



Building a Water Investment Rationale



Summary

Leveraging water investments requires making a case for the benefits associated with water sector interventions and the costs associated with inaction. This Sub-section covers a wide range of methods to demonstrate the economic and non-economic rationale for investing in water. The Tools in this Sub-section discuss methods for evaluating water investments, shadow pricing methodologies for finding the hidden economic value of water, developing a business canvas model for water projects, discusses water-related financial disclosures as a means to convince businesses to invest in water management, and discusses the investment markets map methodology.

Distinctive Features of Water as a Resource

There are a number of different features of water as a resource that need to be considered as part of building a rationale for investing in it ([Sadoff et al., 2015](#)):

- **Water is a renewable, common-pool resource:** It is however subject to congestion, overuse, and degradation. The analysis of renewable resources requires a focus on the sustainable use of the resource over time, aligning the usage with the resource's natural capacity, and its timeframe for regeneration.
- **The physical nature of water makes it difficult and costly to transport:** Water-related projects are more appropriate to be considered from a local perspective. In some cases, it is more rational to access "virtual water" ([Tool C5.03](#)) (importing water embedded in products from countries where the resource is abundant, e.g., fruits and vegetables) than embarking in pharaonic infrastructure projects to move water from

long distances.

- **Water sources do not consider political and administrative boundaries:** Project design should incorporate transboundary governance arrangements to reduce uncertainty about economic, social, and environmental benefits upstream and downstream.
- **Water is not a commodity:** It has social and environmental significance for societies which cannot be captured in economic analysis. Therefore, project prioritisation should consider these qualitative characteristics to achieve legitimacy among stakeholders and long-term financial sustainability.

Barriers Impeding Water Investments

Water is widely considered to be a problematic area for attracting funding, partly due to its peculiar features as a resource and partly due to the following factors ([OECD, 2022](#); [World Bank, 2016](#); [Pories et al., 2019](#); [Leckie et al., 2021](#); [Winpenny, 2003](#)):

- **Undervaluation:** Water is an under-valued resource ([Tool C5.04](#); [Tool D1.02](#)) when its economic value, as well as intrinsic, instrumental, and relational values, are not properly taken into account by investors. In monetary terms, water services are under-priced, which hinders full cost recovery. Many of the public and private benefits generated by water management cannot be easily monetised, which undermines revenue flows.
- **High risk:** Investment decisions involve risks. Risks that investors might be concerned about in the water sector include political instability and foreign exchange risk implying mismatch between financial resources in foreign currency and revenues in local currency.
- **Underdeveloped regulatory framework:** This may include pure rule of law and a weak enabling environment for investment characterised by ineffective or absent regulation. Ineffective regulations promote siloed approach across household, industry, and agriculture.
- **Project profile:** Water-related projects are capital intensive with a long pay-back period. Projects are usually small and fragmented, which makes scaling-up difficult raising the transactional costs.
- **Creditworthiness:** Poor creditworthiness of borrowing institutions and lack of suitable collateral undermine the bankability of projects for water.
- **Information asymmetries:** Lack of appropriate data and analytical tool, as well as standardised approach for assessing water investments deters financiers. This also complicates reconciliation between demand for finance and supply of it.

Making the Case for Investing in Water

Despite the existing constraints, the value of investing in water security is hardly arguable. Water resources provide both economic and non-economic benefits recognising the value that water provides to the economy, society, and the environment ([OECD, 2018](#)). In line with integrated approach to water management, economic efficiency comes together with social equity and environmental sustainability ([Agarwal et al., 2000](#)), highlighting how water investments would not only improve water security but also contribute to sustainable development.

Accruing the costs and benefits of water-related investments to economic growth might be challenging given that increase in human well-being is not always reflected in macroeconomic indicators when conventionally measured, as well as not all water-related investments lead to the intended benefits ([Sadoff et al., 2015](#)). Despite this, there is a compelling economic case for investing in water, which can be estimated in terms of benefits reaped and losses occurred in case of inaction ([Sadoff et al., 2015](#); [OECD, 2022](#); [World Bank and UNICEF, 2017](#)):

- Water-related investments propel economic growth, which in its turn provides the resources to finance capital-intensive investments in infrastructure.
- Economic losses as a result of poor WASH services are estimated to be between 0.7% and 4.3% of GDP for the Global South. Underinvestment in WASH is also manifested in lowered productivity for children which has negative economic impacts estimated at 5% of GDP.
- Economic losses as a result of water insecurity are estimated to be USD 500 billion per year, 25% of which comes from property flood damages.
- Water-related losses in other sectors, such as agriculture and health, may result in GDP decline by 2050 by 6%.

Non-economic case for investing in water recognises all the diverse benefits and risks provided by water, encompassing social and ecological dimensions ([HLPW, 2018](#)). These find reflections in the following drivers to invest in water-related initiatives ([WWC-OECD, 2015](#); [OECD, 2022](#)):

- Growing public health and environmental concerns related to water quality, water supply, wastewater treatment and treatment of industrial by-products.
- Increasing awareness of the value of ecosystems and biodiversity together with the services they provide.
- The looming climate crisis heightening the value of investments in resilience in the face of changing water availability and demand, as well as undermined water security.

Water Investments from an SDG Perspective

Investing in water resources management and water governance can help achieve the 2030 Agenda for Sustainable Development. The UN Sustainable Development Goals can be used to measure the efficiency and effectiveness of water sector investments and thus can be used as a narrative framework for developing an investment rationale for water (Fig. 1). Applying these frameworks when advocating for investments in the water sector, has several benefits:

It helps align water sector goals with national sustainable development strategies, which gives discourse coherence to investments when approaching international donors and potential private investors.

It lays the groundwork to think about funding and financing at project level, highlighting economic, political, environmental, and social constraints (e.g., political feasibility of setting a tariff to protect a watershed).

MEASURES ON WSS INVESTMENTS

6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all

6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and open defecation, paying special attention to the needs of women and girls and those in vulnerable situations

MEASURES UPSTREAM AND DOWNSTREAM

6.3 By 2030, improve water quality by reducing pollution, eliminating dumping, and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

6.5 By 2030, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes

MEASURES ON GOVERNANCE

6.A By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities, and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling, and reuse technologies

6.B Support and strengthen the participation of local communities in improving water and sanitation management

Figure 1. Using SDG 6 targets as a benchmark of water project efficiency and efficacy (Adapted from) [OECD, 2011](#).

Sub-section Overview

The Tools in this sub-section provide practical insights on how to build a water investment rationale:

Evaluating Water Investments ([Tool D1.01](#)): Discusses how to perform various economic valuation methods such as cost-benefit and cost-effectiveness analysis. Those can be used to calculate the economic benefits of water projects and policies, thus proving their return value for investors.

Economic Value of Water ([Tool D1.02](#)): Explores methods on how to evaluate total economic value of water with the help of shadow pricing techniques that convert the non-monetary benefits related to water into dollar figures.

Business Model Canvas ([Tool D1.03](#)): Lays out a methodology for water entrepreneurs to develop a well-thought-out business plan, showing their value added for customers and investors.

Water-Related Financial Disclosures ([Tool D1.04](#)): Highlights the way in which disclosing water related risks can help incentivise companies to invest more in water resources management.

Impact Investments Market Maps ([Tool D1.05](#)) Discusses how impact investment frameworks can provide a basis to make a case for investing in water sector project.

Connected Resources

[Securing Water, Sustaining Growth: Report of the GWP/OECD Task Force on Water Security and Sustainable Growth](#)

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