspots for flood risk – many of which are in deltas, on the coast, or situated along rivers. This will call for both 'hard' flood management infrastructure and 'soft' investments, such as early warning systems and improved spatial planning. Drought is also a concern, especially given that the urban population is also projected to increase in many dryland areas.



Map 2. Percentage of population using at least a 'basic' drinking water service.

Source: Authors, using data from UN-Water SDG 6 Data Portal (available at <https://sdg6data.org/indicator/6.1.1>). Based on data for 2009-2017, sourced from household surveys and collated by WHO and UNICEF. The boundaries used on this map do not imply official endorsement or acceptance by the European Commission.

Water for green cooperation

Circular economy

EU external action on water and sanitation can support partner countries to transition to a circular economy. In line with key ambitions of the European Green Deal and the new Circular Economy Action Plan, it can help partner

countries to: improve the productivity of water use in their industries, farms and communities; recover economic value from wastewater; and protect freshwater resources as vital natural capital.

Challenges



More than 80% of total wastewater generated globally is likely to be **discharged without treatment** ([UNESCO and UN-Water, 2017](#)).

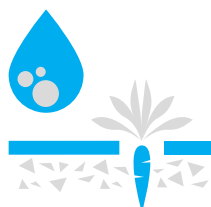


The consequences of degrading our freshwater natural capital can be hugely damaging but are often overlooked. For example, every additional kg/ha of nitrogen applied to farmland can **increase levels of childhood stunting by 19% and reduce adult earnings by 2%** as a result of run-off and release into the aquatic environment and impacts on human health ([World Bank, 2019a](#)).



In rapidly industrialising countries, **industrial water demand could grow five-fold** in the next 10-20 years. Without efficiency, conservation, and re-use and recycling measures to balance supply and demand, economic growth and transformation will be impeded ([UN-Water, 2020](#)).

Opportunities



The 330 km³ of municipal wastewater generated globally each year can **irrigate and fertilise millions of hectares of crops** and supply biogas to **provide energy for millions of households** ([UNEP, 2015](#)).



Enhancing freshwater natural capital by improving water quality could **increase economic growth by a third** in some regions through damage to health, agriculture and ecosystems being avoided. ([World Bank, 2019a](#)).



Countries can rapidly increase the value generated from water while using less of it through efficiency and structural economic transformation. Since the early 1990s India has **more than doubled** the value added per unit of water withdrawn (USD/m³) and China has increased this ratio **more than nine-fold** ([Rossi et al., 2019](#)).



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Strategies

INVESTMENT

Targeted grants can be used to **demonstrate the viability of circular economy business models and technology** in water and wastewater. Blending can **scale results and unlock further investment**.



Example

In Ghana, the African Water Facility – an initiative hosted by the African Development Bank and funded by the EU, among others – provided a €1.1 million grant to a project involving the company Safi Sana Ghana Limited. This supported the demonstration of a build-operate-transfer model for waste treatment plants which receive faecal and organic waste, and sell bio-fertiliser and biogas as end-products ([AWF, 2018](#)).

POLICY

Policy dialogue can **create an enabling environment for circular economy approaches in water**. This includes policies and water pricing to drive enhanced water efficiency in agriculture and other sectors, water recycling and the recovery of resources from wastewater, and the conservation of freshwater natural capital.



CAPACITY

Capacity development can help to **demonstrate the business case and provide skills** for better water management practices in industry and other sectors.



Example

The EU supported the Water Stewardship Pakistan project (2013-2015, €0.8 million) which built the capacity of SMEs to enhance water management practices. 35 SMEs improved water efficiency and reduced water effluent pollution by 15%. The project instigated capital investments of €1.03 million and yielded €1.42 million per year in savings from reduced water, energy and chemical use ([WWF, 2017](#)).



Biodiversity and forests

The **European Green Deal** calls on the EU and its global partners to halt biodiversity loss to build greater resilience, recognising that drivers are global and not limited to national borders. Freshwater ecosystems **provide ecosystem services**, such as food, clean air, and water purification and flow regulation. Freshwater ecosystems are **central to climate change adaptation**, including through nature-based solutions. Their health is also intrinsically linked to that of terrestrial ecosystems such as forests. Freshwater ecosystems also depend on water so that they can continue to function and **urgently need protection and restoration** ([WWF, 2020](#)).



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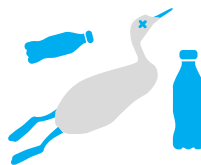
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Challenges



Freshwater ecosystems across the planet, particularly wetlands, are undervalued and **over 85% of wetland area has already been lost globally** ([IPBES, 2019](#)).



Pollution, habitat loss, over-harvesting and the introduction of non-native animals and plants **threaten nearly a third of freshwater species with extinction**. Declines in freshwater species are far greater than in terrestrial or marine species ([IUCN nd.](#)).



Current water management practices have severely disrupted environmental flows, namely the timing, quantity and quality of water flows that maintain freshwater ecosystems. **Two-thirds of the world's longest rivers, many of which are shared by multiple countries, are not free-flowing**. This impedes water, nutrients and sediment, as well as the migration pathways that many species depend on ([Tickner et al., 2020](#)).

Opportunities



Payment-for-ecosystem-services schemes between downstream and upstream communities – also known as ‘watershed protection schemes’ – were worth **€592 million globally in 2015 alone**. These schemes incentivised conservation activities, such as forest and wetland restoration and protection, supported ecosystem services and biodiversity, and provided water quality, availability, and flood risk reduction benefits for those downstream ([Forest Trends, 2016](#)).

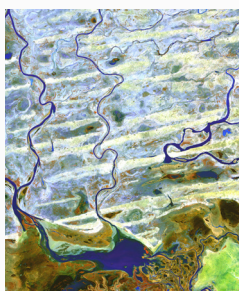


Water management can be successfully reimagined to give biodiversity a better chance. In the EU and its neighbourhood, the **Water Framework Directive** has **strengthened cooperation between Member States on transboundary rivers**, including around the Directive's key objective of achieving ‘good ecological status’ ([EC, 2019](#)). In China and the US, dams, levees and sluices have been removed or reconfigured to restore river connectivity. Colombia and Malawi have pioneered basin-scale habitat protection and a sustainable fisheries policy respectively ([Tickner et al., 2020](#)).

Strategies

INVESTMENT

Targeted grants can **catalyse much larger volumes of blended finance** for freshwater ecosystem conservation and restoration, for example, by developing fundable nature-based solutions or payment-for-ecosystem-services (PES) systems.



Example

In the Niger River basin, environmental protection from threats including desertification, deforestation, pollution and climate change has become an increasing focus for the Niger Basin Authority (NBA) in recent years. The EU has supported the NBA, through a diagnostic and feasibility study, to develop a Regional Climate Change Adaptation Fund and PES mechanism, **attracting total funding of €275 million** (AEWPP, 2020).

POLICY

Freshwater ecosystems and related habitats such as uplands and forests need to be protected from unsustainable practices in land-use value chains. By working at different scales – from the local to national and regional – projects and accompanying policy dialogue can **build coalitions to strengthen synergies** between water, agriculture, forestry and biodiversity policy and implementation.



Example

The EU co-financed the 2015-2018 €6.25 million Páramos Programme. The programme sought to protect the upland páramo ecosystems which provide multiple benefits, including provisioning freshwater for 70% of Colombia's population. Results included **extension of the area under preservation** and the **strengthening of policies and investment plans** across seven páramo areas in Colombia, Ecuador and Peru ([EC, 2016a](#)).

CAPACITY

Projects can help strengthen the capability of government representatives at different levels to **plan basin-scale conservation and restoration investments** in ways that identify synergies and trade-offs between biodiversity and other priorities.



Green and Smart Cities

To be green and smart, cities need to provide **safe, affordable and reliable water and sanitation services**. They need to **build resilience** by managing water pollution, enhancing efficiency in domestic and industrial water use, and reducing flood risks. They can do so by using innovative and smart

technology where appropriate. These priorities are recognised internationally in the **New Urban Agenda** ([UN, 2017](#)). Fortunately, cities have proven to be **engines of innovation and collaboration** when it comes to water and sanitation.

Challenges



City-dwellers all too often lack the means to safeguard their health and productivity. **Over half** of the global urban population (53%) still **lacks access to safely managed sanitation service**. In sub-Saharan Africa, almost **two-thirds** (63%) of urban dwellers **lack the means to wash their hands** ([WHO and UNICEF, 2019](#)).

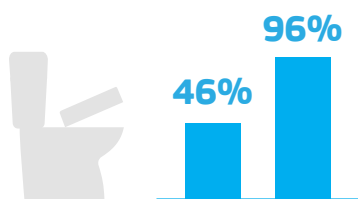


The population of **secondary cities** in many countries, especially in Africa, is expected to **double or even triple** in the next 15-25 years. Secondary cities often have limited capacity for strategic planning to secure the additional water they will need or to provide inclusive and sustainable water and sanitation services. Large and mega-cities are also affected. Over a quarter of major cities in the C40 network are water-stressed ([McDonald and Shemie, 2014](#)).

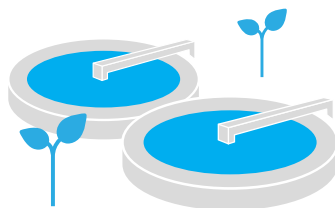


Piped water is the least expensive option for households in the global South, but many lack access. These households rely on other options **that cost up to 52 times more** ([Mitlin et al., 2019](#)), foregoing expenditure on other essentials.

Opportunities



A comprehensive, city-wide approach to sanitation can yield results. Since 2000, Cambodia has **increased urban coverage of basic sanitation services from 46% to 96%** and reduced the gap in access between the richest and poorest city-dwellers by more than 60% ([WHO and UNICEF, 2019](#)).



Secondary cities are less likely to be 'locked-in' to large, conventional water and sanitation systems and can be better placed to consider innovative, decentralised models for services, such as fecal sludge management with resource recovery ([Mason et al., 2017](#)). Big cities can also take decisive action when water risks are made visible – member cities of the C40 network took **50% more actions in areas such as water efficiency and upstream conservation** when they had conducted water vulnerability and risk assessments ([McDonald and Shemie, 2014](#)).

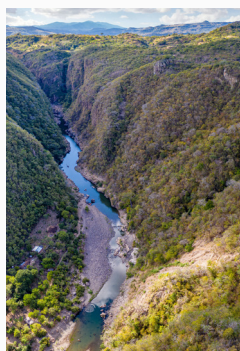


By iteratively improving services that people are willing to pay for, many utilities in low and middle-income countries have been able to **increase their revenue and extend coverage to low-income areas** ([Heymans et al., 2016](#)), generating health and economic productivity gains.

Strategies

INVESTMENT

Water, sanitation and hygiene, as well as waste management and drainage **present multiple 'public good' type benefits** in dense urban settlements, justifying the selective use of project grants. **Private finance can also be leveraged** - with grants, budget support for public-private partnerships, blending, innovative financing, special purpose funds and guarantees.



Example

In Nicaragua, the EU has provided €51 million in grant funding for the Integrated Sectoral Programme for Water and Human Sanitation (PISASH), resulting in a total budget of €337 million through blending. As of 2019 it had **improved drinking water services for 550,000 people and improved sanitation for 223,000 people** ([PISASH, 2020](#); [EC, 2020d](#)).

POLICY

Technical assistance can support city-level and national governments to **strengthen data**, for example, on water-related risks and efficiency opportunities. Data on sanitation services can also be enhanced, covering all residents and technology types along the full service delivery chain from containment to re-use/ disposal, as a basis to **fully incorporate sanitation into integrated urban development planning**.





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CAPACITY

Twinning arrangements, such as those supported by the EU-Water Operator Partnership programme, can support utilities in **improving their financial and customer management systems**, helping to break vicious cycles of low-cost recovery, deteriorating service levels and an inability to extend networks and expand their customer base.



Example

Under the EU-supported 'Partnership for Capacity Building in Sustainable Infrastructure Development and Water Resources Protection in the Oromia region', Ethiopia's (2012-2016, €1.5 million) Vitens-Evides International and the Dutch water authorities Vallei & Eem and Zuiderzeeland partnered with the water bureau and a number of water utilities in Oromia. Improved customer and commercial operations among the utilities in Oromia led to the **recovery of €2 million in unpaid bills** ([Mels and de Blois, 2017](#)).



Sustainable energy

Sustainable energy depends on sustainable water management and vice-versa. Hydropower and biomass are often prioritised in developing country NDCs ([Dzebo et al., 2019](#)), but must be **carefully planned and implemented**

to manage the negative social and environmental impacts. The water sector is a major user of energy and must **rapidly decarbonise**, including through opportunities such as recovering energy from wastewater.

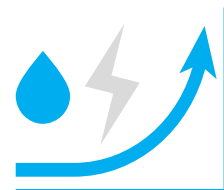
Challenges



While global energy consumption is projected to increase by 35% by 2035, a **water-intensive energy pathway** would lead to a parallel **increase in water consumption of 85%** ([World Bank, 2014](#)). The challenges are also evolving. For example, increased use of green hydrogen will require water-efficient production methods ([Mehmeti et al., 2018](#)).



Hydropower is a crucial source of renewable energy, providing **70% of renewable power and 16% of total electricity** globally, but it can have severe social and ecological impacts when poorly designed and implemented ([UNESCO and UN-Water, 2020](#)). On the Lower Mekong River, which is shared by five countries, better planning could have achieved greater generation capacity, while allowing much more sediment to travel down to the delta ([Schmitt et al., 2018](#)).



The water sector consumes a huge amount of energy: moving and treating water globally used **nearly as much energy as Australia** used in 2014 ([IEA, 2016](#)).



for green
cooperation

for digital, science
and technology

for sustainable
growth and jobs

for migration
partnerships

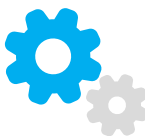
for governance,
peace and security

for human
development

Opportunities



Clean energy pathways **do not need to be water intensive**. In Africa, for example, while increased reliance on hydropower and biomass will have significant water impacts, renewables like solar, wind and geothermal and decreased use of fuelwood will generally reduce water consumption ([González Sánchez et al. 2020](#)).



There are an increasing number of **integrated planning tools** to manage the **social and environmental trade-offs** associated with hydropower dams – existing and new, small and large. Emerging issues include greenhouse gas emissions and evaporative water losses from reservoirs, and the resilience of power generation in a changing climate. The EIB's *Environmental, Climate and Social Guidelines on Hydropower Development* is one such tool, which also highlights the importance of considering transboundary impacts ([EIB, 2019a](#)).



By becoming carbon neutral – through improved energy and water efficiency and the deployment of renewables – the urban water sector globally could contribute the **equivalent of 20% of all the emissions reductions** currently committed by countries in their nationally determined contributions ([IWA, 2018](#)).

Strategies

INVESTMENT

A water-sensitive approach can be taken in strategic planning and individual investment operations for energy generation and distribution. This can help **prevent longer-term costs and stranded assets** arising from unforeseen changes in water availability and flood risk, including those associated with climate change.



Example

The World Bank worked with the Government of South Africa and the University of Cape Town to **incorporate water constraints into the national energy planning model**. The adaptations revealed the importance of accounting for regional variation in hydrological conditions and water supply costs when developing energy investment pathways ([World Bank, 2017b](#)).

POLICY

Policy dialogue can assist partner governments and other stakeholders in **ensuring that risks and trade-offs arising from hydropower and biofuel investments are assessed and mitigated**, including in the context of the water-energy-food-ecosystem nexus.



CAPACITY

Technical assistance can support utilities in designing and implementing energy efficiency measures and capital upgrades (e.g. for sludge digestion, solar, wind or hydro turbines) that both **generate financial savings and reduce greenhouse gas emissions**.

Example

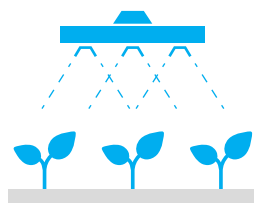
The Water and Wastewater Companies for Climate Mitigation (WaCClIM) project – funded by the German Government in Jordan, Mexico, Peru and Thailand – demonstrates how greenhouse gas emission reductions can be achieved through operational and energy efficiency measures, and long-term upgrading of drinking water and wastewater systems. It has developed an 'Energy Performance and Carbon Assessment and Monitoring Tool' to drive **GHG emission reduction and energy cost savings** in water utilities ([WaCClIM, 2021](#)).

Sustainable food systems

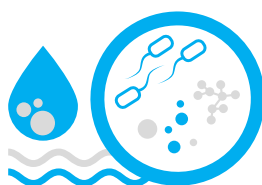
Fair, healthy and environmentally-friendly **food systems depend on sound water management** to grow crops and process foods; reduce environmental impact, including on freshwater ecosystems; and mitigate and adapt to climate

change ([EC, 2020b](#)). Safely managed water, sanitation and hygiene services can also contribute to **ensuring food is sufficient and nutritious for all** by reducing infections which inhibit nutritional uptake ([UNESCO and UN-Water, 2019](#)).

Challenges



With a need to **reallocate 25-40% of water to high-value activities** in the face of growing demand, many countries are likely to seek to **reduce water allocations to agriculture**, the largest water-consuming sector ([World Bank, 2020b](#)).



Agricultural expansion and intensification – including a doubling of the area equipped for irrigation, a tripling of livestock numbers, and a 20-fold increase in aquaculture in recent decades – mean that **agriculture is the main source of water pollution** in many countries ([FAO and CGIAR, 2017](#)). Other sectors and activities can pollute water with pathogens and chemicals, and this must also be reduced if wastewater is to be re-used in agriculture and agri-food processing ([UNESCO and UN-Water, 2017](#)).



To have an impact on **nutrition**, a **comprehensive package** of safely managed water supply, sanitation and hygiene services is often needed to address exposure to pathogens in the local environment ([Cummings et al., 2019](#)).

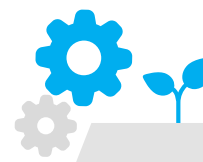
Opportunities



Improved land and water management can lead to significantly more crop (and nutrition) per drop of water – including irrigation efficiency, rainwater collection and water storage. In rainfed agriculture, **improved water management could increase yields by 40% or more** in many parts of the world ([PBL, 2018](#)).



Tackling **food waste** could also **save the 24% of all freshwater resources** that go into growing food that is then lost or wasted along the supply chain ([Kummu et al., 2012](#)).



Climate-Smart Agriculture (CSA) involves land and water management, renewable energy for water pumping and agronomic practices that can help retain carbon, soil structure, nutrients and moisture. Such practices can **reduce emissions** and **build resilience to climate change**, while **enhancing agricultural productivity** and **reducing the pollution** of ground and surface waters resulting from the inefficient application of pesticides and fertilisers ([UNESCO and UN-Water, 2020](#)).

Strategies

INVESTMENT

Budget support can promote a strong **enabling environment for agricultural water investments**, especially when accompanied by policy dialogue and suitable conditions – for example, by putting in place equitable and productive water rights regimes based on basin-level water accounting.



Example

The EU provided €33 million in budget support to Uzbekistan's agriculture sector in 2020. The Ministry of Agriculture is leading the implementation of Uzbekistan's Agriculture Modernisation Strategy 2019-2030, which sets the policy framework, in coordination with the Ministry of Water Resources. The Action Document for the budget support notes the importance of "water accounting, and payments/ taxation for overuse of delivered water" alongside technical measures ([EC, 2020e](#)).

POLICY

Technical assistance combined with finance (grants, budget support, blending, and innovative financing) can **bring multiple interests together** to tackle water challenges in agriculture, such as unsustainable water withdrawals and erosion.



Example

In Tunisia's mountainous catchments of Lake Ichkeul, the Global Water Partnership Mediterranean convened scientists, farmers, local communities and government. The project **united evidence** on climate change, rural development and the perspectives of working rural people to find **workable solutions** to challenges such as the declining availability and quality of water. Several project recommendations were featured in Tunisia's five-year development plan (2016-2020) ([GWP, 2019](#)).

CAPACITY

Technical assistance can **increase knowledge and skills** for **integrated approaches** to water supply, sanitation and hygiene alongside nutrition and health, for example targeted interventions for undernutrition hotspots.



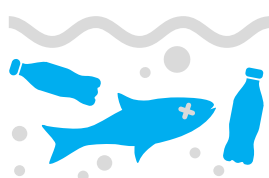
Oceans and pollution

Addressing pollution of freshwater resources in each country is **vital to protect our seas and oceans**. Enhancing cooperation on freshwater pollution management in major world river basins will support the achievement of EU strategies such as the **European Strategy for Plastics** ([EU, 2018](#)). The EU has also **pioneered cross-border approaches to pollution prevention and remediation**, including in trans-boundary watercourses, and continues to do so with the **Action Plan "Towards a Zero Pollution Ambition for air, water and soil"**, envisaged under the **European Green Deal** for 2021 ([EC, 2020f](#)).

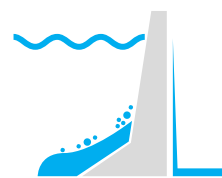
Challenges



60-99 million metric tonnes of mismanaged plastic waste were estimated to have been produced in 2015. More than 90% of this likely to have been transported to the oceans by large rivers with extensive inland watersheds, with a significant majority originating from Asia ([Lebreton and Andrady, 2019](#)).

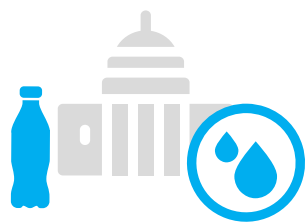


Rivers carry many other pollutants from land to sea, including nutrients and industrial contaminants like persistent organic pollutants. Most coastal regions face **increased nutrient pollution by 2050**, causing eutrophication and dead zones ([Granit et al., 2017](#)).



The global delta surface area vulnerable to flooding could **increase by more than half** over the course of the 21st century due to sediment capture behind dams and sea level rise – jeopardising the many lives, economic activities and ecosystems that deltas support ([Syvitski, 2009](#)).

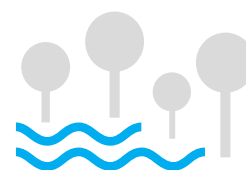
Opportunities



Some low and middle-income countries have been global leaders when it comes to **tackling plastic pollution at the source**. Examples include India's Extended Producer Responsibility laws and efforts to phase out single-use plastics in the Maldives ([World Bank, 2020c](#)).



In the 1970s and 1980s, eutrophication in the Black Sea led to massive die-offs of marine life. Recognition that the Danube was a major conduit for nutrient pollution was crucial to efforts in tackling the issue. The same **'source to sea' approach** is now being used elsewhere, including the Bay of Bengal Large Marine Ecosystem – one of the world's largest covering 6.2 million km² ([Mathews et al., 2019](#)).

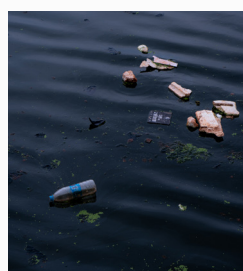


Mangrove forests, which grow in many tropical and subtropical deltas, globally provide **more than €72 billion per year in avoided losses** from coastal flooding and **protect 18 million people**. In total, mangroves can provide **benefits up to 10 times the cost** of preserving and restoring them ([GCA, 2019](#)).

Strategies

INVESTMENT

Large capital infrastructure such as urban wastewater and drainage systems to **address plastic pollution before it reaches the sea** can be financed with concessional loans from the EIB and commercial finance institutions via blending (e.g. the European Fund for Sustainable Development Plus).



Example

The EIB-KfW-AFD Clean Oceans Initiative (2018) aims to tackle plastic pollution in the oceans by financing €2 billion in public and private sector projects by 2023. Several investment projects **address plastic pollution via wastewater and stormwater**, including in Sri Lanka, Benin, Argentina and South Africa ([EIB, 2019b](#)).

POLICY

Technical assistance can help **strengthen the institutional framework** for reducing freshwater, coastal and marine pollution, in support of the **Blue Economy**, especially where this accompanies infrastructure investment.



Example

The Baie de Hann Clean-Up Project in Dakar Region, Senegal, is a €109 million project to improve the quality of coastal waters and the environment of people living nearby. As well as investments in wastewater treatment and collection infrastructure, supported by the EU via a €14.4 million blending operation, the project will **strengthen policy mechanisms for pollution** management including monitoring and taxes (EUD Senegal, 2019).

CAPACITY

Training and skills development can be funded to enable diverse local stakeholders to **map and address the complex pathways** through which land-based and freshwater pollution impact coastal and marine waters, for example through 'source to sea' approaches.



Water for digital, science and technology

Digital and data value chains depend on water – from manufacturing components to cooling data centres. In turn, digital and data technologies can **revolutionise the water value chain**: enhancing management of water resources, treatment and distribution systems; shifting consumer behaviour and

improving customer experience; and enabling the recovery of important resources. Partnerships between public, scientific, civil society and private organisations are needed to **drive innovation and dissemination of technology and digital solutions** in water and sanitation, based on the local context.

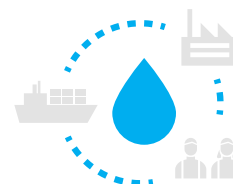
Challenges



Everyone can benefit from digital and data technologies for water and sanitation, but the digital divide must be closed. **It is estimated that 19% of people in the world's least developed countries are online, whereas 87% of people are online in developed countries (ITU, 2019).**

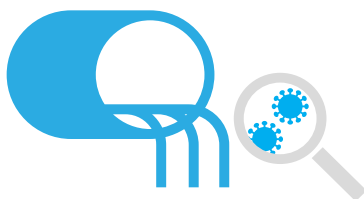


There are **multiple hurdles to translate digital responses** in water and sanitation into functioning solutions. These include integration across complex water institutions and systems; human resource and skills gaps in the water sector; and identifying which innovations offer the greatest value (IWA, 2019).

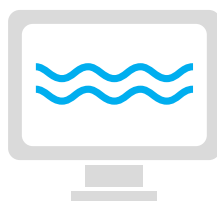


Globalised supply chains for digital components are vulnerable to water-related risks. Thailand produced 43% of the world's hard disk drives before devastating floods in 2011. The impact of the floods **reduced hard disk drive shipments by 30% and increased prices by up to two-fold (Haraguchi and Lall, 2014).**

Opportunities



The water sector has shown it can **innovate rapidly and effectively around specific challenges** and in ways that benefit all – for example monitoring wastewater to detect COVID-19 outbreaks ([BMJ, 2020](#)).



Digital and data solutions can be **incorporated into old as well as new water infrastructure** and management systems. This matters, because the need to renew ageing water and sanitation infrastructure is at least as great as the need for new infrastructure for the unserved ([World Bank, 2019b](#)).



Technology companies are starting to look beyond their energy use and carbon footprint to consider their dependence and impacts on water ([Reig et al., 2020](#)). Microsoft, for example, has adopted a **net-zero water use target** at its parched Silicon Valley campus, to be achieved through demand management, water recycling and rainwater harvesting ([Microsoft, 2017](#)).

Strategies

INVESTMENT

Digital payment platforms can facilitate cost recovery, enabling **sustainable financing for agricultural, industrial and household water services**, as well as other water-related financing solutions like payment for ecosystem services.



Example

In Togo, the Cizo pay-as-you-go solar electrification programme is deploying ‘**smart**’ **solar-powered pumps** for drinking water and irrigation, as part of wider rural electrification. The EU Africa Infrastructure Trust Fund has made a €10 million contribution to the project, led by the African Development Bank. A digitised pay-as-you go platform will **facilitate cost recovery and project monitoring** ([AfDB, 2020](#)).

POLICY

Policy dialogue and technical assistance can support development of **long-term water allocation strategies**, harnessing digital technologies to measure real time water use.



CAPACITY

Partnership programmes can leverage European scientific expertise in water, climate and environment. These can **strengthen capacity for data-driven and digitally-informed policy making** by empowering institutions in low and middle-income countries to take the lead.



Example

The Global Monitoring for Environment and Security in Africa programme, co-financed by the EC and African Union Commission with a budget of €30 million, **uses and adapts Copernicus programme data and services** (earth observation and in-situ) for Africa. Competitive grant awards are made to African institutions for projects in water, natural resources and marine and coastal areas ([African Union, 2019](#)).

Water for sustainable growth and jobs

Water management and related services can **enable sustainable growth and jobs** through multiple pathways. EU external action can **increase the value obtained from water** for productive purposes – including via the informal economy and ecosystem services – and can **enhance resilience to**

floods and droughts, which impede enterprise and growth. Action in this area can also promote “the transformation to... climate-resilient pathways” in line with the **European Consensus on Development** ([EU, 2017](#)).

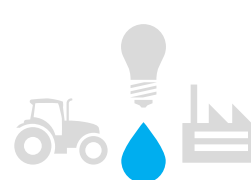
Challenges



In cities, droughts causing water shortages, power outages and stalled economic momentum can **reduce sales by informal enterprise by a third**, with knock-on reductions in worker income ([World Bank, 2017a](#)).



A 1% increase in the geographic area experiencing extreme rainfall or droughts can **reduce GDP growth by 1.8% and 2.7%, respectively** for a given year ([Brown et al., 2013](#)).



As well as supporting countless livelihoods, water is an essential input for many jobs. **42% of global jobs are heavily water-dependent and are in sectors such as agriculture, energy and industry.** A further 36% of the world's active workforce are moderately water-dependent and are in sectors including construction and recreation ([UNESCO and UN-Water, 2016](#)).

Opportunities



Measures to improve the resilience of low-income individuals to water-related disasters and other extreme weather events – such as early warning systems, dikes and environment and forest conservation – could **save countries and communities €90 billion per year** ([World Bank, 2016a](#)).



Sustainable management of water resources facilitates economic growth by supporting economic activity in numerous sectors. Policies to optimise water use through planning and productivity incentives, expand investment in water supply and availability, and reduce the impact of hydrological extremes, could **accelerate economic growth by as much as 6% in some global regions** ([World Bank, 2016b](#)).



Ensuring access to water, sanitation and hygiene facilities for women in Bangladesh could help them **recoup up to six days of time** for work or leisure per month.

Strategies

INVESTMENT

Special purpose credit lines, guarantees and other financial tools can **support local banks to lend to small and medium enterprises** seeking to engage in water and wastewater services in the municipal, industrial and agricultural sectors.



Example

Agence Française de Développement used guarantees, a concessional credit line and grant funding worth €22 million to **facilitate access to financing for small private water operators** in Cambodia. As a result of the project, Cambodia's Foreign Trade Bank has started to include part of the appraised value of water infrastructure assets and future cash flows when assessing collateral requirements for its loans ([World Bank, 2016c](#)).

POLICY

Technical assistance and policy dialogue can improve the business environment by supporting the development of cost-reflective yet affordable water and wastewater tariffs. Technical assistance and policy dialogue can also secure regulatory regimes and water rights **to give investors confidence, while protecting ecosystem and livelihood needs**.



CAPACITY

Grants can catalyse multi-stakeholder partnerships to promote 'water stewardship.' This approach aims to minimise water risks by engaging all stakeholders constructively, including the private sector. This in turn **facilitates skill and knowledge sharing as well as investment** from different parties.



Example

In Zambia, GIZ supported **Zambian Breweries, Zambian Railways, the water authority and Ndola City Council** to partner to improve ecosystem services through the protection of a key water source. The partnership **triggered an investment of €90 million** from Zambian Breweries ([GIZ, 2018](#)).

Water in migration partnerships

Water stress **contributes to peoples' decision to migrate** within and across international borders ([FAO, 2018](#)). Improving water management, alongside agricultural adaptation and livelihood diversification, plays a role in **reducing the risk of unplanned migration** and the **risk of displacement** driven by sudden water-related disasters such as floods ([Opitz-Stapleton et al., 2017](#)). For migrants, internally-displaced persons and refugees, special priority must also be given to **durable water, sanitation and hygiene solutions**, as recognised by the EU Human Rights Guidelines on Safe Drinking Water and Sanitation.



Challenges



Increased water stress affecting **agricultural production and rainfall extremes** can contribute to peoples' decision to migrate. Forced and rural-urban migration can in turn **increase vulnerabilities** including by **increasing pressures** on water and other natural resources in destination areas ([FAO, 2018](#)).



The **ten largest disaster displacement events in 2016 were related to floods and storms** ([Opitz-Stapleton et al., 2017](#)). Climate change has made these events, as well as droughts and heatwaves, more likely and/ or severe in many locations ([Carbon Brief, 2020](#)). Migration can be an important mechanism to help households cope with and recover from water-related disasters ([Opitz-Stapleton et al., 2017](#)).



Of **ten countries** consistently hosting the most refugees (2013-2016) **seven face water stress or scarcity**, and a quarter of the total population across all countries lack access to basic drinking water ([Mason et al., 2017](#)). There is a need for greater integration of water interventions in such contexts: between conflict-affected countries and their neighbours, and across the humanitarian-development-peace nexus.

Opportunities



Effective institutions for water management and drought and flood response can **mitigate the environmental drivers of migration** ([FAO, 2018](#)).



Countries and communities that ensure migrants have access to water, sanitation and hygiene are more likely to achieve the **economic co-benefits** from migration, reduce risks to the environment and public health, and **promote social cohesion and equality** ([Jobbins et al., 2018](#)).



Remittances offer an **important pathway for migrants to support water security** where their origin communities have low levels of water supply, sanitation and hygiene services and equipment for productive water use such as irrigation ([Jobbins et al., 2018](#)).

Strategies

INVESTMENT

Grants and accompanying technical assistance play a crucial role in **expanding and sustaining infrastructure** for the provision of water and sanitation services and wastewater management in **fragile and conflict-affected situations** across both host and displaced communities. Technologies such as off-grid renewable energy can help build greater resilience into water and sanitation infrastructure in fragile or water-stressed contexts.



Example

The Mauritanian government, with the support of UNICEF, installed boreholes powered by solar panels to provide water to **23,000 people in 40 drought-prone communities** from 2015-2017. The government aims to scale this to 2,500 remote communities by 2030 ([UNICEF, 2019](#)).

POLICY

Policy dialogue can support countries' water sectors to be **better prepared for crises**, for example by facilitating dialogue between development-orientated coordination platforms and the humanitarian cluster system; and encouraging the use of **conflict-sensitive approaches and disaster-preparedness measures**.



CAPACITY

Technical assistance can help to **build local capacity to ensure the provision of water and sanitation services before, during and after crises**, e.g. through enhanced early warning systems for disaster risk reduction and by ensuring long-term water security is strengthened as part of emergency responses.



Example

Turkey hosts more refugees than any other country in the world (3.9 million) and has spent approximately €1.2 billion on water, sanitation and hygiene infrastructure and services, including new dams, reservoirs and pipelines, especially in provinces bordering Syria. Parallel capacity building has sought to **integrate Syrians to ensure inclusive and sustainable management of water and sanitation services** ([UNESCO and UN-Water, 2019](#)).

Water for governance, peace and security

Even as tensions, conflict and even terrorism around water continue to rise at multiple levels, water can be an **enabler of peace and cooperation**. This includes at the transboundary level in line with the **European Council Conclusions on Water Diplomacy**, which also promote integrated water resources management (IWRM) and effective water governance as essential components of **long-term stability** ([European Council Conclusions, 2018](#)).

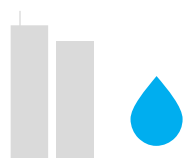
Challenges



Over **40% of the land area** covered by shared river basins, lakes and aquifers **lacks an operational agreement for transboundary water cooperation** – based on the 60+ countries for which data are available, ([UN-Water et al. 2018](#)).



Climate change is generally projected to **increase demand** ([UNESCO and UN-Water 2020](#)) and **negatively affect the stability** of existing water institutions and interstate relations ([Blumstein et al. 2016](#)).



Conflict and terrorism threaten critical water infrastructure. The **majority of the 675 incidences** of water-related terrorism recorded globally between 1970 and 2016 **took place after 9/11** ([Veilleux and Dinar, 2019](#)).



Less than 40% of countries have made good progress in implementing integrated water resources management, jeopardising progress in many other areas that depend on sound water governance, such as food security and inclusive and sustainable economic growth ([UN-Water and UNEP, 2018](#)).

Opportunities



In Central Asia alone, action to improve transboundary water management could **avoid costs of €4.1 billion per year** associated with agricultural losses, inefficient energy trade and lack of access to international finance ([Adelphi and CAREC 2017](#)).



In the first round of NDCs, **87% of countries** that set out adaptation actions **identified water as a priority sector**. Countries revising and resubmitting NDCs can use IWRM to support climate change adaptation through strengthened water governance ([GWP 2018](#)).



In countries facing terrorist risks, critical infrastructure protection legislation and 'security by design' strategies represent **concrete steps to protect water supplies**. Such approaches are in line with the **EU Counter-Terrorism Agenda** adopted in 2020 that allows the EU to share its best practices with partner countries and includes a focus on protection of critical infrastructure ([EC, 2020g](#)).



Since 2016 **all UN Member States can accede to the Convention on the Protection and Use of Transboundary Water Courses and International Lakes** (Helsinki Water Convention 1992). This was originally negotiated as a framework for the pan-European region ([UNECE, 2018](#)).

Strategies

INVESTMENT

Budget support can **enable country-led investments** in infrastructure to protect and enhance water resources and strengthen water and sanitation services, while promoting improvements in water governance.



Example

EU budget support to Morocco's water sector (€120 million, 2002-2006) supported major infrastructure but also catalysed governance improvements, including through IWRM. This laid a strong foundation for EU support to the sector totalling €230 million in the past 15 years ([ADE, 2014](#)).

POLICY

Policy dialogue, including water diplomacy in the context of shared waters, can **promote enhanced water governance and mitigate the risks of conflict**, focusing on entry-points for collaboration and integration, such as enhancing decision support across the water-energy-food-ecosystems nexus.



Example

In Central Asia, uneven distribution of water resources, lack of cooperation and unsustainable management have led to severe water and energy shortages and political tensions within and among riparian countries. Coordinated diplomatic efforts by several international actors, including Germany under the EU Central Asia Initiative, has **enabled dialogue among the riparian countries** to continue even when wider political relations have become strained ([EU, OECD, UNECE, 2014](#)).

CAPACITY

Policy dialogue and technical assistance can help partners to **resolve water conflicts in a peaceful manner**, for example through negotiation and mediation, collaborative endeavours such as joint fact finding, and twinning with countries and civil organisations with strong experience.

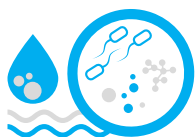


Water for human development

Ensuring that everyone's **rights to water and sanitation** are fulfilled will bring **multiple benefits across human development**: improving outcomes in health, nutrition, education and gender. Addressing inequalities is crucial at all levels, from individual households to entire countries and even continents that are falling behind. At an individual level, for example, the **EU Gender Action Plan III** points to

the continued need to address stark inequalities in access to water that affect the **health, education and opportunities of women and girls** ([EC and HR/VP, 2020](#)). At a geographic level, EU external action is increasingly focusing on **fragile and conflict-affected situations**, many of which are water-stressed ([SDC, 2017](#)) and have inadequate water, sanitation and hygiene services ([WHO and UNICEF, 2017](#)).

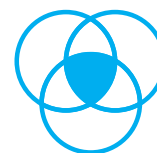
Challenges



Water insecurity creates multiple physical and psychosocial health burdens ([Young et al., 2019](#)). Diarrhoeal disease is the **third leading cause of child mortality** and killed **almost 1.6 million people** in 2017 ([Dadonaite, 2019](#)).

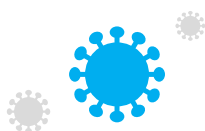


In fragile and conflict-affected situations, **420 million children lack basic sanitation** and **210 million children** lack access to safe drinking water globally. In protracted conflicts, **children under 15 are more than three times as likely to die from diarrhoeal disease** linked to unsafe water and sanitation, than from violence arising from war and conflict ([UNICEF, 2019](#)).



There are multiple, persistent and intersecting reasons why people are left behind in efforts to extend access to water supply, sanitation and hygiene, and improve water security. These include gender, poverty, ethnicity, age, disability, sexual orientation and health status ([UNESCO and UN-Water, 2019](#)).

Opportunities



COVID-19 has brought renewed attention to the crucial **contribution of water, sanitation and hygiene to human health**, and to related, mounting challenges such as anti-microbial resistance.



In fragile and conflict-affected contexts, engagement on water and WASH offers a **practical entry-point to strengthen the 'triple-nexus'** between emergency humanitarian response, development programming and peace-building activities. For example, in conflict-affected contexts including Iraq, Libya, Yemen, Syria and Ukraine, the importance of water services has **enabled continued provision across front lines** and provided a **more conducive environment for dialogue** between hostile parties ([UNICEF, 2019](#)).



The human right to safe drinking water and sanitation provides an international legal framework obliging states to work towards universal access to water and sanitation, prioritizing those most in need ([UNESCO and UN-Water, 2019](#)). The **EU Human Rights Guidelines on Safe Drinking Water and Sanitation** show how to **use available EU foreign policy tools to promote and protect this human right**, including through best practice exchange and dialogue on national policy and legislation ([European Council conclusions, 2019](#)).

Strategies

INVESTMENT

Grants or budget support can be used to **support multi-sectoral programming** in which a package of sustainable water supply, sanitation and hygiene interventions is integrated with programming in other areas such as health, social protection and nutrition for maximum impact on health. Examples include WASH, including menstrual hygiene management, integrated into education programming.



Example

In Mozambique, the EU and UNICEF have collaborated with the Government on a multi-sector nutrition intervention in Naumpula and Zambezia Provinces, bringing water, sanitation and hygiene together with health and nutrition. The collaboration has been expanded to help limit the COVID-19 outbreak and mitigate the effects.

POLICY

Policy dialogue and technical assistance can facilitate water and sanitation sector institutional reform in support of human development. Priorities may include progressive tariff reform, rights-based legal frameworks and incentives for pro-poor targeting to **proactively address inequalities**, and **empowering women and girls** through WASH programmes and policies. Such interventions should be sustained over time and tailored to country contexts.

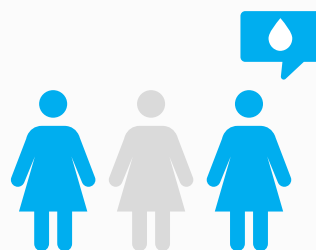


Example

In Samoa, the EU has allocated over €17 million in budget support to the water and sanitation sector – in line with the government's 'Water for Life' plan – with a particular focus on improving the quality of water and sanitation and enhancing the resilience of water resources. The support has been instrumental in ensuring **89% of Samoa's population** had access to piped water by the start of 2020 ([EC, 2019b](#)).

CAPACITY

Interventions focused on building capacity in the water and sanitation sector can **enable the active and meaningful participation of women and girls** and other under-represented groups in decision making, monitoring and accountability. This includes in technical engineering and decision-making roles.



Summary

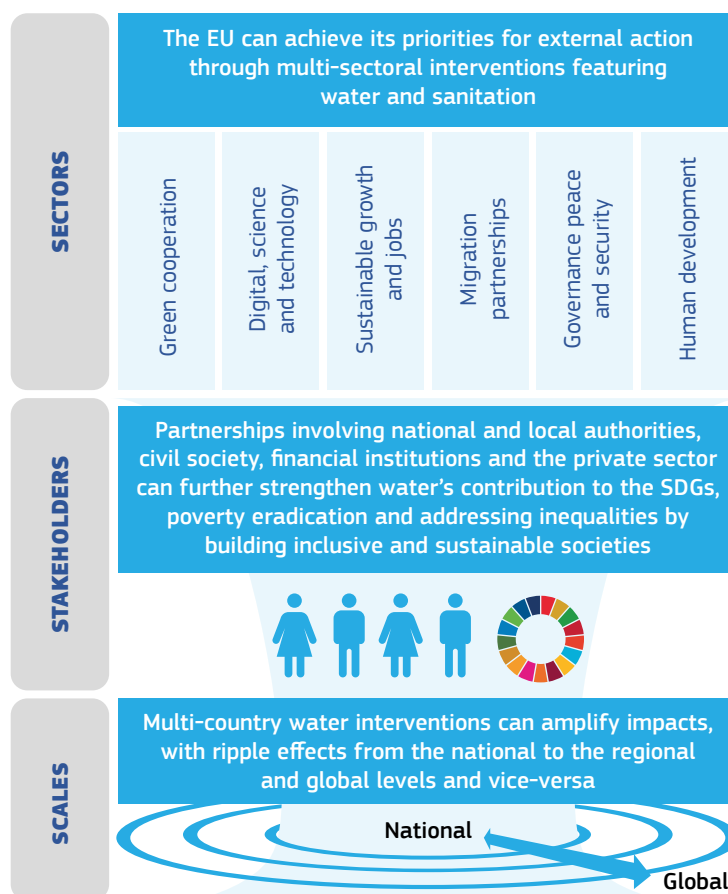
Integrating water across sectors, stakeholders and scales

When integrating water into support for the EU priorities for external action and global agreements, such as Agenda 2030, it is important to consider three dimensions:

1. Water-related interventions are usually more effective when they are integrated with interventions in other **sectors** – from water, sanitation and hygiene (WASH) investments that complement nutrition and health programmes, to natural and built infrastructure

that provides benefits and manages trade-offs across the water-food-energy-ecosystem nexus.

- The diverse values placed on water by different groups and interests mean that involving multiple **stakeholders** in transparent and participatory dialogue, including women and marginalised groups, is especially important to ensure successful outcomes in water-related interventions.
- Water-related interventions at different **scales** complement and strengthen each other. For example, regional cooperation on a transboundary basin can be facilitated and strengthened through international water law, such as the 1992 UNECE Water Convention. This in turn can allow for an important investment in hydro-power in one country while securing sufficient water for biodiversity and agriculture in the delta of a country downstream.



This publication benefits from the engagement of the following partners in support of an earlier, internal document: Agence Française de Développement; AquaFed; Aqua Publica Europea; European Pact for Water; Borda, European Bank for Reconstruction and Development; European Investment Bank; European Policy Centre; European Water Partnership; Federal Ministry for Economic Cooperation and Development of Germany; Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation, Kingdom of Belgium; Food and Agriculture Organization of the

United Nations; GIZ; Global Water Partnership; IHE Delft Institute for Water Education; Join for Water; KfW; Ministry for Europe and Foreign Affairs of France; Ministry of Foreign Affairs of Hungary; Ministry of Foreign Affairs of the Netherlands; Ministry of Foreign Affairs of Sweden; Organization for Security and Co-operation in Europe; Stockholm International Water Institute; Swedish International Development Cooperation Agency; UN-Water; Vitens Evides International; WaterAid; Wetlands International; and Young Water Solutions.

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Endnotes

¹ Based on OECD DAC purpose codes 140.

² Drinking Water Directive, Bathing Water Directive, Environmental Quality Standards Directive, Urban Waste Water Treatment Directive, Nitrate Directive, Flood Directive.

³ Including the Convention on the Protection and Use of Transboundary Water Courses and International Lakes (UNECE Water Convention 1992) and the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (New York 1997).

⁴ Based on PBL Netherlands (2018)

⁵ Drinking water from an improved source, provided collection time is not more than 30 minutes for a roundtrip including queuing. Improved sources include piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water.

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