Sustainable Finance Platform

SDG 6 Impact Measurement Overview

From the Sustainable Finance Platform

The Sustainable Finance Platform

This report is a reflection of the deliberations of the SDG Impact Assessment Working Group set up under the auspices of the Sustainable Finance Platform. The working group consists of financial and non-financial companies and is sponsored by PGGM.

The Sustainable Finance Platform is a cooperative venture of De Nederlandsche Bank (chair), the Dutch Banking Association, the Dutch Association of Insurers, the Federation of the Dutch Pension Funds, the Dutch Fund and Asset Management Association, Invest-NL, the Netherlands Authority for the Financial Markets, the Ministry of Finance, the Ministry of Economic Affairs and Climate, and the Sustainable Finance Lab. Platform members meet twice a year to forge cross-sectoral links, to find ways to prevent or overcome obstacles to sustainable funding and to encourage sustainability by working together on specific topics.

The Sustainable Finance Platform fully supports this paper. However, the practices and advice described herein are in no way binding for the individual financial institutions comprising the industry organizations which are members of the Platform, nor are they committed to take any specific follow-up actions. Furthermore, this paper outlines private sector initiatives and as such does not contain any supervisory requirements.

Content

1	Introduction	4
2	Methodologies and initiatives	5
3	Data sources	7
4.1	Company example	8
4.2	Investor example	9
5	Challenges and future developments	10

1 Introduction

This Impact Measurement Overview on Sustainable Development Goal (SDG) 6 – Clean Water and Sanitation – follows up on the publication SDG impact indicators – A guide for investors and companies (2017) by the SDG Impact Assessment Working Group ('Working Group') of the Sustainable Finance Platform. Its aim is to provide the investor community with a summary of available methodologies, data sources and examples of positive impact measurement for SDG 6. The SDG 6 Impact Measurement Overview can be found on the website of the Sustainable Finance Platform for use by the wider investor community, as a **dynamic document** that will be improved upon and refined with progressing insights, experiences and data quality.

SDG 6 aims to "ensure availability and sustainable management of water and sanitation for all."[1] Fresh water, in sufficient quantity and quality, is essential for virtually all aspects of human development (e.g. food security, health promotion and poverty reduction) – access to water and sanitation are, in fact, recognized by the United Nations as legally binding international human rights[2] – and healthy fresh-water ecosystems provide essential functions and services.[3]

Yet, in 2017, 2.2 billion people (i.e. 29% of the global population) lacked access to safely managed drinking water services,[4] whilst 4.2 billion people (i.e. 55% of the global population) lacked access to safely managed sanitation services.[5] Moreover, over the last century, the world lost approximately 70% of its natural wetland.[6] These numbers are expected to increase as the effects of climate change intensify and the global population grows.[7]

In this context, the public sector has a clear responsibility to alleviate these issues, and thus a duty to address crucial areas of concern related to water (e.g. water insecurity and scarcity, water quality impairment and ageing infrastructure). At the same time, however, the private sector, in particular private finance, has a pivotal role to play, both by (1) limiting its adverse impact (agriculture accounts for 69% of annual water withdrawals globally and industry, including power generation, for 19%)[8] and (2) upscaling[9] its **positive impact** through the provision of **products and services** that address water related challenges (e.g. water treatment technologies, smart metering systems, reuse and desalination systems).

Positive impact indicators and the logic model

The positive impact indicators the Working Group originally proposed for SDG 6 were:

- Number of people provided with safe and affordable drinking water (Target 6.1)
- Number of people provided with adequate and equitable sanitation (Target 6.2)
- Volume of water saved (Target 6.4)
- Volume of wastewater treated for reuse (Target 6.3)

These and other indicators can be mapped on the logic model below:

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[1] See https://sdgs.un.org/2030agenda
[2] See https://www.unwater.org/water-facts/human-rights/
[3] See https://www.unwater.org/publications/highlights-sdg-6-synthesis-report-2018-on-water-and-sanitation-2/
[4] See https://www.who.int/news-room/fact-sheets/detail/drinking-water
[5] See https://www.who.int/water_sanitation_health/monitoring/coverage/en/; https://www.who.int/en/news-room/fact-sheets/detail/sanitation
[6] See https://www.unwater.org/publications/highlights-sdg-6-synthesis-report-2018-on-water-and-sanitation-2/
[7] Ibid.; https://inweh.unu.edu/wp-content/uploads/2017/11/Global-Water-Crisis-The-Facts.pdf
[8] See https://www.unwater.org/publications/highlights-sdg-6-synthesis-report-2018-on-water-and-sanitation-2/
[9] Current financial resources are insufficient to achieve SDG 6 by 2030. Indeed, "the World Bank estimated the annual capital costs of meeting SDG targets 6.1 and 6.2 as US$114 billion per year. This does not include other SDG 6 targets." (i.e. a threefold increase of the current level of capital investment); Ibid; https://inweh.unu.edu/wp-content/uploads/2017/11/Global-Water-Crisis-The-Facts.pdf

• Equity and/or credit	• Companies developing, producing and distributing products & services, in the areas of:[10] ○ Water storage, supply or distribution ○ Sanitary facilities ○ Wastewater management ○ Wastewater treatment ○ Water desalination ○ Water quality testing ○ Water-use efficiency	• Installed capacity: ○ E.g. number of wastewater treatment plants; length of distribution network (km) • Products/services sold: ○ E.g. smart water meters; water-efficient fixtures[11]	• Volume of drinking water supplied/distributed (m^3)[12] • Volume of wastewater treated (m^3)[13] • Volume of water saved (m^3)[14]	• Number of people provided with safe and affordable drinking water[15] • Number of people provided with adequate and equitable sanitation[16]

The focus of this SDG 6 Impact Measurement Overview on positive impact measurement does not preclude the need to identify and measure **adverse impacts**. After all, solely accounting for positive impact, and disregarding potential adverse impacts, may facilitate 'SDG washing'. Moreover, companies that contribute positively to SDG 6 (e.g. by developing products and services for water supply and distribution) may nonetheless have adverse impacts on other, interlinked SDGs (e.g. through adverse environmental impact),[17] or even on SDG 6 itself.

[10] Taxonomies can be used to identify appropriate companies/projects, based on their activities.
[11] Including faucets, toilets, showerheads, i.e. sanitary facilities.
[12] See https://iris.thegiin.org/metric/5.1/pi8043/
[13] Indicative of, amongst others, safely managed sanitation services; See, for example https://iris.thegiin.org/metric/5.1/oi9412/; https://iris.thegiin.org/metric/5.1/pd3523/
[14] See https://iris.thegiin.org/metric/5.1/pd5786/; https://iris.thegiin.org/metric/5.1/pi2884/
[15] See https://iris.thegiin.org/metric/5.1/pi4060/
[16] See https://iris.thegiin.org/metric/5.1/pi4060/
[17] In this context, Target 6.6 mandates that by 2020, "water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes" should (have) be(en) protected and restored.

2 Methodologies and initiatives

Several SDG 6-specific methodologies and initiatives are available for evaluating the impact of companies and investments on 'Clean Water and Sanitation'. Some relevant methodologies and initiatives are included in the table below and mapped to the logic model.

• APG-PGGM taxonomy • CBI Water Infrastructure Criteria	• AIMM Sector Framework Brief: Water and Wastewater • PGGM/UBS/CUNY: Water Impact Model[18] • AAAQ Framework • Veolia WiiX • Accounting for Product Impact in the Water Utilities Industry

Among the methodologies and initiatives that approximate impact measurement by classifying companies' activities and revenues, we identify the taxonomy developed by APG and PGGM and the CBI Water Infrastructure Criteria

The **taxonomy developed by APG and PGGM** offers guidance on which companies contribute to the advancement of SDG 6, by mapping their revenues to pre-defined SDG 6 solutions.

The **Water Infrastructure Criteria by the Climate Bonds Initiative (CBI**) are intended to communicate to investors which water-related investments are resilient, effective, and sustainable over their operational lifetime.

Among the methodologies and initiatives that approximate impact measurement by evaluating or quantifying outputs and/or outcomes, or, by contextualizing those outcomes, measure impact, we identify several frameworks.

The International Finance Corporation (IFC), developed an ex-ante impact assessment tool – the Anticipated Impact Measurement and Monitoring (AIMM) system – which allows the IFC to define, measure, and monitor the impact of each project. The **AIMM Sector Framework Brief** on the water and wastewater sectors sets out a number of indicators for measuring project outcomes and contribution to market creation, as well as criteria for the contextualization of impacts (e.g. the extent of the development gap, domestic market typology).

The **Water Impact Model** developed by the Graduate Center of the City University of New York (CUNY) for UBS and PGGM proposes a framework for measuring how companies' products and services provide solutions to three of the main human water challenges:[19] (1) water insecurity and overuse, (2) water quality impairment, (3) aging

[18] Reference documents are available upon request.
[19] As defined by the authors of the methodology.

infrastructure. In order to account for the range of activities relevant to the water sector, different business paths are identified and assigned to the appropriate *clusters* (e.g. water supply development, water treatment technologies, smart irrigation). Distinct formulas are elaborated for the calculation of outputs (e.g. annual wastewater treatment), outcomes (e.g. annual clean water additions relative to location) and impacts (e.g. customers served by additional clean water).[20] Notably, conversion factors for water clusters were developed to transform company revenue into volumes of water (m^3) saved or improved.

The Danish Institute for Human Rights has developed a framework on the basis of the AAAQ criteria (Availability, Accessibility, Acceptability and Quality) for operationalizing the right to water.[21] The **AAAQ Framework for the Right to Water** is complete with a number of generic indicators (e.g. quantity of water used per person per day, total costs as proportion of income) and benchmarks[22] (e.g. 50 liters per person per day, total household water costs amount to max 5% of total household income), and can offer guidance on adequacy standards in line with Human Rights obligations.

Veolia has developed the **Water Impact IndeX (WiiX)** as a method for measuring the water footprint of municipal and industrial activities, taking into account, for example, quantity of water withdrawn from and restored to a water source, local water stress, type of water resource used.

Harvard Business School's framework for product impact measurement, developed as part of the Impact-Weighted Accounts Project,[23] has been applied to the water utility sector in the 2021 publication '**Accounting for Product Impact in the Water Utilities Industry**'. The report outlines a methodology for impact measurement in the water utility sector, which relies on monetization of both positive and negative impacts in relation to, amongst others, the product's reach, access, and quality.

[20] Note that the indicators used in this framework only partly overlap with the indicators proposed above, and the classification of outputs/outcomes/impacts may differ.
[21] "The human right to water is derived from ICESCR, Art. 11, the right to an adequate standard of living and Art. 12, the right to the highest attainable standard of health, as well as derived from the right to life and dignity."
[22] The benchmark distinguishes between 'intermediate' and 'recommended' standards.
[23] See https://www.hbs.edu/impact-weighted-accounts/Pages/default.aspx#:~:text=Impact%2Dweighted%20accounts%20are%20line,environment%20and%20the%20broader%20society.

3 Data sources

In the table below, we include the most relevant available data sources to support the above-mentioned methodologies and map them to the logic model.

• Company reports • FactSet Revere • CBI Certified Bonds	• Water efficiency labeling schemes: WaterSense label, European Water Label • Water Conservation Tracking Tool • WaterSense Calculator	• Peer-reviewed scientific publications • Aqueduct tools • WWF Water Risk Filter • Goal 6: Clean Water and Sanitation - SDG Tracker • UN-Water SDG 6 Data • Our World in Data • FAO AQUASTAT • The World's Water – Water Data • World Bank Water Data

Information about companies' revenues and activities can be retrieved directly from **company reports**[24] or from more general data sources, such as FactSet.[25] Additionally, the **Climate Bonds database** lists all certified bonds and loans, including instruments certified, amongst others, under the Water Sector Criteria.

Available data sources to obtain (or calculate) output and outcome data, include various water efficiency labeling schemes, some water conservation tracking tools and publicly available databases. **Water efficiency labeling schemes**,[26] such as the American WaterSense label or the European Water Label, can provide water use efficiency ratings or an indication of whether fittings, fixtures and appliances are efficient (e.g. products bearing the WaterSense label are 20 percent more water efficient than average products in that category). This information can be used to calculate the volume of water saved. Additionally, tools such as **AWE's Water Conservation Tracking Tool** and **WaterSense Calculator** can help calculate water savings associated with specific conservation activities.

Lastly, country-level and worldwide water data, useful for contextualizing companies' outputs and outcomes and moving toward impact measurement, is available from a number of sources. These include several tools by **Aqueduct,** the **WWF Water Risk Filter**, the dedicated SDG 6 page of the **SDG Tracker**, the **UN-Water** SDG 6 Data Portal, water use and stress data from **Our World in Data**, the FAO global information system on water resources and agricultural water management, **AQUASTAT**, **The World's Water** data series on global freshwater resources, and the **World Bank's Water Data**. Moreover, **peer-reviewed scientific publications** are an essential source of data on the various technologies employed in the water sector, on the level of freshwater pollution, and on other topics relevant for impact measurement.

[24] Company reports may also be used to retrieve output, outcome and even impact data.
[25] See introductory document.
[26] See https://iwa-network.org/wp-content/uploads/2019/02/IWA-EUWM-Labelling-Report_Final-002.pdf for a succinct overview.

4.1 Company examples

Several companies are already reporting on their activities, outputs, outcomes and even impacts relative to SDG 6.[27] Below, we briefly discuss the example of the water utility company Aguas Andinas[28] and list other relevant company examples (see second table below).

• **Equity and/or credit** = x% of equity	• Aguas Andinas produces and distributes potable water.	• **Installed capacity** = 38.27 m^3 per second of total water treatment capacity**;** 15,754 km of underground network	• **Volume of drinking water produced** = 861.000.000 m^3 of potable water	• **Number of people provided with drinking water** = 2,366,009 customers supplied.

Aguas Andinas is a water utility company operating in the Metropolitan Region of Chile under concession arrangements from the Chilean government. The company's main activities relate to the provision of water and sanitary services, including raw water collection, potable water production and distribution, wastewater treatment and disposal. In the face of growing urban population and increased climate change-related threats, the company applies a circular economy model aimed at maximizing efficiency in the use of available water resources as well as the sub-products of the water treatment and sanitation processes.

Other company examples include:

• Athens Water Supply and Sewerage Company • California Water Service Group	• SUEZ • Veolia • SABESP • Essential Utilities • Xylem • Pennon Group PLC • Geberit

[27] Not all companies make explicit references to the SDG framework in their reports, but nonetheless include information on water collection, treatment and supply.
[28] All information reported was retrieved from Aguas Andinas' 2019 Integrated Report, unless noted otherwise.

4.2 Investor examples

Several investors are already reporting on their (financed) activities, outputs, outcomes and even impacts relative to SDG 6.[29] Below, the example of the RobecoSAM Sustainable Water Equities fund[30] is briefly discussed and other relevant investor examples are listed (see second table below).

• **Equity and/or credit** = EUR 1,000,000	• Capital Goods & Chemicals • Construction & Materials • Utilities • Quality & Analytics		• **Amount of clean water distributed** = 47,000 m^3 • **Amount of wastewater treated** = 34,900 m^3	• **Amount of people provided with clean drinking water** = 588 persons

The RobecoSAM Sustainable Water Equities fund is an actively managed fund that "invests globally offering products and services that address the challenges related to the quantity, quality and allocation of water."[31] The fund focuses on companies "which supply to the value chain of water or which offer products or technologies which are more water efficient than others in their category," and that thus positively contribute to the achievement of, amongst others, SDG 6.[32]

Other investor examples include:

• Pictet – Water • EIB Water Sector Fund • Water.org • ASN BANK	• WHEB Asset Management • Kempen Global Impact Pool • PGGM Investments • IMPAX (Water strategy)

[29] Not all investors make explicit references to the SDG framework in their reports, but nonetheless include information on (financed) water collection, treatment and supply.
[30] For illustrative purposes, the example models the impact of a 1,000,000 EUR investment in the fund.
[31] See https://www.robeco.com/en/funds/prof-glob-en-11/robecosam-sustainable-water-equities-i-usd-lu2146192534.html#!#portfolio
[32] Ibid.

5 Challenges and future developments

Although SDG 6 positive impact measurement is still relatively little prioritized in investors' and companies' (sustainability) reports, numerous companies in the water and sanitation sector are already reporting on metrics such as the ones proposed above. These data can be combined with information on local water context, retrievable from various publicly available databases, in order to measure impact.

Overall, impact measurement in the context of SDG 6 still faces various (methodological) challenges, including:

- **Affordability and accessibility**: SDG Target 6.1, after which one of the proposed positive impact indicators is modelled, makes explicit that drinking water should be "safe and **affordable**"[33] for all. Affordability is crucial, particularly in the context of SDG 6, as payment for services (i.e. safe drinking water) should not be a barrier for accessing them.[34] At current, however, it remains challenging to define commonly agreed upon indicators, supported by existing methodologies and data sources, that adequately capture the affordability dimension of impact, and more work in this direction is required.[35] The same holds true for **accessibility**, where lack of (physical) access to safe and affordable drinking water can function as a barrier to the achievement of SDG 6 by 2030. Nonetheless, with progressing insights and data quality, it might eventually be possible to assess the impact of companies based on whether the water services they provide are affordable and accessible.
- **Geographic specificity of impacts**: SDG 6 impact measurement should aim to account for context and location. More specifically, in the case of water utility companies, geographical factors such as density of population, access to water and sanitation, quality of inflow (for wastewater treatment) affect whether similar activities bring about different benefits. In fact, some of the methodologies presented above, notably the UBS/PGGM/CUNY Water Impact Model, the AIMM Sector Framework Brief and Veolia's WiiX, already account for local water context, for example by relying on measures of local water stress. These and similar approaches can be used to account for the geographic specificity of impacts.
- **Gender specificity of impacts**: SDG 6.2 calls for the achievement of "access to adequate and equitable sanitation and hygiene," specifying that special attention should be paid "to the needs of **women** and **girls**."[36] In order to report progress on SDG 6, and especially on the provision of sanitation, it is thus preferable that impacts are contextualized with respect to the sex of the recipients.

[33] See https://sdgs.un.org/2030agenda (emphasis added)
[34] See https://www.unwater.org/publications/highlights-sdg-6-synthesis-report-2018-on-water-and-sanitation-2/
[35] Ibid.
[36] See https://sdgs.un.org/2030agenda (emphasis added)


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