

Malawi snapshot on water and climate

About the country snapshot

This country snapshot provides an at-a-glance understanding of the current national water and climate resilience status. It presents the latest information across key climate-smart decision-making categories (water resources and water and sanitation, SDG 6, climate change and disaster risk reduction, financing, governance, gender mainstreaming and social inclusion) in an easily digestible format, extracting the most important details from national and/or international analysis. No data was independently collected for this baseline snapshot, which will be complemented by a follow-up snapshot in mid-2024 to assess incremental progress in our journey to resilience.

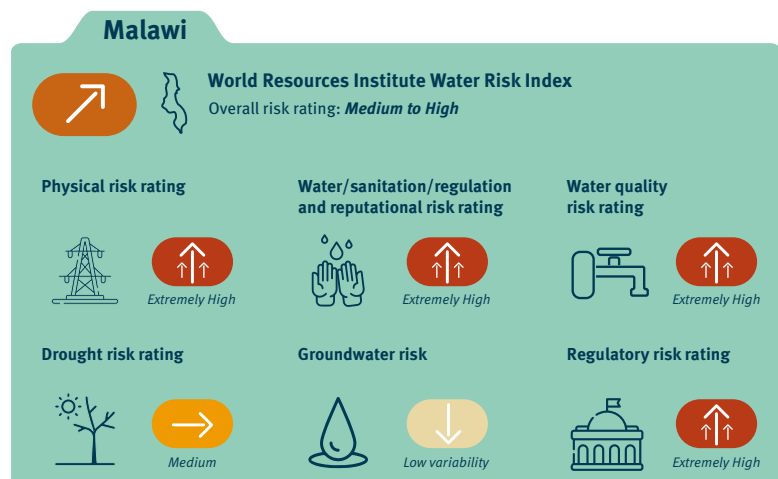
1. Malawi water resources and water, sanitation, and hygiene

Malawi has an extensive network of surface water bodies covering about 21 percent of the country's total area (approximately 24,400 km²). While the overarching climate is sub-tropical and influenced by the Inter-Tropical Convergence Zone and El Niño Southern Oscillation (McSweeney et al., 2012), the Malawian terrain creates different micro-climates, largely due to rainfall variation across locations. Malawi has an estimated annual renewable fresh water resource of **3,000 m³ per capita**. The country has two climate patterns: one for the north, with the highest rainfall around the lakeshore, and another for the central and southern regions, characterized by higher temperatures (Malawi Programme Proposal to the Adaptation Fund, 2019).

Weather-related shocks are becoming more frequent and devastating in the country, the most prominent being the major floods of 2015 and Cyclone Idai in 2019. Malawi is experiencing high surface run-off due to intensified rainfall, resulting in less water percolating down to recharge groundwater supplies or being retained in surface water bodies. Most parts of the country have already started experiencing a decrease in the water table. Coupled with frequent droughts, some perennial rivers are now becoming seasonal. The southern area, in particular, has clear hotspots for weather-related shocks due to the decline in annual rainfall and evapotranspiration (IRC International Water and Sanitation Centre, 2021).

Malawi mainly depends on groundwater, especially in rural areas, where about 80 percent of Malawi's population lives. Source protection challenges, soil erosion, and deteriorating water quality pose a significant risk to water resources, amplified by increased seasonal variability and lower water tables that aggravate water insecurity (IRC International Water and Sanitation Centre, 2021).

Water-related climate shock impacts heavily affect Malawi's delivery of water, sanitation, and hygiene (WASH) services. For instance, it is estimated that Cyclone Idai destroyed WASH infrastructure worth US\$3.8 million (World Bank, 2019).



The [World Resources Institute \(WRI\) Malawi Water Risk Index](#) provides an overall score of medium to high. The physical risk factors associated with riverine floods are extremely high, reflected in the frequent floods that displace millions of people and destroy key infrastructure, particularly roads, bridges, schools, homes, electricity networks, and agricultural land. Unimproved water, lack of sanitation, and regulatory and reputational risk are extremely high. Drought risk is medium, and groundwater has low variability. Water quality risks are extremely high due to untreated wastewater and limited sanitation coverage. Regulatory and reputational risks are extremely high, representing a hindrance to private sector investment that can enhance access to water services and increase the economical use of water resources.

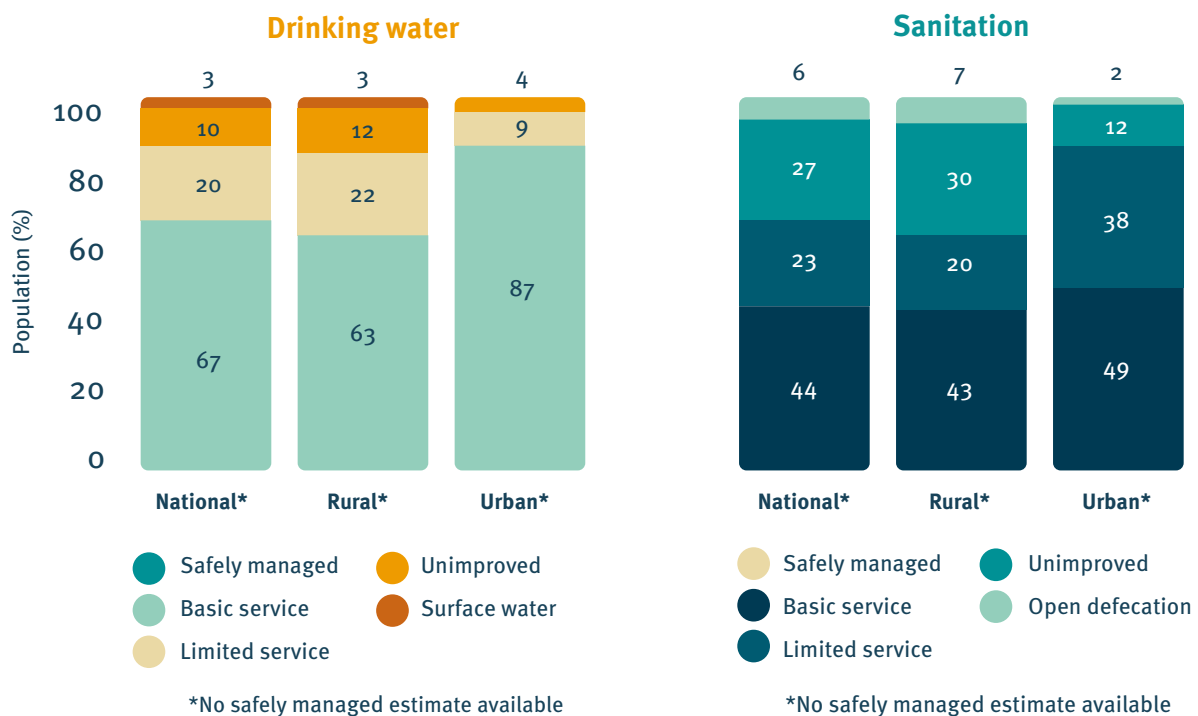
This brief reviews data from existing global frameworks that are used at the country level to plan, finance, and manage water resources to meet the challenges related to climate change and development.

2. Sustainable Development Goal 6: Joint Monitoring Programme and Global Environmental Management System

Malawi has made impressive progress in increasing water supply coverage over the last five decades. The World Health Organization/United Nations Children's Fund (UNICEF) Joint Monitoring Programme for 2017 estimated the coverage for basic water supplies to be 67 percent nationally: 63 percent in rural and 87 percent in urban areas. While the availability of water resources is considered satisfactory overall, per capita water availability has declined rapidly due to population growth. Additionally, low functionality of water is prevalent, with an estimated 30 percent of water points being non-operational at any given time. Providing safe and reliable

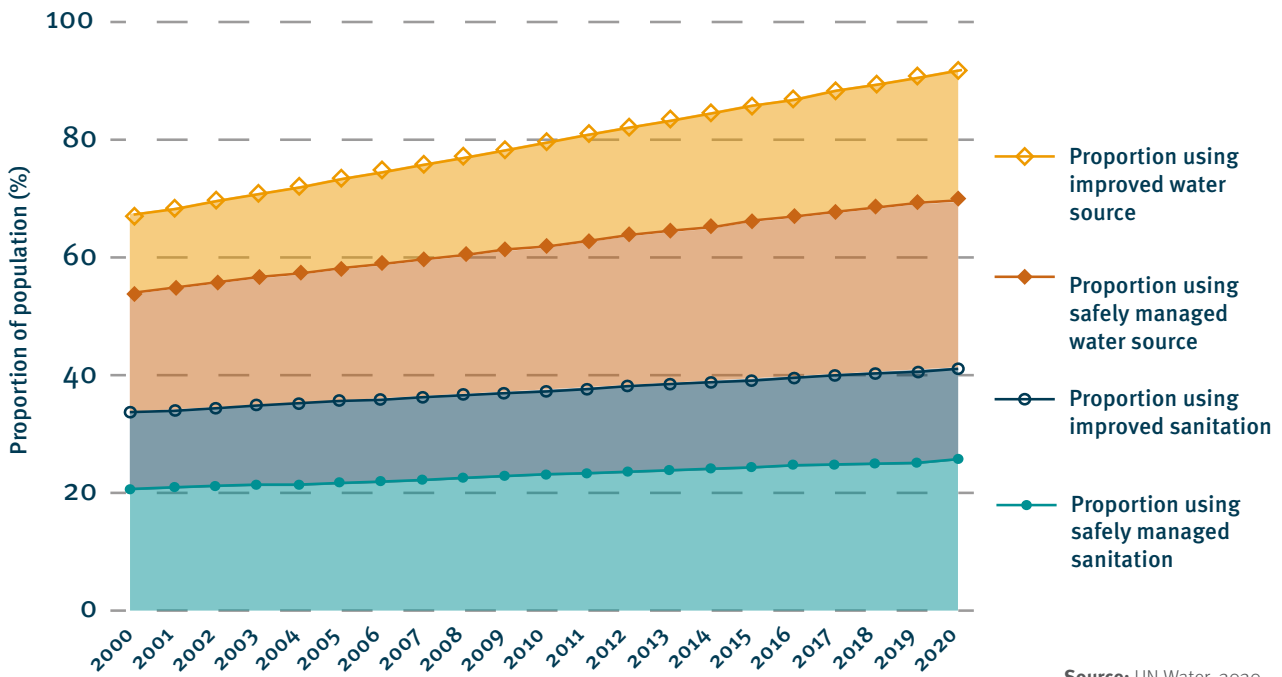
drinking water beyond the current 80 percent service coverage requires an increase in water production from 100 million to 150 million litres of water per day. Losses due to non-revenue water – piped water that is lost, either from leakage or from theft/metering inaccuracy – are of particular concern: currently, about 40 percent of treated water is lost annually, translating to a loss of 16 million m³ per year due to illegal connections, poor customer data management, and ageing pipe infrastructure. Key national-level water and WASH indicators are summarized in Figure 1 below (UNICEF, 2019).

Figure 1: National-level WASH indicators



Source: JMP, 2017

Figure 2: Proportion of population using an improved drinking water source and improved sanitation



Source: UN Water, 2020

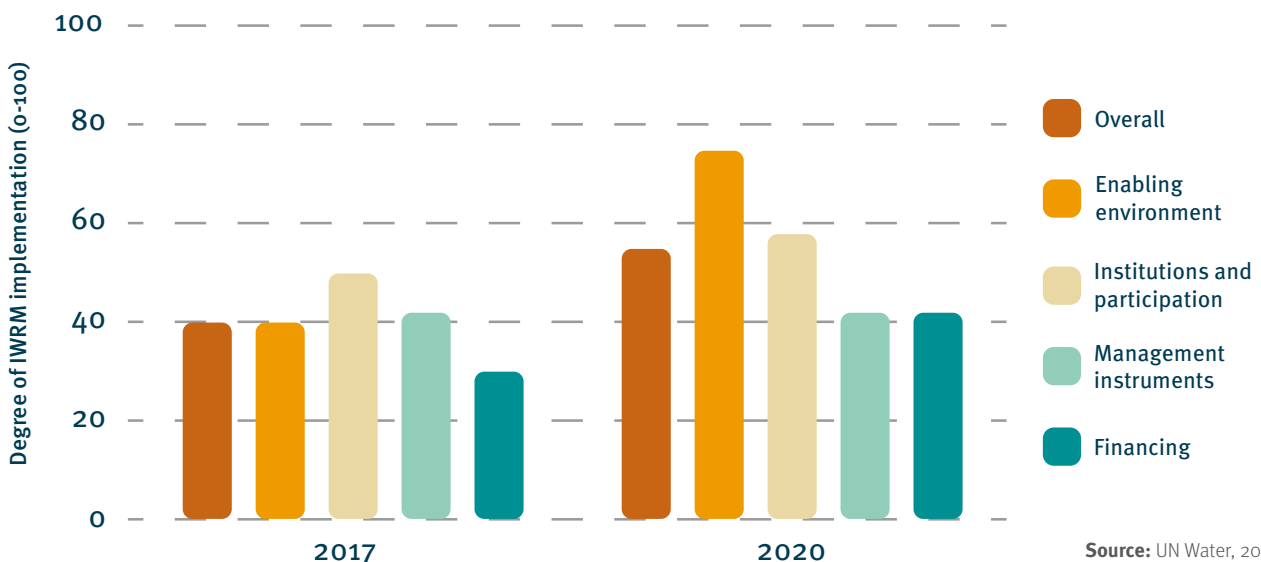
The Joint Monitoring Programme report covering 2000–2020 reveals (Figure 2) that the population using an improved drinking water source increased from 86 percent to 92 percent between 2015 and 2020. In comparison, safely managed and improved sanitation have continued to lag, with access to improved sanitation only increasing from 38 percent to 40 percent during the same period.

Sustainable Development Goal (SDG) 6 targets related to the **Global Environmental Management System (GEMS)** estimate that 18 percent of renewable water resources in Malawi are being withdrawn after taking into account environmental flow requirements (UN Water, 2020). Water demand across the country is dominated by agriculture

(71 percent) and domestic water requirements (19 percent) (Green Climate Fund, 2021). The enabling environment for the integrated water resources management (IWRM) agenda of the national strategy on water resources implementation (on a scale of 0–100) was estimated as ‘High’ at 76 percent in 2020, up from 40 percent in 2015. On average, factoring in the various components, including financing and implementation of the IWRM, overall implementation is below 60 percent, with an increase of 15 percent since 2015 (see Figure 3) (UN Water, 2020).

The country’s policy and legislative framework on water management are well advanced, though public participation in decision-making at the policy and programme level was moderate as of 2019.

Figure 3: Degree of IWRM implementation in Malawi



Source: UN Water, 2020

3. Climate change and disaster risk reduction

Malawi has experienced an increase in the frequency, intensity, and variability of weather-related shocks in recent years, including floods, droughts, and dry spells, as well as an increase in temperature. According to the Department of Disaster Management Affairs, between 7 and 9 March 2019, Malawi experienced devastating floods associated with Tropical Cyclone Idai. Approximately 870,000 people from 15 of the country's 28 districts were affected, including 60 dead, 3 missing, 672 injured, and over 87,000 displaced.

Under its updated Nationally Determined Contribution (NDC) submitted in July 2021, Malawi adopted absolute economy-wide targets for cutting greenhouse gas emissions by 2040. The updated NDC represents a more detailed and robust

assessment of mitigation and adaptation measures in Malawi, including emissions reductions and estimated funding requirements, informed by in-depth analysis, improved information and data, and an extensive national stakeholder-driven consultation process (Government of Malawi, 2021b).

The impacts of climate change are felt particularly in the rain-fed agriculture sector (Malawi Programme Proposal to the Adaptation Fund, 2019). Deep-rooted poverty, rapid population growth (estimated at **2.7 percent annually**, resulting in overexploitation of natural resources), and high dependence on subsistence rain-fed agriculture (Government of Malawi, 2021a) are all increasing the vulnerability of populations to climate change impacts.

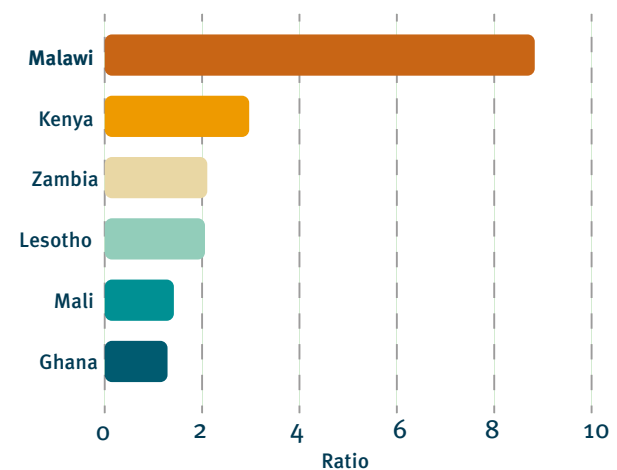
4. Financing

Public financing for recurrent water expenditure and development resources is low, affecting the implementation of Malawi's WASH agenda. The overall district council budget allocation was 39,200,580,635 Malawi Kwacha (MWK) (US\$38,450,789.95) in 2018, with the WASH sub-sector being the least funded at 1 percent of the council funding (UNICEF, 2019). The [Malawi National WASH Building Blocks Assessment](#) established that Malawi's sector strategic plans are not effectively linked to the Ministry of Finance budgets. The UNICEF SDG costing analysis tool 2019/2020 indicates that Malawi will require US\$97 million (MWK 68,840 million) to build and maintain BASIC universal coverage and an additional US\$258 million (MWK 183,228 million) to build and maintain safely managed services each year up to 2030, to achieve SDG 6.1 and SDG 6.2 by 2030. The WASH budget for 2020/2021 allocation was US\$88.2 million (MWK 90 million) and mostly allocated to urban water supply (Mambulu, 2020). The Government of Malawi budget allocations to WASH as a proportion of gross domestic product are also low compared with other countries in the region. Available data show that the government allocation of resources to WASH is 0.081 percent of gross domestic product, which is only 55 percent, 52 percent, 43 percent, and 27 percent of that allocated by Kenya, Zambia, Ghana and Mali, respectively. The difference in allocation between Malawi and the others is clearly evident in Figure 4, where the ratio of external financing for Malawi is much higher than internal allocation. The per capita allocation is less than one-fifth of those countries (Government of Malawi, 2020). Malawi is highly dependent upon international financing, including the World Bank Strategic Program for Climate Resilience, the Global Environment Facility, and the Adaptation Fund, for its WASH, IWRM, and climate adaptation needs. Malawi has obtained funds from GCF for two projects, including

US\$16 million for Scaling Up the Use of Modernized Climate Information and Early Warning Systems in Malawi (Government of Malawi, 2021b).

Implementing the Malawi updated NDC measures will require US\$41.8 billion through 2040. Challenges for climate finance in Malawi include an inadequate domestic budget and limited private sector involvement. The Government of Malawi is currently preparing a resource mobilization strategy to support the prioritized measures identified by the updated NDC. As part of its US\$350 million support to Malawi, primarily for hydropower, the US Millennium Challenge Corporation invested over US\$20 million to reduce the impact of soil erosion and invasive aquatic seaweeds, and to improve the catchment along Shire River.

Figure 4: Ratio of external to government financing for the WASH sector in six sub-Saharan African countries



Source: UNICEF, 2020

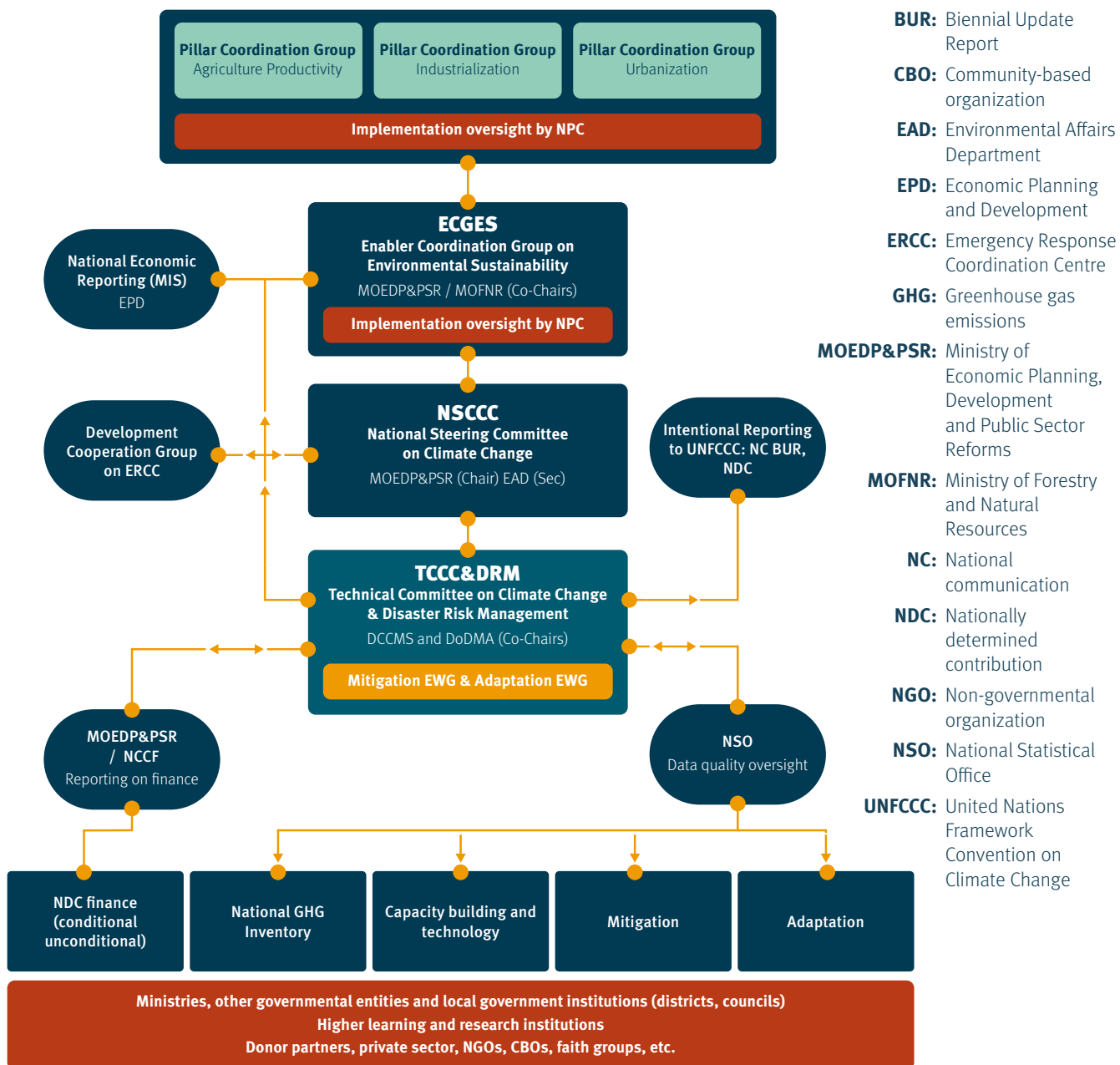
5. Governance

District councils are responsible for WASH service delivery tasks in rural areas, while water boards focus on urban areas. Water users' associations are responsible for the operation and maintenance of community water systems. At the national level, there are three key ministries: i) the newly launched Ministry of Water and Sanitation has overall responsibility for water service provision and water resource management; ii) the Ministry of Health and Population leads on sanitation and

hygiene promotion, including the management of front-line staff; and iii) the Ministry of Local Government is responsible for local authorities.

Climate change planning involves cross-sectoral and district-level administrative structures coordinated by the National Planning Commission through Sector Working Groups (SWGs). The SWGs track the short-term implementation of sector

Figure 5: Institutional arrangements for tracking Malawi's NDC implementation



Source: UNICEF, 2020

priorities, aligned with the goals of the Malawi Growth Development Strategy III and the National Vision (Malawi 2063).

In its updated NDC, the proposition is made (see Figure 5) that the Pillar Coordination Groups shall be the top-most level and will be responsible for spearheading implementation and reporting progress on the three pillars of the National Vision, with the support of the Enabler Coordination Group on Environmental Sustainability. This Enabler Coordination Group will be co-chaired by the Ministry of Economic Planning, Development and Public Sector Reforms and the Ministry of Forestry and Natural Resources, with the Environmental Affairs Department as the secretariat. The Enabler Coordination Group shall comprise both state and non-state actors. The

Pillar Coordination Groups and Enabler Coordination Group on Environmental Sustainability will work closely with the National Steering Committee on Climate Change and the joint Technical Committee on Climate Change and Disaster Risk Management in defining multi-year pillar and enabler priorities, as well as advising the government on the resources required for meeting the defined priorities of the National Vision within their respective pillars and/or enablers.

The [Malawi National WASH Building Blocks Assessment](#) concludes that the National Water Policy of 2005 and National Sanitation Policy of 2008 are outdated (but under review), expressing concern on vacancy rates of 67 percent in the water departments and at the district level, and failure to share WASH strategies.

6. Gender mainstreaming and social inclusion

[Malawi's National Climate Change Policy](#) seeks to reduce people's vulnerability, promote community and ecosystem resilience to the impacts of climate change, and boost gender-equitable adaptive capacity for planning and implementation. The gender mainstreaming component is also emphasized in other policy frameworks, including the SDGs, NAPs, and NDCs (Malawi Environmental Affairs Department, 2022).

The [Malawi Programme Proposal to the Adaptation Fund](#) reveals that a key constraint to climate adaptation is the unequal access between men, women, and youth to climate information. Women tend to prefer face-to-face interactions with extension workers and lead farmers due to their lower levels of literacy and limited access to income opportunities, technology, and assets. Conversely, men and youth use radios, mobile phones, the internet, television, and newspapers to receive climate information.

Malawi relies heavily on rain-fed agriculture, with women undertaking 50–70 percent of all agricultural tasks and producing 70 percent of the food consumed locally; however,

they rarely have access to the benefits of production (Malawi Programme Proposal to the Adaptation Fund, 2019).

To address the gender gaps in WASH and climate change, the updated Malawi NDC has an improved monitoring and evaluation framework, with an elaborated structure for reporting progress nationally and internationally. It includes disaggregated indicators capable of tracking the extent of gender and vulnerability integration across sectors (Government of Malawi, 2021b), informed by various policy and programme interventions by development partners in Malawi. For example, the government and World Food Programme-commissioned [Gender, Social and Environmental Assessment for the Adaptation Fund](#) project (2019) identified an urgent need to prevent violence against women and girls, ensure equitable access to social services and productive inputs, and promote the equality of women in labour markets and decision-making processes to ensure full contribution to climate-related planning, policy-making, and implementation (Malawi Programme Proposal to the Adaptation Fund, 2019).

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About the Global Water Leadership (GWL) programme

Effective and equitable water management is becoming increasingly complex, and increasingly important, as climate change impacts add new uncertainty to policy decisions and financial investments. The Global Water Leadership in a Changing Climate programme (GWL) is working intensely in ten countries, bringing together key stakeholders and decision makers from two water management pillars – water resources and water and sanitation – to develop holistic, integrated policies and plans to enhance national water and climate resilience. The programme is funded by the UK Foreign, Commonwealth and Development Office (FCDO) and implemented by Global Water Partnership (GWP), the United Nations Children's Fund (UNICEF), the Sanitation and Water for All Partnership (SWA) and the World Health Organization/UNICEF Joint Monitoring Programme (JMP).



Countries in the GWL programme

1. Bangladesh
2. Central African Republic
3. Chad
4. Madagascar
5. Malawi
6. Nepal
7. Rwanda
8. State of Palestine
9. Tanzania
10. Uganda