

6 CLEAN WATER AND SANITIZATION



GOAL 6

Ensure availability and sustainability management of water and sanitation for all

Context

Water resources and access to safe water for consumption are critical to human existence. For Jamaica, the main source of water supply is rainfall, which manifests as surface water (rivers and streams), groundwater (wells and springs), direct rainwater (through evapotranspiration and rainwater harvesting) and through a private project by the Jamaica Public Service Company Limited (JPS) desalination was introduced in 2016. Jamaica's water resources are excellent in quantity and relatively abundant, earning the island the moniker "land of wood and water." The country's main water sources are concentrated in the north of the island, while water demand is greatest in the south.

The agencies with responsibilities for the sector are:

- the Water Resources Authority (WRA), with responsibility for regulation, control and management of the nation's water resources;
- the National Water Commission (NWC), with responsibility for the public supply of drinking water and sewage treatment;
- the National Irrigation Commission (NIC), with responsibility for the supply of water for agricultural and irrigation;
- the Rural Water Supply Company, with responsibility for the execution of small rural projects;
- the Solid Waste Management Authority and Environmental Health Department of the Ministry of Health and Wellness (MOH&W), with responsibility for the monitoring of waste water and treatment;
- the Ministry of Economic Growth and Job Creation with responsibility for oversight of the Water Sector as well as the implementation and monitoring of the Water Sector Policy; and evaluating the effectiveness of the programmes and initiatives aimed at meeting its requirements.

Along with the WRA are other regulators, namely the MOH&W, the national Environment & Planning Agency (NEP) and the Office of Utilities Regulation (OUR).

Concerning domestic water supply, the provision nationally is shared among the following institutions accordingly:

- National Water Commission – island wide (urban and rural) by Statute
- Parish Councils – rural areas by Statute

- GOJ Enterprises – specific supply areas by Licence
- Private Enterprises – specific supply areas by Licence
- ODPEM – island wide under conditions of disaster.

The liberalization of the water services sub-sector facilitated the inclusion of the participation of Private Enterprises as set out in the National Water Policy (1999). Consequently, housing developers can develop their water supply system to support their respective housing developments and utilize the option of operating these private water supply systems rather than handing them over to the NWC, as was previously required. Subsequently, five such private companies were licensed by the Office of Utilities Regulation to operate accordingly.

Jamaica through various institutional and related policy-led initiatives recognizes the role clean water supply and sanitation offer in advancing sustainable development and improved quality of life for all, by strengthening the water infrastructure. This is articulated in the Revised National Water Sector Policy & Implementation Plan 2019; the Water Sector Plan; Vision 2030 Jamaica – National Development Plan, the guiding frameworks for development objectives and outcomes within the sector, as well as the Medium-Term Economic Framework, the mechanism through which Vision 2030 Jamaica—National Development Plan and the SDGs are being implemented.

The prioritization of SDGs is embedded in its close alignment and integration in the country's national sustainable development framework. These goals mirror the comprehensive and ambitious social, environmental and economic reforms articulated and are being advanced by Jamaica. Concerning Goal 6, its links are manifested in several national outcomes articulated in Vision 2030 Jamaica—National Development Plan to include, "Healthy and Stable Population", "Strong Economic Infrastructure", "Sustainable Management and Use of Natural Resources", and "Hazard Risk Reduction and Adaptation to Climate Change". Underpinning the NDP are numerous policies and strategies, which produce the twin effect of guiding a multiplicity of sectors while fulfilling the desired outcomes of the national vision and the SDGs.

The review for the period 2018-2022 summarizes key achievements, issues and challenges concerning clean water and sanitation.



FIGURE 29: HIGHLIGHTS, CLEAN WATER AND SANITATION (2018-2022)

Discussion

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

The activities in the water and related sector are guided by the National Water Sector Policy (NWSP) & Implementation Plan (2019), which is also aligned with the Vision 2030 Jamaica—National Development Plan. Critical to the achievement of Goal 6 is the work of the Water Resources Authority (WRA), the agency legally mandated to manage, protect, and control the allocation and use of Jamaica's water resources. It has been established that Jamaica has a surplus of freshwater resources to meet human and ecological needs up to 2025. Therefore, access (given the need to move water from the north of the island where it is more abundant to the south where the population/demand is greater), quality and distribution that would be of paramount importance. According to the JSLC 2019, improved drinking water sources are the proxy indicator by which access is measured. Included in this and designated safe drinking water are indoor or outdoor tap/pipe, public standpipe, bottled water, and trucked water from the NWC. All other sources, including harvested rainwater, wells, rivers and streams are considered unimproved sources. The responsible agencies are the NWC, the Ministry of Health and Wellness, the Ministry of Local Government and Rural Development and some private providers.

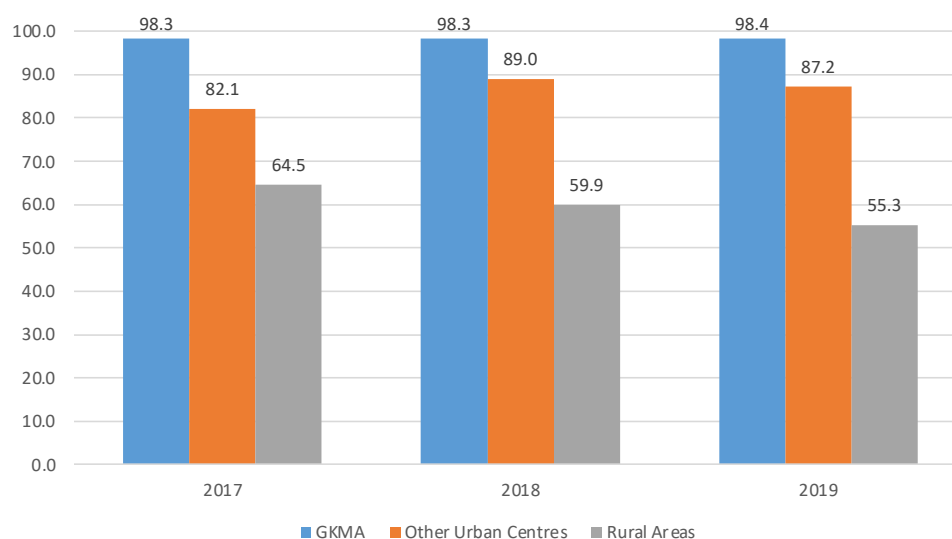


FIGURE 30: PERCENTAGE DISTRIBUTION FOR SOURCE OF DRINKING WATER 2013–2019
Source: Jamaica Survey Living Conditions 2019

Several issues related to Goal 6 along with policies, programmes, projects and initiatives to address these were highlighted in the previous VNR. Despite these interventions, and the continued work, a number of these issues have not been fully addressed and include:

- Threats to water quality (Figure 31)
- Ageing infrastructure and under metering for 15.0 per cent of the population
- Inequalities regarding access to the drinking water sources by geographic region
- Inequalities in access to improved drinking water sources by geographic region and low level of connection to a sewerage network
- Environmental pollution and hazardous waste management

- Unsustainable land and water management agricultural practices
- Need for better quality climate and hydro-meteorological data for decision-making support



Draft

Limestone Aquifer Vulnerability

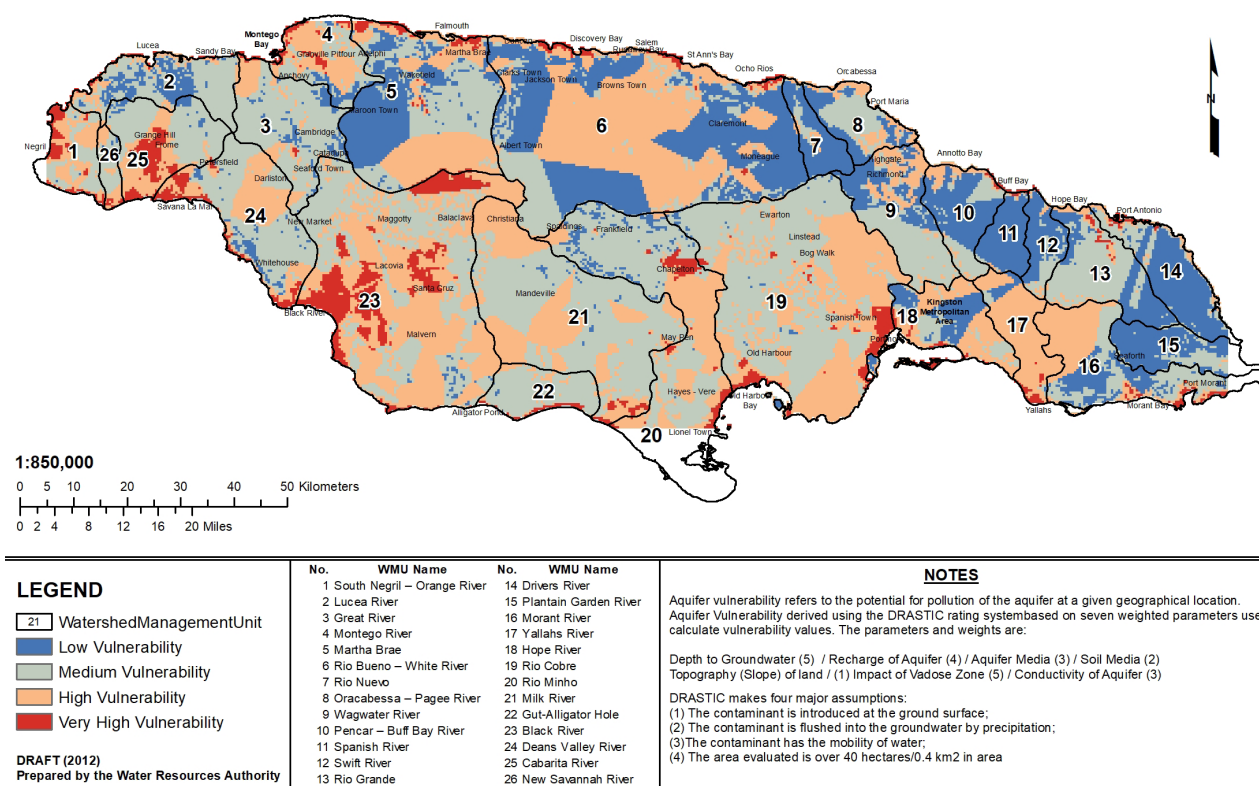


FIGURE 31: LIMESTONE AQUIFER VULNERABILITY
Source: Water Resources Authority

Concerning the universal and equitable access to safe and affordable water supply, data provided by the JSLC 2019 indicates that 76.6 per cent of households had improved drinking water sources compared with 78.4 per cent reported in the JSLC 2018. Disaggregated according to region, 98.4 per cent of households in the Greater Kingston Metropolitan Area (GKMA) had access to improved drinking water sources, Other Urban Centres (OUC) 87.2 per cent and Rural Areas 56.0 per cent. Comparatively, the GKMA remained relatively flat over the three years, while respective declines of 1.3 percentage points and 4.1 percentage points in access to improved water sources in OUC and Rural Areas, respectively.

Disaggregation by quintile showed that more than 60.0 per cent of households in all quintiles reported improved drinking water sources in 2019 and 2018. Also linked to access is the proximity to improved sources. While the Joint Monitoring Programme (JMP) recommends a distance of 30 minutes or less, the Jamaica Water Sector Policy proposes a shorter journey in distance travelled of 500 m. According to the JSLC 2019, some 55.8 per cent of households utilizing public sources travelled less than the 500m compared with 61.3 per cent in 2018. Further, all households in the GKMA travelled less than 500 m. The situation differs for the OUCs and Rural Areas, at 74.3 per cent and 51.1 per cent respectively. The improvement in the proportion for OUCs may be attributed to the increase in the proportion having access to improved sources and is consistent with projects rolled out by the NWC up to 2019.

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

Improved access to adequate and equitable sanitation and hygiene and the end of open defecation, paying special attention to the needs of women and girls and those in vulnerable situations would propel the country towards the universal achievement of same by 2030. As per the JMP 2021, Jamaica has the lowest level of hygiene services in the Caribbean with 67 per cent of the population having access to basic hygiene services, 16 per cent with limited service (without water or soap) and 17 per cent having no hygiene facility. There is need for greater investment in hygiene services especially in the context of the pandemic. Compared with 2018, there was a 4.7 percentage point increase to 86.2 per cent in households with water closets in 2019. The JSLC data indicated that for the comparative years (2019 and 2018), all households reported increased access to an improved sanitation facility (water closets)—the GKMA a 5.8 percentage point to 97.6 per cent, OUCs 4.7 percentage point to 86.1 and Rural Areas 2.4 percentage point to 77.6 per cent. Over the two years, there has also been a noticeable increase in all types of facilities used. However, water closets linked to onsite disposal systems and Pit Toilets have been most prevalent in rural areas. The percentage of households utilizing Pit Toilets remained relatively unchanged at 18.1 per cent, which in 2018 was the second most commonly used sanitation facility for Quintiles 1, 2 and 3.

The quality of Jamaica's water is reportedly very high and has been over the years. This is associated with the ambient quality, for which Jamaica's standard is generally high. According to the WRA, 92.1 per cent of the rivers within the 10 hydrologic basins were considered to be of good ambient quality in 2016. Based on the National Ambient water quality standard or the WHO guidelines for drinking water, the WRA reported that for 2018, the proportion of Jamaica's total water body, containing acceptable levels of Nitrate, Sodium, Chloride, Sulphate and Total Dissolved Solids separately was 97.0 per cent, 99.0 per cent, 98.0 per cent, 100.0 per cent and 80.0 per cent respectively. The preservation of this quality through an Integrated Water Resources Management (IWRM) framework is imperative as the country seeks to maximize economic and social welfare without compromising the sustainability of ecosystems and the environment.

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

In acknowledgment of this SDG target 6.5, Jamaica, through the 2019 Water Sector Policy, established and began implementation of the IRWM. The extent to which this is attained is measured in percentage terms from 0 (no implementation) to 100 (fully implemented). In 2020, Jamaica achieved 50.0 per cent overall implementation compared with 42.9 per cent in overall implementation in 2016. The 2020 implementation rate is above the average of 37.0 per cent for the Latin America and Caribbean region but below the global average of 54.0 per cent (UN STAT).

The need to ensure the sustainable use of freshwater resources cannot be overstated and includes the promotion of efficient water use. Consequently, other measures aimed at addressing the level of water stress have been undertaken to achieve target 6.5. The level of water stress, which is defined as the portion of freshwater withdrawal as a portion of available freshwater resources, has been relatively stable throughout the period 2014–2016 at approximately 33.0 per cent. Efforts to improve water efficiency include a Water IQ Initiative (WIQI), which is a conservation campaign aimed to raise awareness in schools of proper water management. Sector-wide campaigns include the encouragement of recycling wastewater in the Bauxite/Alumina industry (which has reduced the rate of freshwater withdrawal from aquifers) and institutionalized best practices for the treatment of wastewater in the hotel sector.

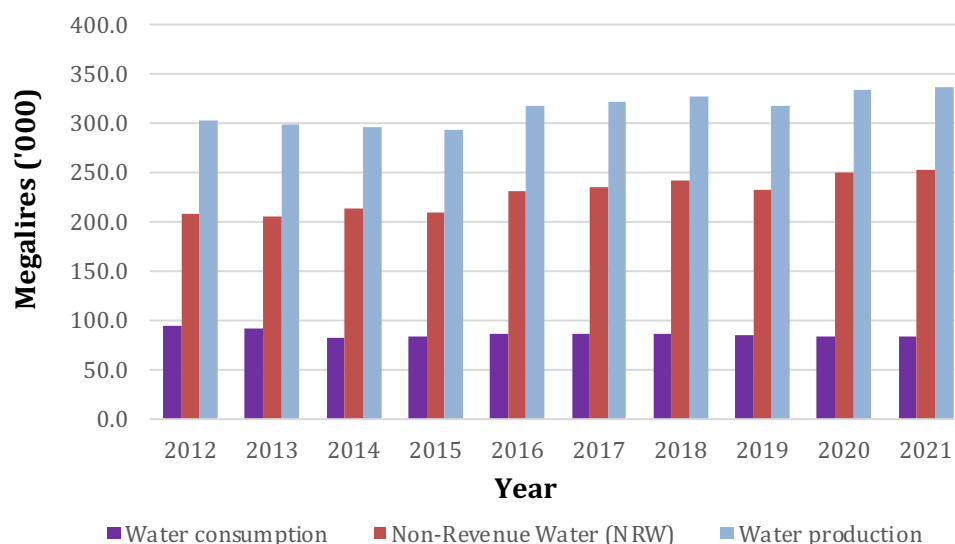


Figure 32: **WATER CONSUMPTION AND PRODUCTION 2012-2021**
Source: Compiled by PIOJ with Data Supplied by NWC

Additional progress under Goal 6 was facilitated under the four components of the KMA Water Supply Improvement Project, more so Components 1 – Rehabilitation of Potable Water Supply for the KMA and more specifically the Non-Revenue Water sub-component. An island-wide NRW Reduction similar to the Kingston and St Andrew (KSA) - Co-Management NRW Reduction Programme should yield results that are beneficial to the sustenance of freshwater resources, as reduced wastage directly impacts the extent to which the resource is abstracted and contribute to mitigating the impact of climate change. The National Water Commission, in its report on the programme's progress noted that there was a reduction in the NRW volume in the KSA—moving from a baseline of 117 061 m³/day in 2016 to 79 000 m³/day.⁹¹ This reduction exceeds the production of the two largest Water Treatment Plants in the KSA system — the Mona at 38 184 m³/day and the Constant Springs Water Treatment Plant at 40 500 m³/day. Phase 2 of the KSA - Co-Management Project is recommended to enhance sustainability, water efficiency, and improvements in service delivery. The issue of non-revenue water is crucial to the NWC's sustainability and resource efficiency, as it accounts for 75.1 per cent of total water produced (figure 32). Attendant to the foregoing, are other projects facilitated by Jamaica's international partners, which include planned and ongoing projects in water and sanitation-related activities and programmes that have been benefiting from international cooperation and capacity-building support. The onset of the Coronavirus Disease 2019 (COVID-19) has somewhat dampened the progress of projects, and has implications for the sustainability agenda.

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

Official Development Assistance (ODA) has played a critical role in meeting the Goals of the Vision 2030 Jamaica—National Development Plan and by extension the SDGs, given their over 95.0 per cent alignment. The water sector has attracted financing in loans and grants from multilateral and bilateral associations during the period including:

91 NWC's NRW Reduction Programme Continues to Reap Good Success 4-20190910-National-Water-Commission-NRW-Reduction-Programme-Continues-To-Reap-Good-Success.pdf (nwcjamaica.com)

- Rural Water Supply Project: US\$30.0 million loan financing from the Caribbean Development Bank in 2020, to support improvements to infrastructure in five parishes across the island.
- Support to NWC for Improvements in Corporatization: US\$483,257 from 2017-2019 in grant financing from the Inter-American Development Bank to aid the NWC in improving corporate governance and service delivery.

The NWC's collection rate fell from approximately 85.0 per cent to 75.0 per cent between March to May 2020, resulting in a financial loss of at least \$100.0 million monthly. This was made worse by the approximately \$13.0 million loss monthly, occasioned by the waiving of late fees and another \$3.5 million spent on advertising and the approximately 50.0 per cent hike in cost associated with the significant increase in the trucking of water. These expenditures have severely hampered the company's progress towards achieving its objectives and the associated SDGs, in a context where access to safe water and hygiene is critical during a pandemic. In a tight fiscal environment, made worse by the resources needed for pandemic recovery, ODA to the water sector in loans and grants is needed to improve the areas of NRW, treatment and distribution.

Impact of COVID-19

With the NWC being the main supplier of domestic water, like other companies, it was impacted by the onset of the pandemic. Since this was a highly contagious disease, transmitted through humans, the main defence against the spread is constant sanitization, wearing masks and practicing social distancing. However, concerning its operations, the company was challenged by a reduction in collection rates and waiving of late fees, while expending more, thereby resulting in monthly losses reduced financial intake can limit the extent to which projects are undertaken. The NWC did however benefit from the suspension of four guaranteed standards, which usually have the highest level of breaches. Their suspension resulted in significantly lower levels of pay-out or potential pay-out for these breaches. In support of the GOJ response to the pandemic and recognising the importance of its service to Water Sanitation and Hygiene in the fight against the spread of the disease, the NWC suspended the disconnection of water for non-payment during the first 9 months of the pandemic. There can be no doubt the COVID-19 pandemic would have caused some setbacks or even a reversal of gains made towards the achievement of Goal 6.

Cross-cutting issues and interlinkages with other SDGs

Challenges

The first VNR highlighted some priority issues as well as policies, programmes, projects and initiatives to address these. These included concerns for degradation of the water quality and high levels of Non-Revenue Water. The measures to address these are rooted in an effective Water Sector Policy & Implementation Plan that provides the guidance necessary to achieve the SDGs. Accordingly, steps were taken to update the 2019 policy under an IDB-funded consultancy "Update of the Water Sector Strategic plans for the Achievement of the SDGs – Jamaica Water Sector Policy Implementation". Several gaps have been identified, inclusive of legislative and institutional capacity, and which are articulated in the recent study undertaken. Consequently, the efforts to address these should be of national importance. Notwithstanding, some programmes are aimed at reaching the most marginalized, for example, the Tank & Pump Programme under the Rural Water Programme, thereby ensuring that no one is left behind. Further efforts are being placed in the rural water supply, ensuring that urbanisation and inward migration do not further impact on the gulf of development between rural towns and more metropolitan areas.

Climate Change

Climate change can have a significant impact on the water sector in terms of rainfall levels and patterns - too much rainfall may cause a landslide, flooding and turbidity. Too little rainfall may cause a drop in water levels at the dams, which may significantly reduce the water supply. More intense and frequent hurricanes may lead to damage to water infrastructure and more intense and frequent droughts can cause a significant decline in the water supply. Consequently, several mitigation measures are being contemplated, including the utilization of renewable energy, rainwater harvesting and catchment tank rehabilitation, recycling of wastewater effluent, recharge of aquifers and improvement in drainage infrastructure as well as adherence to the Rio Cobre Flood Early Warning System. The reduction of the NRW is also contributing to limiting the impact of climate change through better water-use efficiency.

Human Rights and Gender Equality

Having access to adequate Water, Sanitation and Hygiene (WaSH) services is crucial for every woman, man, girl and boy, to live a healthy life, with dignity, upholding human rights and ensuring gender equality. The rights to water and sanitation require that these are available, accessible, safe, acceptable and affordable for all, without discrimination.

Sustainable Development Goal 6 to ***“ensure availability and sustainable management of water and sanitation for all”*** has explicit gender dimensions. Water and sanitation issues affect women and men differently; hence all national efforts to achieve Goal 6 must explicitly consider and address gender inequality. Applying gender equality and equity principles in WaSH contributes to ensuring that they are accessible to everyone.

It must be noted that water and sanitation issues disproportionately affect women and girls due to biological needs (such as menstrual hygiene management and maternal health); social norms (responsibility for water collection); and particular risks (such as gender-based violence when accessing sanitation facilities). For this reason, there is explicit mention of women and girls in the target on sanitation. This target draws attention to the need to enable women to adequately manage their needs with dignity and safety, including in public settings (schools, workplaces and healthcare facilities). Globally, women are more likely to live in poverty than men, and are disproportionately affected by HIV. Disability can also affect access to water and sanitation for both women and men, but women with disabilities are often more disadvantaged than their male counterparts.

When gender equality and women and girls' empowerment are taken into consideration in policies and programmes, women will have more time to earn an income, girls are more likely to attend school, and family health and hygiene improves. Access to clean water and sanitation is crucial for poverty reduction and for achieving gender equality and empowering women and girls.

Against this background, gender equality and gender issues must be mainstreamed in all policies, programmes and projects in the water sector. Gender-responsive approaches should be considered in the design of potable water systems and sanitation and wastewater solutions, so those vulnerable individuals, including the elderly, youth and persons with disabilities, are treated equitably. These approaches should include capacity enhancement of men and women, for effective, efficient, and equitable solutions to the challenges of water resources management and development.

Renewable energies

The NWC is the single largest electricity consumer in Jamaica. Consequently, the price of energy weighs heavily on the extent to which universal access to water can be achieved. Therefore, trends towards the utilization of renewables as well as relatively cheaper energy sources should be pursued.

Way Forward

Progress on the achievement of Goal 6 can be further advanced with considerations given in several areas, including:

- Utilizing a comprehensive Water Supply Master Plan, the importance of which cannot be overstated
- Establishing a baseline for all WaSH systems in the country that is disaggregated by gender
- Investing in the digitalization of the NWC information systems
- Ensuring that the targets of the Water Sector Policy are aligned to the strategic plans of the NWC and other agencies engaged in the production and delivery of water and other indicators associated with the goal
- Ascertaining whether the mandate and tasks of the NWC are achievable and determine the role of the private sector and capitalize on the benefits that can be garnered from their involvement
- Committing to investing at least 1 per cent of the national GDP dedicated to the WaSH sector
- Elaborating a WaSH investment plan for each parish, especially the most unserved and vulnerable to natural hazards and waterborne and airborne diseases; and put in place a monitoring system for these plans at the parish level
- Strongly committing to the reduction of NRW below the average for the Caribbean
- Setting time-bound targets for the achievement of planned activities, and including them in the MTF to ensure these are monitored.

Resource Requirements

The activities to be undertaken to facilitate the achievement of Goal 6 will require financial and other resources. It is therefore of utmost importance that these are costed, and an investment strategy is articulated. Information garnered from the recent review of the Water Sector Policy and Implementation Plan concluded that the “NWC’s Capital Investment Plan (2015 – 2030) is outdated and should be updated for the period 2022 to 2030. This updated plan should be comprehensive and include information on the proposed projects, expected benefits (reliability, coverage, etc.), estimated cost and timeline as a start”.

Financing is of paramount importance and the reliance on domestic resources though critical is not sufficient to undertake the mammoth task of achieving Goal 6. Consequently, the engagement of the private sector and Civil Society Organisations to facilitate partnerships (Public-Private Partnerships and International Development Partnerships) through the provision of loans and grants is important. It must be noted, however, that the country’s classification as a UMIC Upper Middle-Income Country poses a challenge in terms of the eligibility for these concessionary loans and grants. In the last VNR Report, it was stated that the *Roadmap for SDG Implementation in Jamaica (2017)* articulated some strategies that could be explored in the areas of domestic, international and private financing. These include improving the capacity for tax audits to address transfer pricing; exploring options for ‘green fees’, debt-for-nature swaps and diaspora bonds; facilitating social impact investment; and establishing a philanthropy platform. The realization and implementation of these arrangements would achieve the progress necessary for the achievement of Goal 6.