

WATER USE EFFICIENCY

THE ROLE OF SUSTAINABLE DEVELOPMENT GOAL (SDG) 6

TARGET 6.4. IN MONITORING THE CHANGES IN WATER USE EFFICIENCY AND ASSESSMENT OF WATER STRESS LEVELS

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water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA



Introduction

Freshwater resources are abundant worldwide, with only 9% withdrawn by society. However, available resources are unevenly distributed across regions and within countries. Globally, water stress affects more than 2 billion people, a figure expected to rise. Every continent experiences water stress, which impedes the sustainability of natural resources, economic and social development. Water scarcity – both physical and economic – is currently affecting more than 40% of the global population. In order to be able to provide the main three primary human needs which are water energy and food security, water is an essential resource for each. Therefore, competition for it will grow due to increasing populations, shifting lifestyles, economic growth and development as well as climate change.

In September 2015, heads of state from around the world adopted the 2030 Agenda for Sustainable Development consisting of 17 Sustainable Development Goals (SDGs) and 169 targets. The 2030 Agenda includes a dedicated goal on water and sanitation (SDG 6 -Ensure availability and sustainable management of water and sanitation for all), where target 6.4 deals with water use efficiency and water scarcity. The target aims to *“substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity”* by the year 2030.

1. In what ways does legislation address water use efficiency?

The Minister of Water and Sanitation is the public trustee of water resources on behalf of the national government and has the overall responsibility for all aspects of water resource management in South Africa. The Department of Water and Sanitation (DWS) is responsible for establishing how much water is used, by whom and where, to measure how much water is available for use.

The National Water Act, 36 of 1998 (NWA), provides the legal framework for the effective and sustainable management of the country's water resources. The Act requires that the nation's water resources are used efficiently and equitably in a sustainable manner for the benefit of all South Africans. Moreover, Section 22 of the NWA states that a person who uses water, may not waste that water. Therefore, to give effect to this, the NWA provides for the Minister to issue water use authorisations and to make regulations prohibiting the wasteful use of water (Section 26), and to consider incentives and disincentives to prohibit wasteful use and promote the efficient use of water. Sustainability, equity and efficiency are the principles that guide the protection, use, development, conservation, management and control of water resources which are the key elements in the NWA.



Similarly, the objective of the Water Services Act, 108 of 1997 (WSA) is to promote water conservation in the provision of water services. It requires Water Service Authorities (WSAs) to outline amongst others, measures to conserve water resources and also places the duty to conserve water on water services institutions. The Water Services Act states in terms of Section 73 that, the Minister may prescribe measures to conserve water. The Act and its Regulations enables the implementation of Water Conservation and Water Demand Management (WC/WDM) specifically for the municipal sector, by encouraging the sector to develop By Laws, WC/WDM plans, Water Services Development Plans (WSDP), etc.

The Directorate: Water Use Efficiency (D: WUE) has the responsibility to facilitate the national scale development and promotion of water conservation and water demand management aimed at the efficient use of the nation's limited water resources.

2. Why is addressing water use efficiency a concern?

South Africa is the 30th driest country in the world and many parts of the country are approaching a scenario where the demand outstrips the supply. That is most of our freshwater resources are fully utilised. A high level of water stress can result in negative effects on economic development, increasing competition and potential conflict among users, which calls for effective supply and demand management policies and an increase in water-use efficiency. Therefore, Water Use Efficiency is critical in ensuring the sustainability of the freshwater resources.

3. Which SDG Target provides for addressing water use efficiency and water stress?

SDG 6, Target 6.4 addresses water scarcity, aiming to ensure that there is sufficient water for the population, the economy and the environment by increasing water-use efficiency across all sectors of society. Securing environmental water requirements is essential to maintaining ecosystem health and resilience. Moreover, the target declares that by reducing water scarcity and ensuring sustainable withdrawals and supplies of freshwater, there will be reduction of the number of people who live in water scarcity and substantial decline of the poverty rates resulting from water scarcity by the year 2030.

There are two sub indicators which are used to reach the target. Indicator 6.4.1 monitors changes in water use efficiency over time. The indicator tracks the value added in US

dollars per volume of water withdrawn in cubic metres, by a given economic activity over time. It considers water use by all economic activities, with a focus on agriculture, industry and the water service sector. This indicator allows countries to assess the extent to which their economic growth depends on the use of their water resources. Regional differences in climate and water availability must be considered in the interpretation of this indicator, in particular for agriculture.

Indicator 6.4.2 assesses the “level of water stress: freshwater withdrawal as a proportion of available freshwater resources”. This indicator tracks the amount of freshwater that is being withdrawn by all economic activities, compared to the total renewable freshwater resources available. It also takes into account environmental flow requirements. Data can be disaggregated geographically (water basin), by source (surface water/groundwater) and by economic activity.

4. What is the role of the Department, represented by the Task Team for Target 6.4 in achieving this 2030 agenda?

The role of DWS is to coordinate, monitor and report progress towards achieving the set goal. The Task Team through D: WUE ensures:

- The promotion of effective and efficient use of water,
- The contribution to sustainable water resources management,
- The development and the implementation of efficient water use programmes for all the sectors,
- The development and the implementation of WC/WDM Outreach Programmes, and
- The monitoring and reporting of water use efficiency programmes nationally.



5. Which stakeholders are involved in addressing water use efficiency and what are their roles?

Governments are increasingly collaborating with other stakeholders, including the private sector, to ensure that Water Governance is truly inclusive. The fundamental components of good water governance include effective, flexible, and accountable state institutions that can respond to change, along with openness and transparency. Citizens and communities should also be able to voice their opinions and be involved in decision-making. Policy processes must involve participation and multistakeholder engagement.

- **South African Local Government Association (SALGA):** Ensures the provision of services to communities in a non-exploitative manner. SALGA promotes a safe and healthy environment in local government, promote social and economic development, encourage the involvement of communities and community organisations in matters of local government. SALGA provides support to Water Services Authorities (WSAs) to ensure the implementation and reporting of Water Use Efficiency.
- **Sector Bodies such as Business Unity South Africa (BUSA), Minerals Council and Agricultural Sector bodies:** Provide support to their members to ensure the implementation and reporting of WUE information.
- **Water Services Authorities (WSAs):** Implementation of WUE programmes and report progress to the Department.
- **Industry, Mining and Power Generation Sector:** Implementation of WUE programmes and report progress to DWS.
- **Civil Society:** Advocating the importance of saving water within their communities.
- **Water Research Commission (WRC):** Provide Research and Development of tools relating to WUE.

6. What role can an ordinary DWS employee play in addressing water use efficiency?

DWS employees should lead by example, using water efficiently inside the DWS buildings and report leaks to Facilities Management. The management of DWS can also consider using water saving taps or moving employees to buildings with water saving taps which reduce the flow of water/ automatically switch off to help in saving water. Moreover, DWS employees should be water ambassadors, be vocal and also educate their families/ households, friends, relatives, and neighbours to use water wisely.

7. What role can an ordinary South African Citizen play in the management of water use efficiency?

All South African Citizens need to be mindful of the amount of water they are consuming in their households and use water sparingly. Each household can agree on their own Water Master Plan and implement different water saving tips as continuously communicated by the Department. An enormous amount of water is wasted on a daily basis due to household water leaks. Every drop counts, and SA Citizens need to ensure leaking or burst pipes in their yards and toilets are fixed as soon as they are observed. Communities need to support their Water Services Authorities by reporting leaking and burst pipes, and also hold the authorities accountable to the by-laws. Water users should also be aware of their responsibility and take ownership of the water services and resource management in their area of residence.



8. What challenges are encountered in addressing water use efficiency?

Lack of metering and accurate reporting: Metering is the critical component in WUE. Installation of meters allows water users to monitor their water use patterns, performance of systems and development of water balance for their facilities.

Ageing infrastructure and lack of Operation and Maintenance (O&M): Ageing Infrastructure and inadequate O&M practice increases the levels of water leakages, non-revenue water and financial losses. Having Infrastructure Asset Management Plans and adequate funding for O&M increases WUE.

Mindset of the public about water: The public still believes that water comes from nature, and therefore must be free and hence the non-payment of water services. This leads to wastage of water and high consumptions. Continuous water education for public/ communities is prominent. A paradigm shift is required amongst all South Africans to understand the importance of conserving the nation's water resources and to foster a culture of using water efficiently and payment of water services.

Price of water vs True cost of water: The price of water in SA is relatively low and this is not promoting WUE or the conservation of our scarce water resources. Increasing the price of water, both raw and potable, to reflect its true value is the key in promoting WUE.

Where to find more information?

Visit DWS SDG 6 website and have access to information at:

<https://www.dws.gov.za/Projects/sdg/default.aspx> (The website includes all SDGs DWS is involved in, including more information on SDGs).

Details of Unit/ Task Team responsible for Target 6.4 and their contact details:

Name: Xolani Hadebe
Chairperson: Departmental Task Team for SDG Target 6.4
Tel: +2712 336 7886
Email: HadebeX@dws.gov.za

Name: Zinzi Mboweni
Member: Departmental Task Team for SDG Target 6.4
Tel: +2712 336 8518
Email: MboweniZ@dws.gov.za

Name: Lindiwe Sithole
Member: Departmental Task Team for SDG Target 6.4
Tel: +2712 336 7515
Email: SitholeE@dws.gov.za

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