

# World Water Monitoring DAY



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Local to global annual celebration of World Water Monitoring Day is crucial for ensuring awareness on the importance of monitoring and assessment of natural water resources. In highlighting the importance of water quality monitoring, this annual celebration in South Africa also includes promoting awareness on data management and specialised monitoring while simultaneously showing how monitoring and evaluation greatly influences planning, decision making, policies and governance in the water sector and across various disciplines interested in water related issues from a local to a global scale.



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## World Water Monitoring Day: 18 September annually

*Enhancing accountability and sustainability for every drop!*

World Water Monitoring Day is an international education and outreach program that builds public awareness of the importance of protecting water resources around the world by engaging with people to conduct basic monitoring of their local water bodies. World Water Monitoring Day is officially celebrated on September 18<sup>th</sup> annually, but monitoring and educational events can take place any time between March 22 and December 31 annually. During this time, people of all ages throughout the world have an opportunity to monitor the quality of their local watersheds and enter the results of their efforts into an international database. Water boards and stakeholders also use this period to educate and create awareness on natural water resource monitoring targeting professionals and managers in the sector, across different disciplines and end users.

The Department of Water and Sanitation Surface and Groundwater directorate engages in a wide variety of data collection and analysis activities such as specialised springs, transboundary aquifer and Acid Mine Drainage monitoring, surface and groundwater quality and level monitoring including rainfall station, in support of the public's needs and in support of decision making processes. This is in line with adhering to the South African National Water Act (NWA, 36 of 1998) to protect and ensure that all natural water resources are used and managed sustainably, and the public has reliable, affordable, accessible and good quality water on daily basis for domestic and economic use. Monitoring these water resources and ensuring environmental sustainability further contributes towards the progress of achieving SDG goal(s) namely Clean Water and Sanitation (SDG 6);

- **Target 6.3:** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- **Target 6.5:** By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
- **Target 6.6:** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
  - WWMD activities are aligned with ensuring progress towards **Target 6.B:** Support and strengthen the participation of local communities in improving water and sanitation management.



There is a continuing need to provide better climatic and hydrological data within and across the sector to ensure efficient and sustainable integrated management, coordinated activities and dissemination of reliable information and products to the public. This will ensure that pertinent, recent data and results are used whenever possible by the public and different stakeholders, reduce redundancy or contradictions and increase communication.

There is also a need to collect additional data in areas of the country subject to rapid change, such as rural areas or any areas sensitive to change. To these ends, the directorate has established several working groups, committees and special technical teams to audit data, do site verifications, analyse the results and establish specialized monitoring networks through various monitoring programmes. Recently, this task has been further developed for advancement and sustainable implementation through the National Water Resources Monitoring network (NWRM) optimisation network.

The SGWI directorate has the following monitoring programmes:

<b>Groundwater Monitoring Programmes</b>	<b>Surface Water Monitoring programmes</b>
Acid Mine Drainage	Dam monitoring
ZQM	Stream Flow
Water level	Evaporation and Rainfall
Dolomites	Real-time Data transmission Systems
Transboundary aquifers	
Rainfall recharge	
Springs	

Responsible directorates:

- Groundwater monitoring programmes: Groundwater Resource Assessment and Monitoring
- Surface water monitoring programmes: Data Acquisition and Management, and Streamflow Hydraulics

This data is monitored and analysed under the following WMAs (arranged WMA 1-9) and responsible regional office indicated (bold shows region responsible for most of the sites):

- **Limpopo- Limpopo**, North West and Mpumalanga
- **Olifants- Mpumalanga, Limpopo** and Gauteng
- **Inkomati-Usuthu- Mpumalanga**



- **Pongola-Mtamvuna- KwaZulu Natal**
- **Vaal- Gauteng, North West, Free State, Mpumalanga and Northern Cape**
- **Orange- Northern Cape, Free State, Eastern Cape and Western Cape**
- **Mzimkhulu- Tsitsikamma- Eastern Cape, Western Cape**
- **Breede Gouritz- Western Cape**
- **Berg Olifants- Western Cape and Northern Cape**

Outside the Surface and Groundwater directorate, more data analysis is conducted by various directorates responsible for climate analysis, surface and groundwater planning, disaster risk reduction, ecosystems and water resource services. In addition to technical data collection and analysis, many sections of the department rely on effective and sustainable monitoring networks in order to make decisions in South Africa and globally during bilateral engagements and equivalents.

#### Call to Action and Stakeholder engagements recommendation

Availability of good quality and reliable data is crucial for decision making, analysis of current status, information and knowledge sharing as well as training and capacity building. The monitoring programmes led by the Surface and Groundwater Information directorate play a key role and contribution to the bi-annual reporting of the national status of the water resources, quarterly status of water resources, weekly status of dam level, monitoring of extreme hydrological events and projections. The data collected, audited and analysed further provide reliable information for decision making process including drafting of policies, strategies, research (including academic) and bilateral engagements.

Various challenges such as lack of monitoring equipment, vandalism, funding, training, availability of information to end-users and human resource (retainment of current staff and appointment of additional staff) continue to hinder monitoring programmes and negatively impacts the efficiency and sustainability of establishment and optimisation of the national water resource monitoring network. Consequently, this has an impact on monthly monitoring, reporting efficiency and ensuring reliable information is available for various decision making and engagements from local to global water resource management practices within the water sector and across the sector.

Through hosting the WWMD annually to raise awareness for a week coupled with addressing the different challenges outlined above, the DWS can continue to monitor and ensure efficient monitoring and assessment of South African water resources.



Furthermore, WWMD awareness will also provide an opportunity internally and externally to educate and share information on the importance of monitoring water resources which will ultimately reduce the risk of vandalism of monitoring equipment, promote local community engagement and improve trust from end-users on available and issued data and analysis reports.

**Proposed 2021 World Water Monitoring awareness week focus area:**

- 2021 Global WWMD and World Water Day theme: Valuing Water
- 2021 World Water Week theme: Building Resilience Faster

*SGWI 2021 Theme: Enhancing accountability and sustainability for every drop!*

<b>Date</b>	<b>Activity</b>	<b>Venue</b>	<b>Focus</b>
Day 1	Internal and external online publication of information:  <ul style="list-style-type: none"> <li>• Flyers</li> <li>• Information sheets</li> <li>• Links and equivalent</li> </ul>	Online communication through DWS	Groundwater Monitoring programmes (Water quality and water level)
Day 2			Groundwater Monitoring programmes (Specialised)
Day 3			Surface Water Monitoring programmes (Data Acquisition and Management)
Day 4			Surface Water Monitoring Programmes (Streamflow Hydraulics)
Day 5: WWMD	World Water Monitoring Day:  Information sheet and Interviews and sharing of experiences from each sub-directorate	Communications and SGWI directorates	<ul style="list-style-type: none"> <li>• Optimisation network including progress made since the start of each monitoring programme in the department</li> <li>• IR, Climate Change And DRR management implications/practices</li> </ul>



**NB:**

1. Due to COVID19 PANDEMIC, lockdown restrictions need to be adhered to. Advisable to plan the awareness as follows
  - a. Fully online programme as webinar or equivalent. **For 2021**; daily communication from DWS Communications in a form of flyers/info sheets and equivalent.
  - b. Hybrid programme with 50-100 max at the venue depending on lockdown restrictions and adhering to regulations
2. Fully offline: **not advisable in 2021 due to the pandemic.**
  - a. Daily engagements: rapporteurs, relevant speakers and presenters etc are needed per day.
3. Should WWMD be over the weekend (inclusive of Friday), Day 5 remains as WWMD.
  - a. In a case where WWMD is between Mon-Thurs during a particular year, programme needs to be adjusted accordingly to ensure that WWMD is either at the start of the programme, end, field visit or the day of key HLP discussions.
4. Technical site visits:
  - a. Advisable (after WWMD) unless 3a is applicable. These should be arranged in advance.
  - b. Arrangements can be made with regional offices and site owners (where applicable and possible) to allow access to pre-approved visits from the public during awareness week
  - c. **For 2021: no technical visits.** Where possible, Virtual Reality or recorded video can be used to demonstrate monitoring or assessment of one of the programmes. Alternatively, showcase monitoring equipment.
5. Youth projects: the department runs youth programmes annually which address monitoring. It would be impactful to include those ideas and innovations by young people outside the department. Aqua Enduro project and Public speaking competition are one of the initiatives that conduct such activities. These can be included during awareness week as presentations (public speakers) and/or poser (Aqua endure).
6. Daily networking can be scheduled for:
  - a. before the of the daily programmes (60 minutes)- this also ensure early arrival of attendees (online/offline)
  - b. After the proceedings of the daily programme- it also allows attendees to reflect and plan for next day.



7. Flyers to be designed showing progress, current status and projects: this way information can be updated every 2/3 years instead of every year to avoid flyers being irrelevant in terms of information provided.
  - a. Awareness week posters are to be designed per year due to changing WWMD theme and focus globally and locally; and published daily.
8. Rapporteurs are to debrief daily and share a report within 14 days after awareness week.

Main sections to contact in the department (collaboration and information sharing):

- SWGI
- WRM (Chief Directorate)
- Planning section (Mr Mndaweni's section)
- International Relations: global celebrations and awareness of water related events/activities organisers
- NWRI Central Operations: World Water Day organisers
- Transformation: for the youth initiative (2020 Vision team) linked to WWMD
- DRR section: organisers of Disaster Management Capacitation workshops
- Communications: branding and media liaison