GOAL 6: ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL

Approximately 99.6 per cent of Mauritian households have access to potable water across the island.Half of the potable water supplied to the population comes from groundwater. There are six water distribution networks throughoutMauritius.

While Mauritius receives an annual rainfall of about 3,700 million metres cube (Mm^3), seasonal water scarcity still occurs. Of the total amount of rainfall received in 2017, only 23 per cent could be mobilised for use. The rest was lost either through evatranspiration or as surface run-off waters.

Since 2015, Mauritius is actively engaged in the replacement of pipes around the island. It isestimatedthat39 per cent of pipes within the distribution networkrequire replacement. During the period 2015-2018, about one third of the mostcriticallydefective pipes werereplacedduring the period 2015-2018.

Policy Framework for Water rests on the following 4 pillars

1. Supply of water to all households on a 24/7 basis;
2. Reduce *Non-Revenue Water* (NRW) from the current level of 55 per cent to 50 per cent in 2020, and 37 per cent by 2030;
3. Protect water quality to ensure supply of safe drinking water; and
4. Improve water use efficiency in all sectors of the economy through the promotion of water conservation measures and the use of efficient water usage technologies in domestic, agriculture, tourism, commercial and industrial sectors

In view of enhancing and protecting water quality, Mauritius is investing in the construction of new and upgrading of existing water treatment plantswith capacity ranging from 60,000 m^3/day to 80,000 m^3/day. An*Effluent Discharge Permit* has also been established to ensure proper monitoring ofeffluent discharged by industries into the environment.

In Mauritius, almost the whole of the population has access to sanitation facilities, either through on-site disposal or the national sewer system. Mauritius projects to extend The national sewerage network is being extended in environmentally sensitive regions and areas near high water table that are frequently prone to wastewater overflow. The aim is toincrease connection to the national sewerage network, currently at 27 per cent to at least 50 per cent of the population by 2030. A *National Environmental Action Plan* was also adopted in the 90s.

As opposed to Mauritius, Rodrigues is considered water stressed. It receives uneven rainfall throughout the year and has limited storage capacity or underground water, rendering distribution sparse between periods. In some regions, people receive brackish water from the tap.

However, the situation is very different from underdeveloped countries where water shortages often lead to hunger, child and maternal mortality, vector-borne diseases, gender inequality, school drop-outs and abject poverty. Households have acquired tanks (many of them underground), surface and

on the roof, where they are able to store their water requirements between two periods of supply. It is also common practice that households and all commercial as well as government buildings and schools have their own rainwater harvesting systems.

Leaving No One Behind

Since 2015, households consuming up to 6 m^3 per month are exempted from payment of water charges. This measure was adopted in the spirit of leaving no one behind and improving access to water while reducing the burden on low-income households. So far, around 20 per cent of domestic consumers have benefitted. Moreover, some 57,000 families from the low-income bracket are beneficiaries of the water tank grant scheme.

Numerous projects were also initiated to improve sanitaryconditionswithin poor communities.To date, some 283 families have been connected to the national sewerage system.

Bright Spots

Increasing water storage capacity

To counter challenges relating to growing economic activities, resulting in urbanisation as well as changing land use practices, additional water resources are being harnessed. New storage dams were constructed in 2002 and 2017 allowing to increase the water storage capacity to 71 Mm^3 by 2019.

Since 2015, Mauritius has also invested in the construction of 3 service reservoirs of capacities ranging from 2,000 to 3,000 m^3 in several regions of the island.

With climate change, rainfall patterns have changed, leading to longer periods of dry season and huge rainfalls during short periods. To counter challenges during the dry seasons, the local authorities collaborate with the private sector in mobilizing additional water from boreholes on private lands.

Eco-Friendly practices in Private Hotels

The hotel industry has also taken the lead by investing in desalination plants and addressing potential water shortages. Many luxury hotels have desalination plants which uses reverse osmosis water purification technology enabling them to be water independent and meet their daily water demands. Brackish water is extracted on site from the ground and purified, which is suitable for drinking as well as for hotel operations. This has indeed relieved the national water system to an extent, both in terms of ensuring adequate supply and investments.

Since XXXX, it is mandatory for private hotels with more than 50 rooms, including *Integrated Resort Scheme* (IRS) projects, to have dedicated wastewater treatment facilities, if not connected to the public sewer. In addition, to ensure compliance with the required environmental norms, the quality of treated effluents used for irrigation purposes, are monitored regularly.

DESALINATION PLANTS IN RODRIGUES

Since XXXX, Rodrigues has invested in the construction of XX desalination plants.

In 2018, it pioneered an innovative project in the Indian Ocean with the construction of a solar desalination plant enabled by OSMOSUN® technology. The plant is producing 80 m^3 of fresh drinking water to 2,400 inhabitants everyday and using solar energy to do it. At night, it uses a hybrid solar-grid powered source to produce 300 m^3 of drinking water. The project saw the collaboration of *Mascara Renewable Water* who partnered with *Quadran* to install the 66 kWp photovoltaic generator that powers the unit during the day, without using a battery, and international financiers, including innovative solutions from the Indian Ocean Commission program with European funding ENERGIES, partly from French Global Environment Facility (FFEM) and contributions from Rodrigues Regional Assembly (RRA), the local administrative community for Rodrigues.

With the support of UNOPS and UNDP a 5-year *Integrated Water Resources Management* (IWRM) *Action Plan* has been developed for the period 2017-2022. A tree-planting programme has been devised along the northern catchment, which is susceptible to risks of pollution pertaining from the agricultural activities in the region.

CHALLENGES	OPPORTUNITIES
Though the Mauritian Government has committed unprecedented level of financial resources of Rs 1.5 billion for the construction of dams, new water treatment facilities and upgrading of existing treatment plants, 3 service reservoirs and replacement of pipes over the period 2015-2018, the **need for additional financing remains**.	• Construction of new dams and enlargement and rehabilitation of existing ones are planned by 2025. • In view of mobilizing additional water resources, 4 new service reservoirs of a capacity of 2,500 m^3 each and drilling of 3-4 boreholes on an annual basis are envisaged.
With **climate change** as well as **changing economic dynamics**, it is becoming increasingly important for the island to **invest in monitoring of water quality and ensuring that potable water remains free of any contamination**.	• Latest technological equipment as well as technical expertise will be required. • The assistance of the *Agence Française de Développement* (AFD) has been sought for the implementation of a pilot telemetry system and the setting up of a water observatory.
In spite of the massive investment planned for several sewerage projects throughout the island, **additional funding will be required to mitigate any potential health hazards while protecting ground water as well as the Mauritian marine flora and fauna.**	• Approximately Rs 6.0 billion of investment is planned for the extension of the sewerage network during the period 2019-2023.