

FIFTEEN YEARS OF WATER WISDOM

The OECD Water Legacy 2006-2021



TABLE OF CONTENTS

WATER CHALLENGES ARE ECONOMIC CHALLENGES	1
FROM THEORY TO PRACTICE: WHAT WE'VE ACHIEVED	2
As an economic organisation	
As a multi-disciplinary organisation	
As an inter-governmental organisation	
FIFTEEN YEARS BUILDING WATER WISDOM: A TIMELINE	3
POLICY, FINANCE AND GOVERNANCE TOOLS FOR WATER MANAGEMENT	7
1. POLICIES TO REDUCE THE RISK OF TOO LITTLE, TOO MUCH AND TOO POLLUTED WATER	8
Challenges	
OECD response	
2. IDENTIFYING GOVERNANCE GAPS, ENGAGING STAKEHOLDERS, ENHANCING REGULATION	10
Challenges	
OECD response	
3. FINANCING WATER, FROM COST RECOVERY TO DRIVING ECONOMIC AND CLIMATE RESILIENCE	12
Challenges	
OECD responses	
MAP OF OECD GLOBAL REACH	14
Regional surveys and analyses	
In-depth country reviews	
BRIDGING GEOGRAPHIC AND SECTORAL DIVIDES	16
WHERE WE GO FROM HERE	17

WATER CHALLENGES ARE ECONOMIC CHALLENGES

With an estimated 3 billion people lacking access to basic handwashing facilities, the COVID-19 pandemic underscored the far-reaching impact of mismanaged water. It reminded the world that no country, be it developed, emerging or developing, can take water security for granted. Getting freshwater policies right is critical to our well-being now and in the future.

The OECD estimates that by 2050, over 40% of the global population will live under severe water stress and water demand will increase by 55%. The UN 2021 report on progress towards SDG 6: Water and Sanitation for

All emphasised that the world is not on track, with a 35% increase in water stress in some regions over the last two decades. Gaps in water quality data, development assistance, transboundary co-operation and programme implementation persist, putting billions of people at risk.

Because of climate change, demographic pressure, urbanisation and our very consumption and production patterns, the risks of 'too much', 'too little', 'too polluted' water and related tensions will intensify in the coming decade.

♦ Did you know...?

- An estimated 2.2 billion people lack access to safe drinking water. An estimated 4.2 billion people lack access to safely managed sanitation.
- Contaminated drinking water kills 1.7 million people per year, mostly children under five.
- The number of people exposed to flood risk will rise from 1.2 billion now to 1.6 billion by 2050, equal to 20% of the global population.
- Irrigated agriculture remains the largest user of water globally; it accounts for over 40% of water abstraction in many OECD countries, and 70% worldwide.



FROM THEORY TO PRACTICE: WHAT WE'VE ACHIEVED

A changed paradigm for water, from a resource challenge to an economic challenge

As an economic organisation, the OECD looks at water as a driver for sustainable and inclusive growth. We emphasise issues related to the efficiency and effectiveness of policies that affect water demand and use. We pay particular attention to policy instruments and institutional arrangements that signal the value of water, for our communities and economies. The OECD recognised 15 years ago

that water management is not a mere sectoral but a sustainable-development issue. Health, environment, agriculture and food, energy, spatial planning and urban livelihoods, regional development, gender equality and poverty alleviation, all directly relate to water. The risk that policies in different areas will work against each other requires a coherent, multi-faceted policy response.

2 Recognition that multi-level governance and finance are essential to policy success

As a multi-disciplinary organisation, the

OECD draws on cross-cutting policy mixes for coherent responses to complex challenges. Water policy requires a whole-of-government, multilevel and multi-stakeholder approach to manage trade-offs across siloes and ensure that policies that affect water demand, use and availability are water-wise. While water-related investment

needs are massive – projected to range from USD 6.7 trillion by 2030 to USD 22.6 trillion by 2050 – the OECD argues that a wide range of policies from agriculture extension, urban and property development, infrastructure, and climate mitigation and adaptation can also help meet financing needs that contribute to water policy objectives.

3 A body of evidence, insights and tools to support policy design and implementation

As an inter-governmental organisation,

the OECD can enable global change and identify tailored solutions to common problems through sharing best practices. In 2006, the OECD channelled its economic insights and capacity to engage towards horizontal solutions for water problems. Policy imperatives, captured in the 2016 OECD Council Recommendation on Water, and several OECD multi-stakeholder networks

support and connect water policy practitioners and experts in OECD countries and partner countries, as well as in Asia-Pacific, Latin America and the Caribbean, Eastern Europe, Caucasus and Central Asia, and the Middle East and Africa. The 2021 *Toolkit for Water Policies and Governance* compiles good practices and practical tools that facilitate implementation of – and convergence towards – the Council Recommendation.

FIFTEEN YEARS BUILDING WATER WISDOM: A TIMELINE

In 2006, incoming Secretary-General Angel Gurría emphasised that water is a horizontal, economic concern both for developed and developing countries. Having served as Minister of Finance and Public Credit in Mexico, contributed to the World Water Council Report *Financing Water for All* and chaired the Financing Taskforce of the 4th World Water Forum, he campaigned to make water, together with migration and health, the OECD's priorities during his tenure.

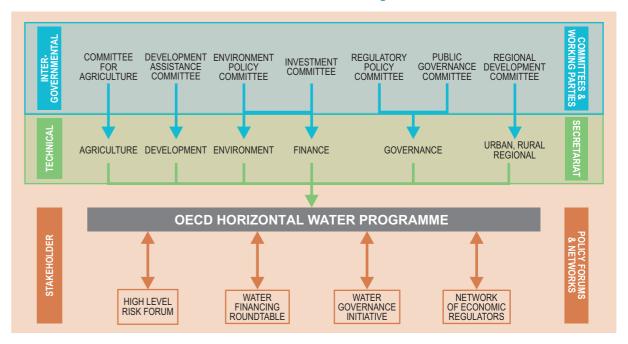
This impetus raised the profile of OECD work on water. That journey began in the 1960s, with the Advisory Group on Water Management undertaking research into economic measures to reduce pollution. By the end of the 1970s, the supply and quality of water became a central issue, and the 1978 Council Recommendation on Water Management Policies and Instruments guided governments struggling to provide clean water to growing populations. Since the late 1980s, the Environmental Policy Committee has studied the role of water prices and other water management issues. In 1989, the OECD strengthened its policy guidance with the Council

Recommendation on Water Resource Management Policies. OECD legal instruments were rejuvenated by the 2016 OECD Council Recommendation on Water.

In the decades since, OECD analysis, networks, standards and frameworks have influenced the way governments address water issues. In particular, since 2007, the OECD Horizontal Water Programme draws policy knowledge from governments through several OECD Committees, and technical expertise from OECD Directorates covering environment, agriculture, governance, finance, urban, rural and regional policy, and development co-operation.

Beyond national governments, the OECD engages with a range of stakeholders via bespoke platforms such as the OECD Water Governance Initiative, the Network of Economic Regulators, the Roundtable on Financing Water and the High Level Risk Forum. These facilitate dialogues and consultations to produce OECD evidence, and guidance in the form of principles, checklists and toolkits.

OECD Horizontal Water Programme



3

PROGRAMMES EECCA Environmental Action Programme Taskforce - Water Component (1993) OECD Horizontal Water Programme (2007) OECD Water Governance Programme (2009) **NETWORKS OECD High Level Risk Forum (2011)** OECD Working Party on Biodiversity, Water and Ecosystems (2011) **OECD Water Governance Initiative (2013) OECD Network of Economic Regulators (2013)** OECD Roundtable on Financing Water (2017) SG Angel Gurría establishes **G20 Agriculture and Water** King Hassan II **G20 Agriculture and Water OECD Water Days** water as a horizontal issue **Ministers Action Plan Great World Water Prize** Ministers Communiqué - 2017 -2006 - 2007 - 2008 - 2009 - 2011 - 2012 - 2013 - 2014 -2016 2018 -**FRAMEWORKS OECD Toolkit for Water Policies and Governance** African Economic Outlook **OECD Environmental Outlook to 2030 OECD Water Governance Indicators OECD Checklist for Private-Sector Participation OECD 3Ts Framework: Taxes, Tariffs, Transfers OECD Water Risk Hotspot Identification Method OECD Health Check for Groundwater Allocation Regimes OECD Multi-level Governance Framework OECD Guidance Against Undue Influence of Economic Regulators OECD Integrated Policy Framework to Tackle Diffuse Water Pollution** OECD Environmental Outlook to 2050 **OECD Council Recommendation on Water OECD Framework for Financing Water Resources Management OECD 3Ps Framework for Cities: People, Places, Policies OECD Water Security Framework OECD Framework for Water and Climate Change Adaptation Polluter Pays Principle OECD Principles on Water Governance Beneficiary Pays Principle OECD Checklist for Stakeholder Engagement** OECD Best Practice Principles on the Governance of Regulators **OECD Health Check for Water Allocation Regimes** Recommendations (1974, 1978, 1989) OECD Recommendation on the Governance of Critical Risks **OECD Framework to Manage Groundwater Use in Agriculture**

Governments have a central role in bolstering the resilience of cities, industries and sectors against water risks, and creating incentives to improve water use and reduce pollution by enforcing water regulations and removing harmful policies and subsidies. To support them:

- The OECD carries out dozens of demand-driven local, national and regional water-related policy dialogues and reviews building on international best practices and engagement with stakeholders within and across countries.
- National peer reviews of environment, agriculture, and development co-operation, coupled with multidimensional country reviews, raise the profile of water across policy priorities.

Today, the economics and governance of water are seen as integral to societies achieving and maintaining socioeconomic development, inclusive growth and environmental sustainability. But more and bolder action is needed. Water crises are opportunities to change water policy. To prepare future reforms, governments should continue research and education, and improve water governance. Flexible sequencing of policy initiatives based on robust evidence, institutional alignment, stakeholder consultation and rebalanced incentives can prepare and facilitate such reforms in the full spectrum of climate, social and economic challenges countries face.

POLICY, FINANCE AND GOVERNANCE TOOLS FOR WATER MANAGEMENT

Solutions to water issues combine policy, governance and finance. They cut across sectors and require a co-ordinated approach by governments, civil society and businesses. Investing in infrastructure is not enough. Water policy and governance are also at the heart of finding sustainable solutions to set the economic incentives, manage complexity, and articulate who does what, how, at which geographical scale and why.

Did you know...?

- An estimated USD 112 billion is transferred to agriculture producers annually in OECD countries in ways that potentially encourage nutrient pollution in water.
- 75% of regulators in the water services sector included in the OECD database are independent agencies, of which 85% publish draft decisions and collect feedback from stakeholders.

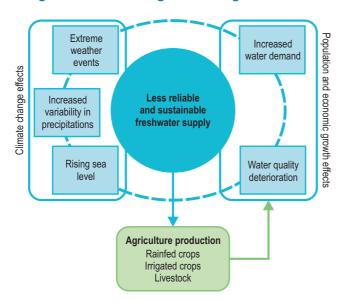


1. Policies to reduce the risks of too little, too much and too polluted water

Challenges

- Water allocation regimes need to address competition for access to resources, and uncertainties about water demand and scarcity driven by climate change and other trends.
- The agriculture and food sector faces increasing water risks while remaining the main user of water and a major source of water pollution around the world, with water risk hotspots that need to be identified for prioritised action.
- Diffuse water pollution is a complex problem that requires coordinated policies targeted at the right scale; concerns related to emerging contaminants (e.g., pharmaceutical residues, micro-plastics) also require product life-cycle solutions.

Agriculture is facing increasing water risks

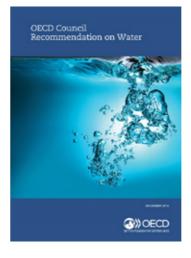


- Sustainable financing for water supply and sanitation services must distinguish between revenue (tariffs, taxes and transfers) and repayable finance, while affordability is best addressed through social measures.
- Innovation and strategic planning are essential, especially for regions that have suffered from years of underinvestment in infrastructure.
- Rehabilitation of existing infrastructure is not enough; a paradigm shift must comprise new approaches to infrastructure delivery, including decentralised and nature-based solutions.
- Policies to signal the opportunity-cost of using water and make pollution costly can spur innovative technologies for water management that disseminate at scale.
- Adapting water policies, financing and governance to future challenges means understanding the political economy of reform and leveraging local knowledge and capacities.

Impact examples

- Following the OECD Water Governance Review of the Netherlands in 2014, the government adopted a waterwise Environmental Planning Act and set up a biannual Water Awareness Week, a website and children's TV shows informing of the risk of flooding and actions to take.
- Following OECD review of flood risk in Paris from the Seine River, a flood management strategy was designed and investments made in resilience, including green infrastructure.
- Following policy dialogues on water facilitated by the OECD and UNECE, Kyrgyzstan and Moldova updated their national WSS Strategies complemented by mid-term action plans, and adopted new design and construction norms for small-scale drinking water supply systems. Belarus and Kyrgyzstan integrated OECD guidance on economic instruments for managing water resources and infrastructure into training courses at universities.

OECD response



The 2016 OECD Council Recommendation on Water is a concise legal instrument adopted unanimously by OECD countries as an international standard for managing water resources and services, including quantity, quality, risks and disasters, governance, and finance. To support countries that either adhere to, or aim to converge towards this standard, the OECD Toolkit for Water Policies and Governance compiles policies, governance arrangements and related tools that facilitate the design and implementation of water management practices.

OECD work on Water Resources Allocation and Groundwater Allocation provides health checks that countries can use to assess whether prevailing allocation regimes allocate water where it is most valuable for the community, and options to strengthen allocation arrangements. Managing groundwater is particularly important for the future of agriculture and cities in several regions; a tripod of regulatory, economic and collective-action approaches can be used to curb intensive groundwater use, adapted to local circumstances. Water Risk Hotspots for Agriculture demonstrated that, unless properly tackled, future risks will concentrate in highly productive agricultural regions, with direct impact on local food production, and indirect impacts on regional markets and broader food security. Governments should make agriculture's use of water more efficient and reduce its impact on water quality to mitigate water risks for agriculture and food security.

Framework to Manage Groundwater Use in Agriculture



Water Security Framework: Know, Target and Manage the Risk



The **OECD Water Security Framework**, developed in 2013, presents a methodology to 'know', 'target' and 'manage' water risks, recalling that the appropriate level of security remains a political decision. In 2015, joint OECD work with the Global Water Partnership made the economic case for strategic investment in water security, which could contribute at least USD 500 billion to global growth annually.

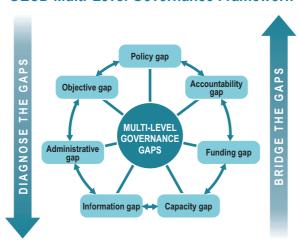
Reducing the risks of water-related disasters requires a whole-of-society response. Since 2011, the **High Level Risk Forum** provides a venue for senior policy makers and executives from key industries to advance the international policy agenda for building resilience to large scale risks, and contribute to solutions for flood risks.

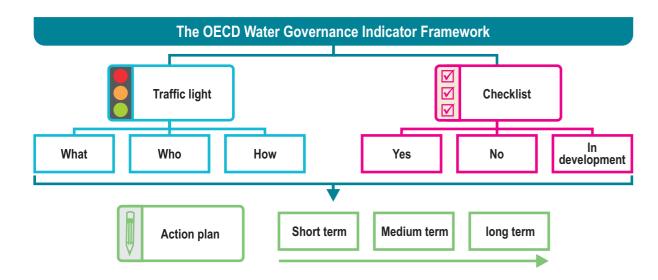
2. Identifying governance gaps, engaging stakeholders, enhancing regulation

Challenges

- Water is both a local and global challenge. Managing water means understanding and mastering complexity and conflicts across scales, authorities and sectors.
- Water crises are often governance crises since they tend to relate more to the 'who does what' at 'which scale' and 'how', than to the 'what' should be done.
- There is no one-size-fits-all solution to water challenges worldwide, but key principles can be adapted to the diverse situations within and across countries.
- Governance is not only about governments. Managing water requires engaging with diverse stakeholders from public, private and non-profit sectors.

OECD Multi-Level Governance Framework



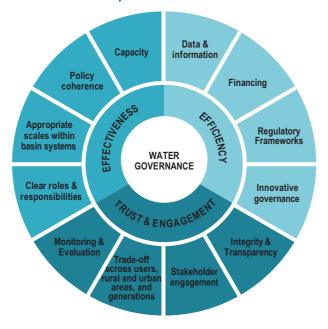


- Involving the private sector does not mean that government takes a back seat. Delegating some aspects of water service provision to the private sector does not mean handing over responsibility from public to private hands.
- Regardless of public or private ownership of water resources and service delivery, government are key to policy and regulation, allocation of risks, and accountability.
- An effective regulator needs clear objectives and functions, and mechanisms to co-ordinate with other relevant bodies – important in all utility sectors but even more for the fragmented and complex nature of water policy.

Impact example

• Since 2015, 80% of countries and stakeholders that endorsed the *OECD Principles on Water Governance* used them to make decisions, policy choices and plan programmatic activities.

OECD Principles on Water Governance



The OECD Network of Economic Regulators (NER), established in 2013, promotes dialogue between water regulators and those with responsibilities in other network sectors like communications, energy and transport. Based on the experiences of NER members, the OECD Best Practice Principles for Regulatory Policy: The Governance of Regulators offer guidance to regulators on key institutional dimensions. The NER produces Indicators on the Governance of Sector Regulators that cover water regulators across OECD countries, and carries out in-depth peer reviews to assess the performance of regulators. To date, the Performance Assessment Framework for Economic Regulators has been applied to water regulators in Ireland and Latvia.

OECD response

Created in 2009, the OECD Water Governance Programme advises policymakers on the design and implementation of water policy through a multi-level framework to diagnose and bridge gaps, regional analyses, and dedicated water reviews. Set up in 2013 as a global policy forum, the OECD Water Governance Initiative gathers 150+ stakeholders from around the globe to share good practices and co-produce guidance such as the OECD Principles on Water Governance adopted in 2015. To support the implementation of the Principles, the OECD developed a Checklist and set of indicators for self-assessing governance frameworks, institutions and instruments.

OECD Best Practice Principles for Governance of Regulators





The OECD framework for **Stakeholder Engagement for Inclusive Water Governance** provides pragmatic policy guidance in the form of key principles and a Checklist with indicators, international references and self-assessment questions to help policy makers achieve the short and long-term benefits of stakeholder engagement.

10

3. Financing water, from cost recovery to driving economic and climate resilience

Challenges

- Finance for water supply and sanitation ultimately relies on the 3Ts – taxes, tariffs, and donor transfers

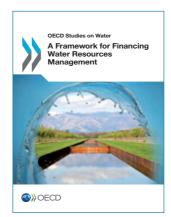
 to support all other financing mechanisms (such as loans and bonds), which must be repaid through a combination of the 3Ts.
- Finance for water security can draw on a range of policy instruments to capture revenue streams from beneficiaries, such as payment for ecosystems services, water-related fees and charges, value capture mechanisms, etc.
- Financing water includes making sure that investments in other areas (e.g., agriculture, land use, urban development) are water-wise and do not generate future liabilities for managing water.
- Governments have a role to play in bolstering farmers' resilience in areas facing increasing water risks and removing policies, like agricultural and energy subsidies, that support excessive use of water and polluting activities.

- Many countries seek out the private sector to expand and improve their water and sanitation systems, but expectations are often built on a poor understanding of what private actors can do.
- Financing water at scale requires intermediaries to bridge the gap between water project owners and financiers
- Targeted social measures are more effective than cheap water or sophisticated tariffs to address affordability issues for water and sanitation services.
- Public and development finance are best used strategically to crowd in – and not crowd out – commercial finance, including by de-risking investments through blended finance.
- Central banks can deliver guidelines to help financiers understand how water-related risks can affect the performance of their portfolio.

Impact examples

- ◆ In 2021, building on the OECD assessment of financing needs and capacities in 27 EU Member States, the Next Generation EU recovery fund to support member states hit by the COVID-19 pandemic secured some EUR 50 billion for water-related investments.
- Following policy dialogues with Brazil on water governance (2015) and financing (2017), the National Water Resources Council included the OECD's recommendations in a new legal resolution establishing general criteria for water charges.





OECD response

The 2012 Framework for Financing Water Resources Management comprises four principles – Polluter Pays, Beneficiary Pays, Equity, Policy Coherence – for financing water resources management at local, basin, national and transboundary levels, emphasising cost recovery of use, and environmental and resource impacts.

The OECD's **3Ts** calls for a combination of user **tariffs**, **taxes** and **transfers** from the international community to finance access to water services. **Managing Water for All: An OECD Perspective on Pricing and Financing** (2009) shifted emphasis from full cost recovery to sustainable cost recovery. To implement this approach, the **OECD Policy Dialogues on Strategic Financial Planning** support policy discussions about the level of service a country can afford for water supply and sanitation, and how to finance it through a combination of the 3Ts.

Potential Sources of Funding and Financing for Water-related Investment Water security Sources of funding finance Water supply and sanitation Development/ Concessional finance

Transfers

Taxes

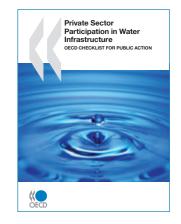
Tariffs

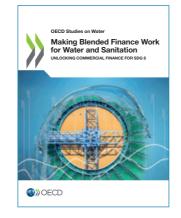
benevolent (grants, philanthropies)

Public budgets

Beneficiaries (tariffs, PES, value capture, public goods charges, self-

Adopted in 2009, the OECD Checklist for Private Sector Participation in Water Infrastructure provides practical guidance for governments with a coherent set of policy directions addressing the allocation of roles, risks and responsibilities, and the framework conditions for optimising private sector participation. The Checklist was used to conduct assessments in Egypt, Jordan, Lebanon, Mexico, Russia and Tunisia.

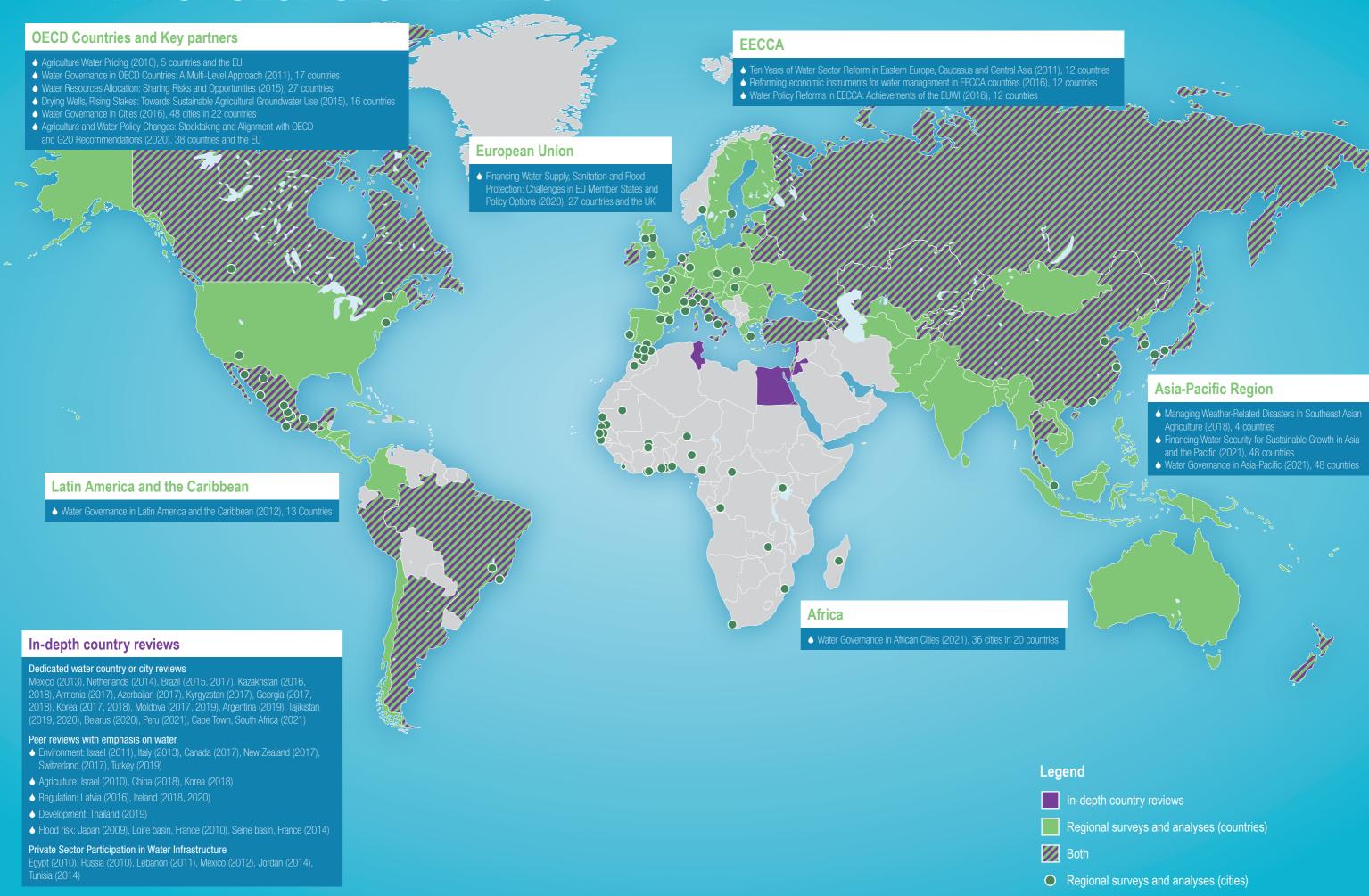




The OECD Development Assistance Committee maintains statistics on aid to water supply and sanitation, to analyse trends and compare the efforts of donors. Regular statistical briefs monitor trends, commitments-versus-disbursements, geographical allocation of development assistance, types of projects financed, climate change and gender equality. Making Blended Finance Work for Water and Sanitation examines how to deploy development finance strategically to crowd in commercial capital.

The **Roundtable on Financing Water**, a global public-private platform established by the OECD, the Netherlands, the World Water Council and the World Bank in 2017, engages governments, investors, donors, academia, and civil society organisations focused on financial solutions that contribute to water security and sustainable growth.

MAP OF OECD GLOBAL REACH



BRIDGING GEOGRAPHIC AND SECTORAL DIVIDES

Bilateral and multilateral engagement

Work with OECD governments, and national and multilateral outreach partners influences the global water policy agenda.

The G20 Agriculture Ministers' Action Plan 2017 on food and water security refers to OECD water work, also referenced in the communiqué adopted by G20 agriculture and water ministers in 2020.

The OECD provides significant support to UN-Water tracking progress toward Sustainable Development Goal 6 on clean water and sanitation. In 2018, the UN High-Level Panel on Water highlighted the OECD Water Governance Initiative and its 12 Principles in its outcome document, *Making Every Drop Count: An Agenda for Water Action*.

Through its Memorandum of Understanding with the **Asian Development Bank**, the OECD benchmarked water governance and water financing for sustainable growth in 48 countries of the Asia-Pacific region and contributed to the *Asian Water Development Outlook* 2020. The OECD carried out policy dialogues in MENA countries in collaboration with the **Union for**

the Mediterranean, the Global Water Partnership-Mediterranean and the European Investment Bank, and in EECCA countries with the EU Water Initiative, in addition to conducting water governance reviews of Argentina and Peru with the Inter-American Development Bank. The OECD also developed a regional analysis of water governance in African cities, in collaboration with United Cities and Local Governments-Africa.

By partnering with these and other organisations, and co-producing work, the OECD facilitates financing and improved governance with a co-ordination basis for donors in those countries. Many multi-lateral and bi-lateral lenders, NGOs and other stakeholders incorporate OECD recommendations into their technical assistance for countries, enabling them to make the most of advice and financing activities to trigger policy change.

In addition, ad hoc advisory support informed policy decisions in several countries, including France, Ireland, New Zealand and the United Kingdom.

King Hassan II Great World Water Prize, 2018

At the 8th World Water Forum (March 2018, Brasilia), the Government of Morocco and the World Water Council awarded the 6th King Hassan II Great World Water Prize to Secretary-General Angel Gurría on behalf of the OECD. This prize, awarded every three years by an international jury, is one of the highest recognitions for excellence in co-operation and management in the use of water resources. The award ceremony highlighted the damning water issues the world continues to face and recognised the OECD for its work in elevating water security as a crucial sustainable development issue, ensuring greater water awareness and visibility globally, and providing policy guidance to OECD members and non-OECD countries. This prize enabled the OECD to pioneer a new Roundtable of Mayors for Water Security in Africa.

WHERE WE GO FROM HERE

Key priorities going forward are further raising the profile of water as a connector between systemic policy agendas, and advancing the measurement, monitoring and evaluation of water policies and outcomes in both OECD and partner countries.

Managing water complexity to build resilience: The complex intersection of water with climate change, biodiversity loss and development, across agriculture, industry and other sectors and different levels of government, provides opportunities to further develop a systems approach in order to strengthen resilience and facilitate a transition from a linear to a circular economy in cities, regions and countries.

Connecting environment, health and social issues: The link between handwashing facilities and COVID-19 underscored the far-reaching impact of mismanaged water for health and economic well-being. Emerging pollutants (e.g., pharmaceutical residues, microplastics) call for strategies to mitigate water-borne risks and the consequences of poor water quality for all users, especially women and girls, and for the environment.

Shifting towards more water-secure food systems: Transforming food systems towards a more sustainable and resilient model requires progress in addressing the key water challenges of agriculture in a changing climate.

Financing water resources management, infrastructure and water services: Financing water at scale needs a robust enabling environment that ensures investments in a range of sectors (e.g., agriculture, urban planning and land use, environment and ecosystems management, and industry) contribute to, rather than stifle, water security. OECD work aims to set up a 'Global Observatory for Financing Water' that can inspire countries, project owners and financiers, and provide a platform to share good practice.

Global thinking for local action: Industrial and service sector development, employment, poverty eradication, and environmental sustainability depend on the ability of cities to provide reliable water and sanitation services to city dwellers and manage the multi-dimensional risks of floods, droughts and pollution. Mayors have an important role to play in all parts of the world to tackle water challenges today for resilient cities tomorrow.





