

Roundtable on Financing Water

The Roundtable on Financing Water

Regional meeting: Europe, 7-8 December 2020

Virtual Meeting

Discussion Highlights

The sixth meeting of the Roundtable on Financing Water gathered up to 350 participants, including public finance institutions, private investors and financiers, development banks, government officials, utilities, philanthropies, NGOs and research institutions. The meeting focused on recent developments and analytical work around three key themes: (1) financing needs and capacities in European member states, (2) water investments to drive climate action, including current developments on the EU taxonomy on sustainable finance, and (3) challenges and opportunities related to COVID-19 and the recovery.

This was a regional meeting focused on Europe, organised in partnership between the OECD and the European Investment Bank (EIB). Participants with diverse backgrounds shared experience related to financing water investments, ranging from country perspectives from Italy, the Netherlands, Portugal, Romania and Spain as well as perspectives from the European Commission, the European Central Bank, public finance institutions, utilities, investors and asset managers.

A brief summary of the highlights is provided below. The agenda, background papers for the various sessions as well as the video recordings of the two meeting days are available on the Roundtable's [webpage](#).

Key messages

- 1. *Rationale and aims of water-related investment: Contributing to climate action, environmental sustainability and resilience***
 - Water risks are increasingly gaining attention from central banks and financial institutions. Physical and transition risks related to water can translate into material financial risks and need to be integrated into financial reporting and disclosures.
 - Central banks, risk disclosure frameworks and taxonomies can play a key role to provide guidelines on how the banking sector and investors can manage potential exposure to environmental risks, including those related to water. For investors, water-related risks can have negative effects on expected returns, but also open new investment opportunities for interventions mitigating these risks and building resilience.
- 2. *Financing needs and capacities for water-related investments in Europe***
 - Investment needs for water supply and sanitation in Europe are substantial: All member states need to scale up their expenditure by at least 20% to reach EU water standards and there is an aggregated financing gap of EUR 289 billion up to 2030.
 - Scaling up water financing requires addressing issues of scale and fragmentation, strengthening the regulatory environment, improving cost recovery and predictability of financing for operations and maintenance, as well as enhancing capacities to develop projects and to absorb funding.
- 3. *Contributing to a green and resilient recovery: A role for water-related investments***

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- Emerging evidence related to the impact of the COVID-19 crisis on the water sector indicates a drop in industrial and commercial water consumption by 27%¹ and has reduced households' ability to pay their water bills, leading to significant revenue shortfalls for water utilities. Capital expenditures have been postponed or reduced, hampering sector's ability to maintain existing infrastructure and address future capital expenditure for infrastructure needs in light of decaying assets.
 - The EU recovery funds are a major opportunity to scale up environmental and climate action and to build resilience. The water sector can be a key contributor to achieving the EU's environmental objectives and nature-based solutions are particularly well-suited, providing adaptive and flexible approaches.
 - It is vital to ensure that public funds, and particularly the EU Recovery Fund, create a positive multiplier effect, by improving the enabling environment, enhancing efficiency and contributing to the mobilisation of additional sources of finance.
- 4. Sustainable finance: recent developments on EU taxonomy**
- The EU taxonomy of sustainable activities may be a powerful tool to channel public and private funds towards investments supporting the EU's environmental objectives, including in relation to Paris Agreement. Technical criteria and clear thresholds, defining which economic activities are considered taxonomy-compliant, are currently under development. The extent to which the taxonomy may support environmental objectives will depend on how these criteria and thresholds are defined,²
 - The protection of water resources is an explicit objective of the taxonomy, which could raise awareness of investment opportunities in the water sector. 'Do No Significant Harm' criteria could help to better protect water resources, for example via reduced pressure on the water resource through changes agricultural practices.
 - Other water-related investments, which may not be considered as "sustainable activities" under the taxonomy's criteria, e.g. supporting access to water supply to previously underserved communities, could lose visibility and attractiveness for investors seeking sustainable finance opportunities, depending on how these activities are categorised. Stakeholder engagement and reliable data can help shaping current development processes of the taxonomy.
- 5. Supporting the mobilisation of commercial finance to scale up investment**
- Commercial investors' interest is mainly driven by the attractiveness of the risk-return profile of a project. Distinctive characteristics of the water sector, such as the small scale of projects and long pay-back periods, or a weak enabling environment can deter commercial financiers.
 - Adequate financing vehicles can help overcome these barriers and help bring together financiers and borrowers. Examples include:
 - *Hydrobonds* in Italy, mitigating the fragmented and small-scale nature of water authorities;
 - EIB's *Sustainable Awareness Bonds*, providing transparency and accountability for investors interested in ESG-related investments, leading to investor diversification and enhanced visibility of the water sector;
 - Dedicated financial institutions, such as *the Netherlands Water Boards Bank*, raising funds with *water bonds* on capital markets and on-lending to local and regional public water authorities in the Netherlands, supporting mitigation, adaptation and biodiversity protection efforts;

¹ Based on a survey with 44 utilities globally in May 2020. [GWI \(2020\), "Water utilities count the cost as COVID-19 hits income from tariffs during pandemic", *Utility Finances, Global Water Intelligence, Vol. 21/5*](#)

² The [background paper](#) for Session 4 provides an overview of recent developments.

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- Private infrastructure investors seeking attractive risk-adjusted returns through digitisation (to improve timely asset management, reduce non-revenue water and improve efficiency of use) and modernisation of aging water infrastructure;
- Equity investors in listed water and sanitation utilities (e.g. SABESP, Manila Water, etc.).

Session 1. Rationale and aims of water-related investment: Contributing to climate action, environmental sustainability and resilience

Financial institutions and central banks are increasingly shifting their attention to environmental risks, including water-related risks (“too much”, “too little” and “too polluted”) and how they may translate into material financial risks. Physical risks, such as water shortages or floods, increasingly exacerbated by climate change, as well as transition risks, e.g. through more stringent regulation and allocation of water resources, can have significant effects on assets and investments along the supply chain. For example 20% of the investments of the Dutch financial sector in the 2 000 largest corporations are located in extremely high water stressed regions globally, which are projected to becoming increasingly water stressed over time³. In his keynote presentation, [Guan Schellekens](#), Lead supervisor on climate risks at the European Central Bank (ECB) highlighted that banks and financial institutions have a limited understanding of those risks and how they can be integrated into their strategic planning. While a large number of banks report that environmental risks deserve a comprehensive risk management approach, only few have such an approach in place. Overall, there is a strong need to manage fiscal risks related to climate and environmental risk and to increase disclosure and transparency in this regard. Central banks can play a key role in setting disclosure requirements and methodology standards. The ECB, for instance, has set out a [Guide on climate-related and environmental risks](#) in May 2020, formulating supervisory expectations on risk management and disclosure.

For investors, water poses both risks and opportunities: water-related risks, now and in the future, can affect expected investment returns and are highly difficult to predict. Close cooperation with clients (such as corporates or water utilities) who may be exposed to water-related risks, is needed in order to better understand and measure where and how these risks emerge. On the other hand, there are opportunities for long-term investments in the sector, including relating to the reduction of exposure to water risk. Due to expectations of increasing water risks in the future, such investments could translate into higher returns.

Integrating environmental factors in investment decision-making could be an important force to advance towards resilience by incentivising adaptive measures. The financial sector hence has the potential both to provide the funds for water-related investments, and to drive solutions and innovation for water security.

For water service providers, increasing water risks exacerbate the need to upgrade and modernise their infrastructure. Data on how climate risks translate into water risks is needed to feed into planning and the design of resilient water infrastructure. To finance crucial investments, it is vital to ensure cost recovery of those interventions as well as to tap capital markets. The rapidly expanding green bond market provides opportunities for raising funds for water-related investments that contribute to greater resilience. With increasing investors’ awareness around climate and water, other financial approaches are starting to gain prominence, such as public-private partnerships, including joint ventures and special purpose vehicles, which will be discussed in more detail in the following sessions.

Session 2. Financing needs and capacities for water-related investments in Europe

To set the scene, [Nele Rosenstock](#), Policy Advisor at DG Environment, European Commission, presented key findings from a joint [OECD-European Commission analysis](#) on financing needs in the water sector in European member states. Current expenditure levels on water supply and sanitation (WSS) across member states range from less than EUR 100 to more than EUR 250 per capita annually. Investments need to increase significantly in order to reach and maintain

³ DNB (2019), *Values at risk? Sustainability risks and opportunities in the Dutch financial sector*.

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compliance with EU water directives – with an estimated aggregated investment gap of EUR 289 billion by 2030. All member states need to scale up their investments in the sector by at least 20% - some states even by 80% or more. Countries have limited room for manoeuvre to address this financing gap and rely heavily on EU funding, which will decline over time. Looking at water tariff levels, in most EU member states, more than 95% of the population could pay more for water services without facing affordability constraints. However, these findings should be reconsidered in light of the COVID-19 crisis, which has exacerbated financial pressure and reduced household incomes.

Countries face various challenges that hamper scaling up investment for water: Romania, for instance, reports a **lack of capacity** to develop and implement projects due to labour and skill shortages and thus faces challenges to absorb and use public EU funds for water-related investments. Furthermore, **small and medium-sized municipalities** responsible for WSS services often face high unit costs but at the same time have very limited access to finance and capital markets. They may rely strongly on public spending with cumbersome procedures, exasperating their investment needs, as it is the case in Spain. There is a **mismatch related to temporal planning** between water service providers and financiers. Water infrastructure is typically capital intensive, requiring high initial investments followed by long pay-back periods of about 20 to 30 years. Commercial lenders, however, prefer to finance projects with a shorter time horizon of 1 to 3 years and long tenor finance is often unavailable for the sector in many countries.⁴

Solutions to overcome the financing gap include making the best use of existing assets, minimising future needs (e.g. through strategic planning, policy coherence and by deploying nature-based solutions) and tapping into several sources of finance. The role of independent regulation for the sector and a robust tariff setting process can be decisive. In Portugal, for example, the reform concerning regulation has played a major role in the country's achievements of water-related objectives in the last 25 years. Financial flows from public budgets can be complemented by revenue streams from different stakeholders, for instance by applying the polluter pays principle. The European Commission is currently elaborating how to implement this approach, particularly in the context of an extended producer responsibility, which could require chemical companies to pay for high-level water treatment, for example.

Options to address some of these financing challenges, include:

- Small-scale service providers could be aggregated to reach minimum critical scale and thus reduce transaction costs when accessing funding and finance. In Belgium, for instance small scale and municipality-owned utilities were aggregated, externally rated and were able to issue bonds.
- To increase water utilities' creditworthiness, cost-recovery could be promoted through efficient pricing of water services, accompanied by social measures, where needed.
- Roles and responsibilities between authorities need to be clearly defined and communicated. Economic regulation needs to be transparent and predictable, allowing for long-term planning and confidence of investors in the sector.
- By using public funds to initiate institutional, structural and tariff reforms, for capacity building and efficiency improvements, these funds can leverage additional commercial finance, from private and institutional investors, such as insurance companies and pension funds.

Session 3. Contributing to a green and resilient recovery: A role for water-related investments

The COVID-19 outbreak has severely impacted economies worldwide. Its consequences are being strongly felt in the water sector: Based on a survey of 44 utilities globally, water consumption from industrial and commercial users has decreased by 27% on average¹. Reduced household income has limited the ability to pay for water for some parts of the population and action against non-payers has been suspended. This has led to revenue shortfalls for water service providers. Italian utilities, for instance, have faced a decline of annual revenues of 5% to 15%⁵. Irish Water has estimated

⁴ [Cardascia, S. \(2019\), Session 4. Financing Water Infrastructure and Landscape Approaches in Asia and the Pacific, OECD](#)

⁵ [Latorre, C. \(2020\), The regulator's view of COVID-19 in Europe](#)

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that the negative impact of COVID-19 on its finances will exceed €110 million in 2020⁶. Revenue losses can also be expected across the water supply chain, affecting technology companies, contractors, and other stakeholders. In the short and medium term, the COVID crisis is likely to reduce and delay capital expenditures. For example, in Ireland, the Greater Dublin Drainage Project was due to start the procurement process this year, but has not advanced since the reception of the planning permission in November 2019. Reductions in capital expenditure will hamper the sector's ability to address future capital infrastructure needs in light of decaying assets, demographic developments and to reach compliance with the EU water acquis. Further, capital expenditure reductions can have cascading effects on the economic activities in the area served by a utility. Impacts of COVID crisis on water-related investments are further discussed in the [background paper for this session](#).

In response to the severe economic and social consequences of the COVID crisis, European leaders have agreed on a historic recovery package consisting of two major elements: (1) repurposing parts of the regular EU budget of EUR 1.1 trillion over seven years and (2) the Next Generation EU Fund of EUR 750 billion. Further, the EIB Group has launched a EUR 25 billion Pan European Guarantee Fund to support small and medium-sized companies⁷. Werner Schmidt, director of the Environment and Sustainable Territorial Development Department at EIB, stresses the strategic importance of using these recovery funds to enhance resilience and to move towards a more sustainable economy. The recovery is both an opportunity and a responsibility for governments to speed up the transition needed to face the current climate crisis. The water sector plays an important role to achieve climate goals and to build resilience. In the EIB Climate Bank Roadmap, setting out in detail how EIB aims to support the objectives of the European Green Deal and to ensure alignment with the Paris Agreement, water is a key contributor to reach the climate objectives, including for mitigation and adaptation. For the water sector, this might also open opportunities to tap finance outside the water sector but which also benefit water security and resilience.

The Covid-19 crisis has shown the interdependencies of sectors and systems. Recovery measures hence need to offer cross-cutting solutions, which address various risks in an aligned and adaptive way, building “deep resilience” as a response to deep uncertainty related to future climate impacts on the hydrological cycle and water resources. Nature-based solutions can offer a flexible and adaptive approach, providing a variety of benefits while addressing several environmental and water-related risks. While a recent [TNC report](#) shows that there are major opportunities to scale up nature-based solutions for water in Europe, uptake remains limited. One major hurdle is the lack of adequate economic appraisal tools to fully account for the non-market benefits of NbS, compared to grey infrastructure. Direct and additional indirect benefits of nature-based solutions are often difficult to quantify and to monetise. Traditional approaches, such as cost-benefit analysis (CBA), may fail to incorporate the full range of benefits of NbS and tend to favour grey infrastructure. The World Bank, currently supporting Bulgaria and Romania with the implementation of flood risk management measures, is applying a broader range of appraisal tools, including multi-criteria analysis to better assess NbS compared with traditional approaches. Forthcoming OECD work on NbS to manage water-related risks identifies policy options to overcome barriers to scaling up, drawing on case studies from the UK and Mexico.

Looking at the current recovery measures, environmental and sustainability criteria would need to be more stringent and if business as usual prevails, current plans may fall short of the bar set by the SDGs and the Paris Agreement. Mainstreaming sustainability in and for a post pandemic world still needs concerted efforts, multi-stakeholder engagement rather than silo-approaches, and to look for transformative solutions, privileging adaptability, flexibility and robustness.

Session 4. Sustainable finance: recent developments on EU taxonomy

Cate Lamb, Water Lead for the UNFCCC's High-Level Climate Champions Team and Global Director of Water Security at CDP, underlined the importance of the water sector in relation to climate action. The water sector accounts for 10%

⁶ [GWI \(2020\), Irish watchdog calls for sustained water funding](#)

⁷ A minimum of 65% of the financing is earmarked for small and med-sized enterprises. A maximum of 5% of the financing can be allocated to public sector companies and entities active in the area of health or health-research or providing essential services related to the health crisis. ([European Investment Bank, 2020](#)).

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of global greenhouse gas emissions and can therefore play an essential role not only for adaptation, but also for mitigation efforts. Wetlands, for instance, can contribute to carbon sequestration, storing twice the amount of carbon than the world's forests combined. However, Cate noted that countries often do not include the water sector in their climate strategies, e.g. Nationally Determined Contributions often do not account for the greenhouse gas emissions from the water sector. Integrating the value and the potential of water and investing in resilience of water resources is vital to contribute to addressing the climate crisis. Both financial actors and governments need to send strong signals through robust policies and private sector commitment, which can reinforce each other and create a virtuous cycle.

The EU taxonomy will provide a framework for classifying when an economic activity can be considered sustainable, thus providing clarity and comparability to project developers, financiers and governments. The taxonomy is an important tool, potentially even game changing, to channel financial flows towards sustainable investments and to define the level of effort needed to achieve the EU's environmental objectives and build resilience. For example, the EIB aims to dedicate 50% of lending to climate action and environmental sustainability by 2025, and intends to use the EU taxonomy criteria to measure progress towards this target.

The EU taxonomy entered into force in July 2020 defining six environmental objectives, including climate change mitigation and adaptation and the sustainable use and protection of water and marine resources. In order to be taxonomy-compliant, an economic activity needs to 1) contribute substantially to one or more of the six objectives, 2) do no significant harm to any other environmental objective and 3) comply with minimum social safeguards. The development of clearly defined thresholds for the criteria related to each environmental objective are currently at different stages of development and will be introduced through delegated acts. The draft delegated acts for mitigation and adaptation criteria have been published for consultation in November 2020. An example of a water-related activity which is considered as significantly contributing to mitigation, is the renewal of water collection, treatment and supply systems, which lowers the average energy consumption of the system by at least 20%. Several 'Do no significant harm' (DNSH) criteria relate to water resources, e.g. sustainable farming measures need to integrate and address risks related to preserving water quality and avoiding water stress.^{8 9} The taxonomy's DNSH component could potentially help to better protect water resources or to increase the visibility of water-related issues when balancing trade-offs between several objectives.

Work on such classifications, technical criteria and thresholds is still underway. The taxonomy approach relies on NACE categories of economic activity. While this could encourage cross-sectorial approaches, it might also add complexity to evaluate and integrate water-related projects. The taxonomy approach could contribute to further fragmentation of water-related investments, as by design, the approach is not conducive to a systemic approach to guiding investment. Some concerns were raised from water utilities and associations that the taxonomy's approach treats the sector as an industrial activity, while certain perspectives advocate that it should be treated as an environmental service.

The EU's taxonomy success and impact depends on its usability. On one hand, it needs to be sufficiently detailed and holistic, while on the other side, easy to understand and applicable. The definition of screening criteria and quantifiable thresholds will be an ongoing process, reliant on stakeholders' engagement and data availability. For water-related activities and especially nature-based solutions, a lack of reliable data and previous experience can pose challenges to this process.

Overall, the EU taxonomy is a powerful tool to channel public and private finance and can serve as a catalyst of systemic change. While businesses and financial institutions are increasingly paying attention to sustainable investment opportunities and climate-related risks, the EU taxonomy can provide the institutional framework, thus igniting a positive feedback loop. For water-related investments, the taxonomy poses both opportunities and challenges, depending on

⁸ European Commission (2020), *Draft Annex 1, Annex to the Commission Delegated Regulation*.

⁹ [OECD \(2020\) Background Paper Session 4, Recent developments on the EU sustainable finance agenda and the implications for water, Sixth meeting of the Roundtable on Financing Water.](#)

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how the still pending topics are addressed. Active participation from experts and stakeholders from the water community in this process could help shape these developments.

Session 5. Supporting the mobilisation of commercial finance to scale up investment

In light of the significant financing gap, which European member states are facing, it is vital to mobilise capital for the water sector from a wider range of sources. Finance from commercial lenders or capital markets, including from public and private institutional investors, which are seeking market rate returns, can help to bridge the financing needs. Currently, commercial finance covers only 6% of the total expenditure on WSS¹⁰ and a very minor share of all funding on watershed investments in Europe¹¹. Kathleen Dominique, Coordinator of the Roundtable on Financing Water at the OECD's Environment Directorate, stressed that investors' interest is primarily driven by the attractiveness of the risk-return profile of a project, which depends on i) a stable revenue stream and ii) how the range of risks related to water security investments are shared between public and private actors¹². Stable and predictable revenues can be ensured through ring-fenced charges on water and ensuring cost-recovery. While some creditworthy water utilities in and outside of Europe (e.g. in the UK, France, US, Chile, Cambodia, Philippines) are able to raise capital on the equity market through listed public companies, only a small part of the revenues from the water value chain is represented in the equity markets. Due to limited experience with the sector and its distinctive characteristics, investors might perceive water-related investments as more risky and generally less attractive.

Dedicated financing vehicles, adapted to the distinctive risk-return profiles in the sector can help bring together financiers and borrowers, such as **hydrobonds** in Italy. Several small-scale water utilities in the Veneto Region accessed the capital markets by creating mini-bonds which they pooled together to hydrobonds. A special purpose vehicle (SPV) was created and fully subscribed to these bonds. This approach, supplemented with utility and regional guarantee funds, helped to mitigate the fragmented and small-scale nature of Italian water authorities and enabled the water service providers to raise EUR 500 million for capital expenditure.¹³

Another promising financing vehicle are use-of-proceeds bonds dedicated to water-related investments. One example are **Sustainability Awareness Bonds** (SABs), which have been launched by EIB in 2018. By guaranteeing high impact investments and a high level of transparency, these bonds attract a large range of investors, interested in sustainably responsible portfolios. Beside investor diversification, this approach directs financiers' attention and awareness to the water sector and opens up new dialogues between project developers, borrowers and lenders. Throughout 2019, EUR 872 million were allocated to projects related to water access and sanitation, pollution prevention and control, sustainable water resource use and natural disaster risk management.¹⁴

Similarly, the **Netherlands Water Boards Bank** (NWB) issued so-called water-bonds. NWB is a dedicated financial institution helping to raise funding on the capital market for water-related projects delivered by Dutch Regional Water Authorities combined with mitigation, adaptation and biodiversity protection efforts. Thanks to a zero-default history, the bank can access finance at affordable conditions and has received the highest rating for sustainability "dark green" of their use-of-proceeds issuance from Cicero, provider of Second Opinions on green bond frameworks. In 2019, the bank lent EUR 976 million to water authorities¹⁵. One distinctive characteristic is that their clients, local and regional authorities,

¹⁰ [OECD \(2020\) Financing Water Supply, Sanitation and Flood Protection: Challenges in European Member States and Policy Options.](#)

¹¹ Trémolet, S. et al. (2019), *Investing in Nature for Europe Water Security*, The Nature Conservancy, Ecologic Institute and ICLEI. London.

¹² [OECD \(2018\), Financing Water, Investing in sustainable growth, Policy Perspectives, OECD Environmental Policy Paper No. 11.](#)

¹³ Gatti, S. (2018), *Project Finance in Theory and Practice: Designing, Structuring and Financing Private and Public Projects*, Academic Press, Elsevier.

¹⁴ EIB (2020), *CAB & SAB Newsletter, April 2020*.

¹⁵ NWB Bank (2020), *Annual Report 2019*, Nederlandse Waterschapsbank N.V.

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can levy their own taxes and cannot be subject to austerity measures or other political developments, which provides predictability for investors.

Political arrangements and regulation can play a critical role in the ability to mobilise investment. In Italy, for instance, regulation requires smart meters for water networks, thus attracting private infrastructure investors to step in. Whitehelm capital seeks opportunities for digitisation to drive efficiency gains for water infrastructure and service delivery at city level, thereby capturing value that can be shared among public and private actors and drive attractive risk-adjusted returns for investors. Further examples of financing approaches for water-related investments are discussed in the [background paper of this session](#).

Concluding remarks

The Roundtable on Financing Water provides a unique platform to share experiences and learning, identify innovative approaches to scale up financing for water-related investment and exchange good practice on experience to strengthen the enabling environment for investment. Several key messages emerged from European member states that include primarily the importance of (1) integrating water-related risks into financial reporting and the role for central banks and financial institutions, (2) using public and particular recovery funds to finance the transition towards sustainability and resilience and prioritising adaptive and flexible approaches, such as nature-based solutions, (3) strengthening the absorptive capacity, regulatory frameworks and cost-recovery and using dedicated financial vehicles to mobilise a broader range of financing sources and (4) current developments of the EU taxonomy on sustainable finance, opening both opportunities and challenges for water-related investments.

Opportunities and challenges to financing water-related investments in the next decade, incorporating valuable insights from this regional meeting, together with outcomes and shared experiences from previous Roundtables on Financing Water and related analyses, will be compiled in a forthcoming OECD report.

For more information, please visit:

<http://www.oecd.org/water/roundtable-on-financing-water.htm>