

The Sustainable Development Goals (SDGs) are 17 goals set out by the UN to achieve the 2030 Agenda for Sustainable Development, adopted by 193 world leaders at the September 2015 UN Summit. The 2030 Agenda has 3 key aims: (1) end extreme poverty, (2) fight inequality and injustice, (3) fix climate change.

Hydro mainly addresses SDG 6 through its expertise in treatment of wastewater and ability to provide safe, sustainable drinking water. However, Hydro's work addresses targets from all the SDGs, due to the diverse activity Hydro is involved in the water sector, the wide reaching impact improving WaSH, and Hydro's environmental impact.



Total volume of water treated by Hydro
15,000,000,000 litres

Average annual volume water treated since 2015
1,000,000,000 litres

WaSH Pillar



Water access is intrinsically linked to poverty. For example, in England and Wales "water poverty" is defined as households spending more than 3% of their net income after housing costs on water. It is estimated lack of safe water and sanitation costs sub-Saharan Africa around 5% of its annual GDP.

We are working alongside NGOs to provide water treatment units which will be run by local entrepreneurs, charging very low prices for the water but still generating profit for the owner and generating jobs for local individuals in roles such as operators and water deliverers. This will directly reduce the number of people living in poverty and extreme poverty directly through job creation ([Target 1.1](#), [1.2](#)).

It is estimated that globally women spend more than 200 million hours collecting water per day (*UN Women 2012*), reducing this lost time will increase the time individuals have to engage in income generating activities. Hydro water treatment units aim to reduce the time spent collecting water through reducing the distance to the source and plan distribution systems ([Target 1.1](#), [1.2](#), [1.4](#)).

In communities where the water price is high and takes up a substantial proportion of the household income, the money available for food is reduced, leading to hunger and nutritional deficiencies. By reducing the cost of water, there is an increased proportion of the household income available to spend on food ([Target 2.2](#)).

WaSH interventions have been demonstrated to reduce stunting (*Cumming and Cairncross 2016*).



3 GOOD HEALTH AND WELL-BEING



Up to 80% of all illness are transmitted by contaminated water (UN Women 2012). Hydro total water solutions treat contaminated water directly reducing the risk of illness (Target 3.1, 3.2, 3.3, 3.9).

For example, diarrhea is the 4th most important cause of disability globally, is responsible for 90% of childhood morbidity under 36 months (Kotloff et al 2013). A water treatment unit including household delivery could reduce the risk of diarrheal disease by up 93% compared to an unimproved source (Wolf et al 2014) (Target 3.2, 3.3).

There is on average a 14% relative risk reduction in 2 week diarrheal incidence and an average increase of 0.2 in the WAZ score for under 5 children associated with a 5 minute decrease in walk-time to water source (Pickering and Davis 2012).

Hydro water treatment units aim to reduce the distance to the source and plan distribution systems to reduce the time women spend walking to water sources (Target 3.2).

Hydro water treatment units have been installed in schools in India (Target 4.1). Poor WaSH access is negatively associated with educational attainment in 3 keys ways:

- (i) children don't attend school because need to fetch water,
- (ii) children fail school because has to spend time collect water instead of doing assignments,
- (iii) children get in trouble in school for poor hygiene/lack of bath (Subbaraman et al 2015).

Hydro improve water access in homes and have partnered with the Rotary Club Bangalore to improve WaSH access in schools in India (Target 4.5).

Girls are more likely to miss school due to poor WaSH access at home as the duty of collecting water is more likely to fall on women and girls. Girls are also more likely to miss school due to poor WaSH access at school due to the lack of capabilities to deal with menstruation. In Ghana, a 15-minute reduction in water collection time increased girls' school attendance from 8% to 12%. A Bangladesh school sanitation project that provided separate facilities for boys and girls boosted girls' school attendance by an annual average of 11% (UN Women 2012).

4 QUALITY EDUCATION



5 GENDER EQUALITY



Globally women spend more than 200 million hours collecting water per day (UN Women 2012). Women and girls perform the largest proportion of unpaid labor associated with WaSH in households and communities (WaterAid post-2015 toolkit). By reducing the distance to water source, Hydro water treatment units are contributing to reducing the time women and girls have to spend in unpaid work associated with WaSH (Target 5.4)

Poor WaSH access is associated with an increased risk of gender based violence towards women.

Every aspect of Hydro's work directly impacts SD6. Hydro technology cleans water at various different levels, from community water sources to industrial wastewater. Thus directly increasing the sustainability of water resources worldwide (Target 6.1, 6.3, 6.4, 6.6).

Hydro drinking water units provide high volumes of WHO standard water for low operation and maintenance costs, enabling the water to be sold at affordable prices to the local community. This water source will be reliable and by partnering with local, trusted community members through NGOs, Hydro ensures the narrative surrounding the installation and operation of the unit leads to positive local perceptions (Target 6.1).

6 CLEAN WATER AND SANITATION



10 REDUCED INEQUALITIES



There are huge inequalities within and among countries surrounding access to a reliable water source (WA 2016).

Hydro's water treatment units are owned, operated and maintained by local individuals which directly creates jobs in the local community and supply chain. Additionally, there are indirect effects which contributes to local economic growth, for example via the increased disposable income of those employed leading to increased spending locally (Target 10.1).

To decrease the existing inequalities in job opportunities between genders, when ever possible Hydro target women to be the owners, operators and maintainers of the drinking water units (Target 10.2).

One of the 4 building blocks of basic social services is clean water (UNICEF 2000 *basic services for all?*). Hydro's work building and supporting the operation and maintenance of drinking water units increases the number of people with access to safe, adequate and affordable clean water (Target 11.1).

11 SUSTAINABLE CITIES AND COMMUNITIES



17 PARTNERSHIPS FOR THE GOALS



Hydro works closely with a variety of partners, suppliers and customers to ensure that every project is delivered to the highest standards and works towards these global goals. For example, Hydro have entered into a collaboration with Dawnus and Swansea University to share expertise to deliver comprehensive services and total water solutions to the most disadvantaged communities in the world.

Environmental Pillar

3 GOOD HEALTH AND WELL-BEING



Hydro substantially reduces the release of polluted wastewater from industrial processes, thus reducing the volume of hazardous chemicals being released into the environment (Target 3.9).

Hydro water treatment technology reduces the need for liquid chemicals to zero, thereby reducing the incidence of accidents from the handling of hazardous chemicals (Target 3.9).

It is estimated that >80% of global industrial wastewater is released into the environment untreated. Hydro is working with local and international companies, including Ford and TATA, to reduce this percentage. Hydro total water solutions have helped industrial companies increase their water-use efficiency through treating the water to remove pollutants and reusing the treated water, thereby reducing the water footprint of industrial plants (Target 6.3, 6.4).

6 CLEAN WATER AND SANITATION



8 DECENT WORK AND ECONOMIC GROWTH



>40% of the world's active workforce are heavily water-dependent (*UN 2016 Water and Jobs*), yet by 2025 half the world's population will live in countries with high water stress, equating to poor job security in the places most in need of economic growth. By 2050, the water demands of industry are forecast to increase by 400% in developing countries (*UN water for a sustainable world*). Through increasing economic productivity of a company by decreasing their water footprint, Hydro is helping decouple economic growth from environmental degradation (**Target 8.4**).

Hydro's technology is continually being tested and improved to ensure it is as "environmentally friendly" as possible, ensuring when it is installed in industrial processes it reduces their environmental impact and increases their resource efficiency (**Target 9.4**).

Hydro are at the cutting edge of water innovation research and development. Led by market demand and global water challenges, Hydro has led and being involved in a large number of collaborative R&D projects, including public private partnerships (**Target 9.5**).

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



11 SUSTAINABLE CITIES AND COMMUNITIES



The majority of the environmental impact from wastewater is caused by industrial wastewater released without adequate treatment, Hydro's activity to reduce the proportion of wastewater released untreated is helping reducing the per capita environmental impact (**Target 11.6**).

Hydro helps our leading industrial clients use water more efficiently and extract useful products from wastewater. Through using Hydro technology these businesses manage their industrial activities more sustainably and efficiently (**Target 12.2, 12.6**).

After the wastewater has been treated, if possible the water is reused or recycled back into the industrial process, and the extracted waste products are used or recycled (**Target 12.4, 12.5**).

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



Hydro's clean water solutions decrease the impact our industrial clients have on the environment in a number of ways:

- (i) decreasing the volume of wastewater release into the environment untreated to zero,
- (ii) decreasing the reliance on chemical treatment.

Hydro's clean water solutions have a lower carbon footprint than the alternative solutions, decreasing the carbon release by our clients therefore helping reduce their environmental impact.

Hydro's clean water solutions reduce to zero the volume of pollutants release by our industrial clients into the ocean (**Target 14.1**).

14 LIFE BELOW WATER



15 LIFE ON LAND



Hydro's clean water solutions reduce to zero the volume of pollutants release by our industrial clients into the ocean (**Target 14.1**).

Industrial Pillar

Mine sites have high water demand, using it for mineral processing, metal recovery and controlling dust on site. The used mine water is often contaminated and requires treatment before being release to prevent it polluting the surrounding surface water and groundwater. Water management at every mine site is essential to prevent environmental catastrophes such as artisanal mining which released 650 - 1,000 tonnes of mercury accounting for one third of all human-release mercury (Telmer 2006).

Hydro total water solutions have helped mines and minerals companies increase their water-use efficiency through treating all used mine water to remove contaminants and pollutants often reusing the treated water, thereby reducing the water footprint of mines (Target 6.3, 6.4).

6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



Hydro metal and mineral recovery equipment decreases the loss of product which increases the volume of mineral produced per unit of energy, thus improving the energy efficiency. For example, at a steel works plant in India Hydro equipment is recovering an average of 339 tonnes of iron per day (Target 7.3).

By upgrading technology at mines and associated industries, Hydro has help companies increase their economic productivity through the recovery of metals and minerals (Target 8.2).

8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Globally, Hydro has been upgrading and retrofitting mines and associated industries with environmentally sound technologies to increase their sustainability, primarily through water treatment, reuse and recycling (Target 9.4).

Hydro are at the cutting edge of water innovation research and development. Led by market demand and global water challenges, Hydro has led and being involved in a large number of collaborative R&D projects, including public private partnerships (Target 9.5).

Hydro's sustainable water management leads to more efficient use of natural resources through reducing the water demand of mines and associated industries. Further, through metals and minerals recovery Hydro's equipment increases the efficiency of mining industries (Target 12.2). Hydro is contributing to substantially reducing mining industries' waste generation through treating millscale and other waste produce, recovering minerals, metals and oils and recycling or reusing the clean water (Target 12.5).

Hydro encourages our industrial clients to adopt sustainable and environmentally sounds technologies and practices. Hydro plan to start providing SDG reports to our clients so they can better understand and demonstrate their own impact (Target 12.6).

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



Hydro's clean water solutions decrease the impact our clients have on the environment in a number of ways:

- (i) decreasing the volume of wastewater release into the environment untreated to zero,
- (ii) decreasing the reliance on chemical treatment. Hydro's clean water solutions have a lower carbon footprint than the alternative solutions, decreasing the carbon release by our clients therefore helping reduce their environmental impact.

When a ship sinks or is damaged and the oil mixes with seawater, Hydro's rapidly deployable oil separation unit is able to prevent an environmental catastrophe by treating the oil-contaminated water. The system separates the oil and water, capturing the oil and releasing the clean water into the ocean (Target 14.2).

14 LIFE BELOW WATER



15 LIFE ON LAND



Mining operations have high risk of affecting and polluting the surrounding surface water and groundwater, therefore the water used in mining needs to be monitored and often requires treatment to prevent environmental contamination. Additionally, mines have a high water demand which can have a negative environmental impact in arid regions with limited water availability, without water recycling or reuse the water demand of the mine can contribute to further environmental degradation, such as desertification and biodiversity loss. Hydro's clean water solutions reduce to zero the volume of pollutants release by our industrial clients into freshwater ecosystems (Target 15.1).