



SOMALILAND GROUND WATER STATUS UPDATE

DECEMBER, 2025

Overview

Groundwater is the most dependable and widely used water source in Somaliland, serving both urban and rural communities, including pastoralists and productive sectors, throughout the year, especially during dry spells when surface water sources diminish. Shallow aquifers mainly depend on recharge from rainfall, while deep aquifers can also be replenished by it. This makes the groundwater resources highly vulnerable to climate variability and recurrent droughts. They also face the risk of overabstraction to meet increasing demand. Continuous monitoring of groundwater levels and quality is therefore essential for understanding aquifer behavior and detecting early signs of depletion for informed decisions on humanitarian responses and long-term water resource planning. This update provides an analysis of the current status of groundwater across Somaliland based on the established weekly monitoring of 170 strategic boreholes and 10 telemetric groundwater stations.

It includes a time series analysis of monthly groundwater level trends and conductivities from 10 remotely monitored boreholes, where data are recorded hourly through telemetric monitoring systems and transmitted via satellite. It also incorporates information from 170 strategic boreholes monitored weekly by the borehole operators through coordination by the Ministry of Water Resources.

Key Highlights

- Strategic water sources provide a reliable water supply across Somaliland, fulfilling the needs for domestic use, livestock, and irrigation, particularly during dry periods when surface water sources are diminished.

- During the dry spells of 2024–2025, aquifers declined in many areas, especially in Arabsiyo in the Maroodi Jeex region and Badhan and Dhahar in the Sanaag region.
- Some borehole recoveries that were witnessed mainly aligned with the Deyr 2024 and Gu 2025 rainfall seasons, especially in Borama in Awdal region, Badhan in Sanaag region, and Sheikh in the Saaxil region, indicating high dependence on seasonal recharge.
- Conductivity trends closely followed water-level behavior, with increased mineral concentration during depletion and reduction during the recharge period, especially in Borama in the Awdal region, Oog in the Sool region, and Dhahar in the Sanaag region.
- Highly saline aquifers were determined in the Oodweyne in the Togdheer region borehole, possibly driven by lithological compositions rather than seasonal changes.
- As of December 2025, 95% of the monitored boreholes in Somaliland were functioning. The remaining 5% were non-functional. The main causes of failure were linked to pump, power, and riser pipe issues.
- Continuous groundwater monitoring is crucial for early detection of depletion, assessing functionality, guiding timely rehabilitation of water infrastructures, and supporting evidence-based responses and long-term water resource planning.



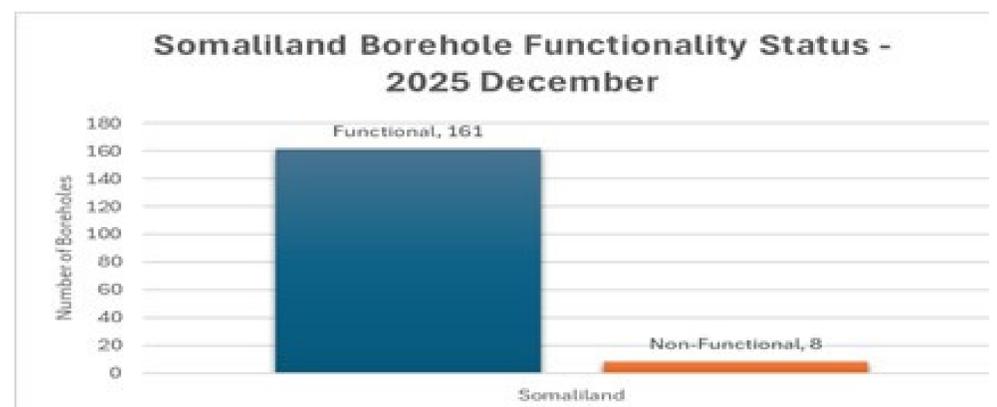


Figure 1: Ground Water Station in Saaxil, Somaliland

Weekly Borehole Monitoring

In December 2025, FAO-SWALIM, in collaboration with Somaliland water authorities, conducted weekly monitoring of 170 strategic boreholes to assess their operational status. The results showed that 161 boreholes (95%) were functioning, while 7 boreholes (5%) were non-operational. The main causes of non-functionality were pump failures, power supply issues, and problems with the main riser pipe.

Overall, this regular monitoring supports the timely identification of technical issues, helps plan necessary interventions, and ensures a continuous and reliable groundwater supply for both rural and urban communities in Somaliland, particularly during dry periods.



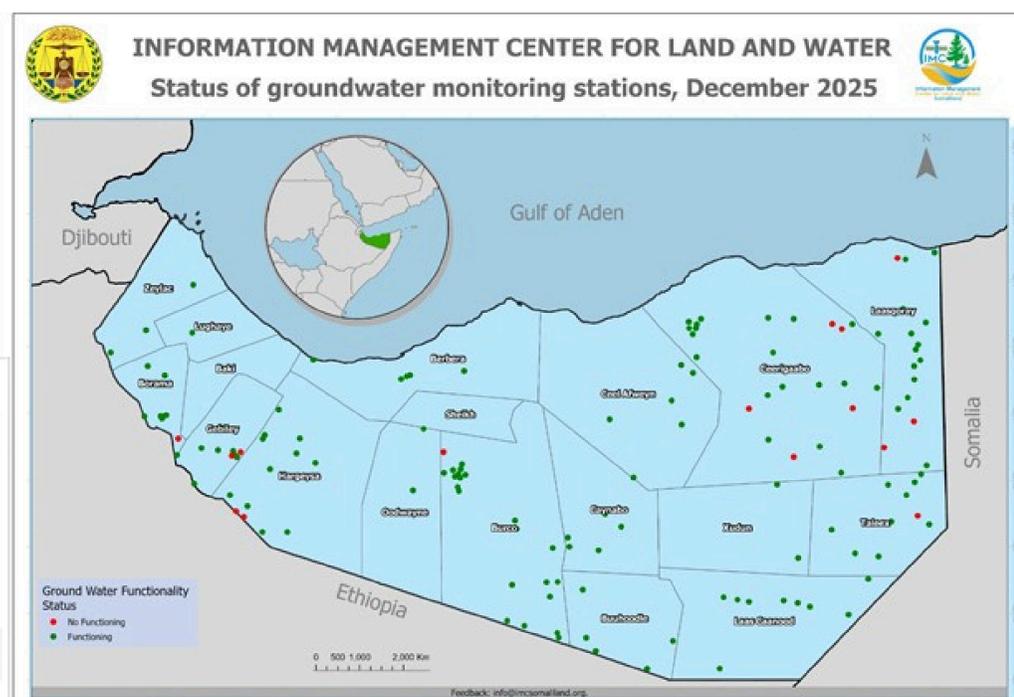
Graph 1: Somaliland Borehole Functionality Status December, 2025

Water Price

Graph 4 shows how the price for 200 liters of water changed from January to December in 2025 across different regions in Somaliland. The monitoring restarted in July 2025, and the price was stable at around \$0.31 to \$0.35.



Graph 2: Somaliland 2025 Monthly Average water price per 200L



Map 1: Status of Groundwater Monitoring Stations, December 2025

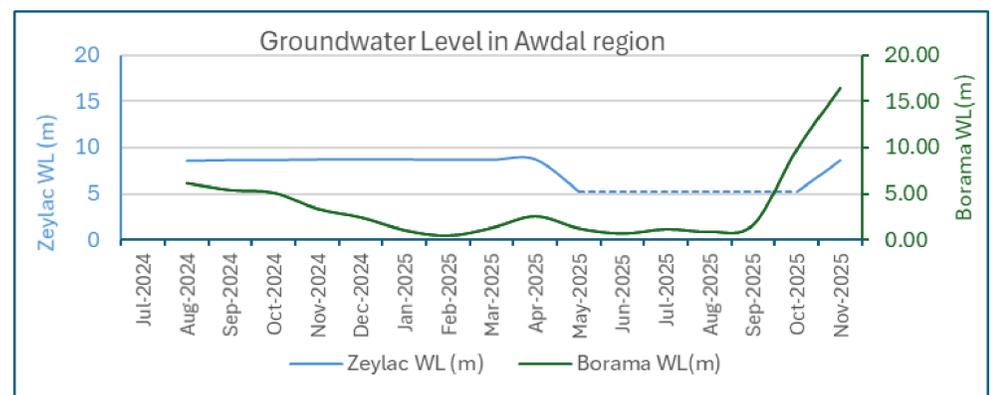
Awdal Region

The trends of groundwater levels in the Awdal region indicate two different changes. Borama displays a steady decrease starting in August 2024, decreasing from approximately 6 m to under 3 m by December 2024, and this downward trend persists into early 2025. By August 2025, the water level had fallen to less than 1 m, indicating prolonged dry-season stress and an absence of meaningful recharge during this period.

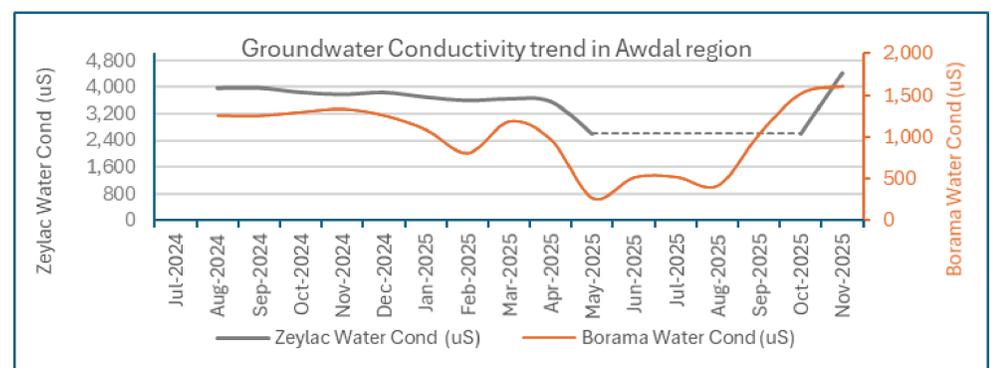
A marked recovery begins in September, and by October–November 2025, the water level rises sharply, reaching above 15 m, demonstrating a response to Deyr rainfall and confirming rapid aquifer recharge once seasonal rains resume. In Zeylac, the water level remains stable from August 2024 to April 2025, fluctuating only slightly between 8.6 and 8.7. The dotted line between May and September 2025 represents a monitoring gap caused by the removal of the water-level sensor, meaning no valid measurements were recorded during this period. When monitoring resumed in October 2025, the water level measurement reached above 5 m in November.

The conductivity displays the differences between the two locations. In Borama, conductivity persisted relatively stable around 1,250–1,350 μS during late 2024, then declined slightly as groundwater levels fell through early 2025, showing mineral concentration changes linked to the decline of the water table. With the onset of recharge in September–October 2025, conductivity rises again, reaching 2,500–3,000 μS . This increase reflects the flushing of accumulated minerals and the mixing of fresh recharge water with deeper, more mineralized groundwater. Awdal Region Zeylac consistently has high conductivity values between 3,800 and 4,000 μS throughout the period when data are available, indicative of a more saline aquifer controlled by local geology rather than seasonal recharge.

The disparity in conductivity readings between May and September 2025 corresponds to the same sensor removal period seen in the water-level graph. After the sensor is reinstalled, conductivity measurements resume, again reflecting the high mineral content of the Zeylac aquifer.



Graph 3: Groundwater level in Awdal Region



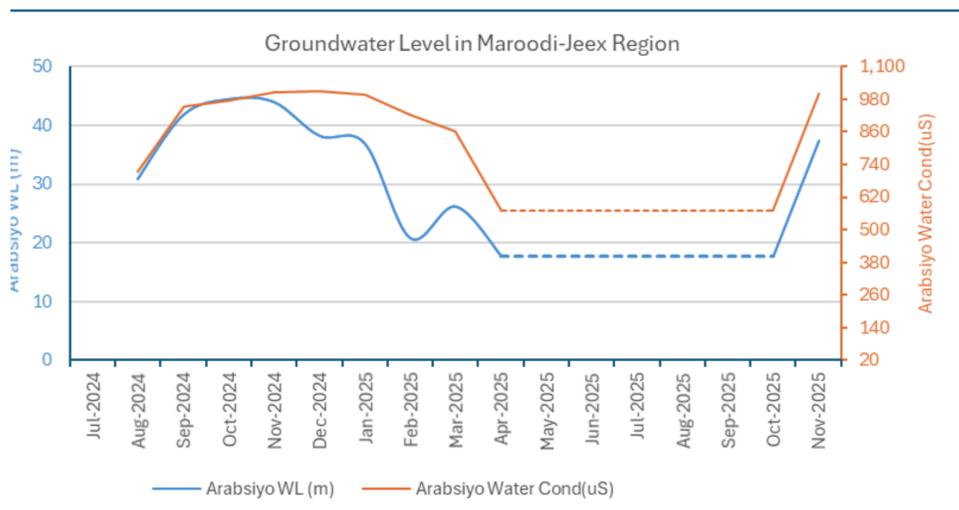
Graph 4: Groundwater Conductivity Trend in Awdal Region

Maroodi jeex Region

The groundwater level trend at the Arabsiyo borehole shows seasonal fluctuations. The water level started at 30.8 m in August 2024 and progressively increased to a peak of 44.4 m in October 2024, reflecting significant recharge from the preceding Deyr 2024 rainfall. After this peak, the level gradually declined through the dry season, reaching 38.2 m in December and 36.8 m in January 2025, before dropping sharply to 20.8 m in February. A minor rise to 26.1 m was observed in March.

The sudden decline in April 2025, followed by a continuous zero-line until September 2025, does not represent actual aquifer depletion. Instead, this portion of the dotted line reflects a monitoring gap caused by the removal of the water-level sensor during borehole rehabilitation, resulting in no data being measured during this period.

After the instrument was reinstalled in October 2025 and measurements resumed, the water level rose to 17.8 m, then to 37 m in November 2025 with the onset of the Deyr 2025 rains. The water conductivity of the Arabsiyo borehole began at 712 $\mu\text{S}/\text{cm}$ in August 2024 and steadily increased to 1,011 $\mu\text{S}/\text{cm}$ by December 2024, indicating higher mineral concentration as groundwater levels declined. A slight decrease occurred in January (995 $\mu\text{S}/\text{cm}$) and February (922 $\mu\text{S}/\text{cm}$), consistent with seasonal dry spells. The gap from April to September 2025 corresponds to the same monitoring interruption caused by the rehabilitation works. When monitoring resumed in October 2025, conductivity ranged between 570 $\mu\text{S}/\text{cm}$ and 1,002 $\mu\text{S}/\text{cm}$ in October and November, reflecting the positive influence of Deyr 2025 rainfall on aquifer recharge and water quality.

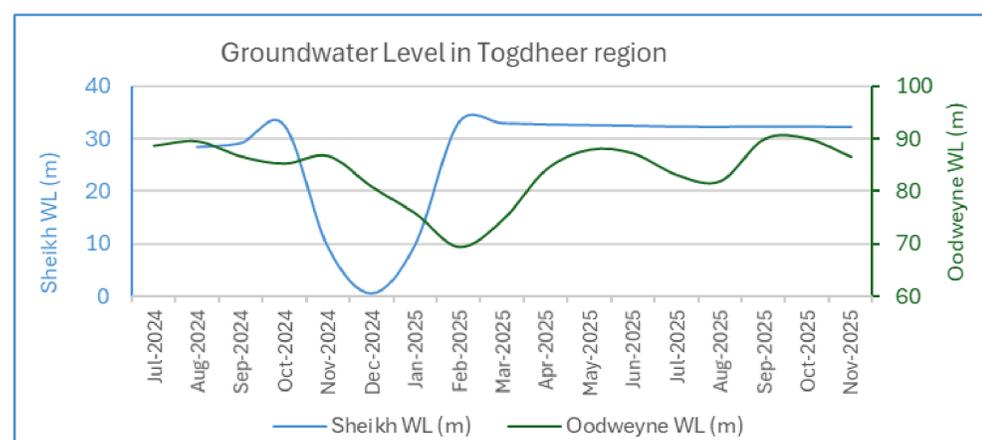


Graph 5: Groundwater level in Marodijeex

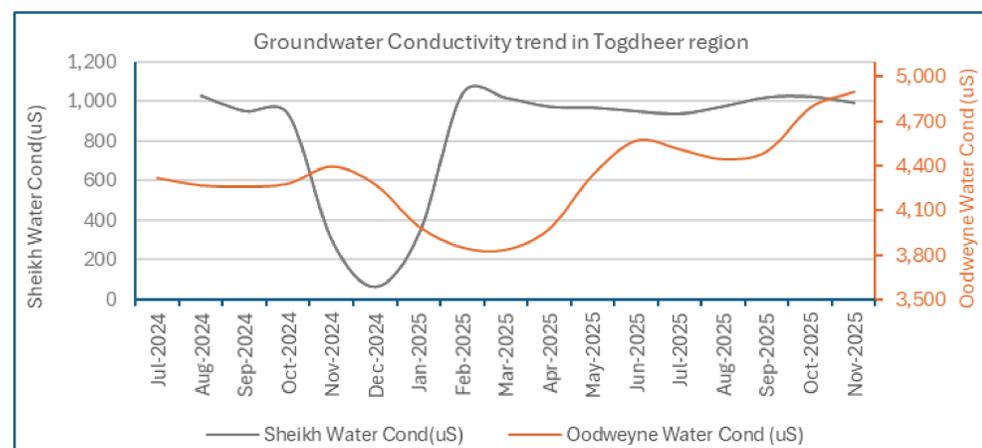
Togdheer Region

The groundwater levels in the Togdheer region indicate two separate responses from the aquifers. At Sheekh borehole, water levels showed a moderate rise from August to October 2024, increasing from 28.4 m to 32.6 m, indicating short-term recharge from the preceding wet season. This is followed by a sharp decline that began in November 2024, when the water level fell to 9.32 m, and reached the lowest point of 0.5 m in December 2024, reflecting severe aquifer drawdown during the poor performance of the Deyr 2024 rainfall. In early 2025, recovery started, and the level rose to 9.8 m in January 2025. By February of the same year, they fully returned to 33 m. From February to November 2025, the curve stabilizes between 32–33 m.

On the other hand, the Oodweyne borehole displays stable water level conditions, and the level persisted between 88–89 m from July–October 2024, then gradually declined to a minimum of 69.4 m in February 2025. A steady recovery follows, with water level rising consistently throughout the monitored period, reaching 90.12 m by October 2025. The water conductivity at the Sheekh borehole reflects seasonal changes in groundwater. It started at 1,027 μS in August 2024, gradually declined through September and October, then dropped sharply in November and December to 296 μS and 63 μS , aligning with the period of declining water levels. When the water level rose, conductivity returned to normal ranges, stabilizing between 937 and 1,039 μS from February to October 2025, and then at 992 μS in November 2025.



Graph 6: Groundwater level in Togdheer



Graph 7: Groundwater conductivity trend in Togdheer

Sool Region

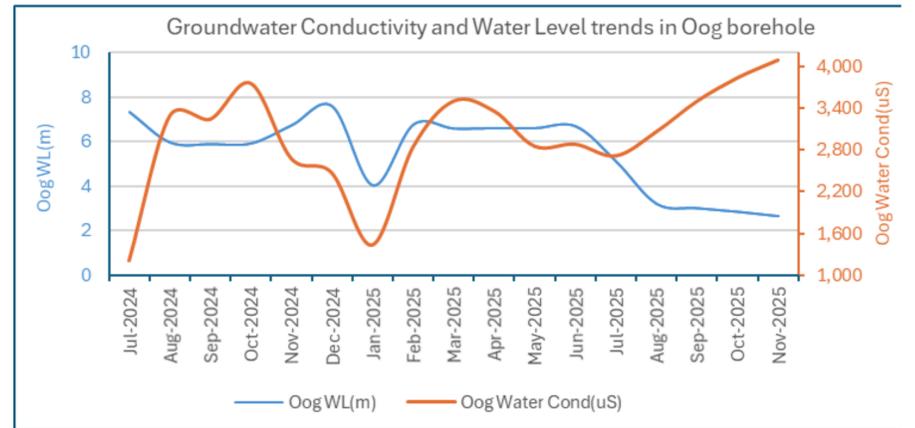
The Oog water level varied with the seasons, showing a decline towards the end of 2025. The level began at 7.3 m in July 2024, then dropped to 5.9 m in August and remained almost stable until September, and in October 2024, it ranged from 5.9 m to 5.9 m. The water level reached 7.6 in December 2024, which was the highest water level recorded during the monitored period.

In January 2025, the level fell to 4.0 m, likely linked to high abstraction and the effect of the Jilaal dry period. In February, the water level rises, and the borehole starts to replenish, increasing to 6.8 m and staying steady through March (6.6 m), April (6.63 m), May (6.63 m), and June (6.7 m). After June, the trend turns downward, dropping to 5.1 m in July, 3.2 m in August, 3.0 m in September, 2.8 m in October, and finally 2.6 m in November 2025. This decline possibly reflects the dry Haggaa season, reduced recharge, and increased aquifer abstraction.

Water conductivity at the Oog borehole shows seasonal variation, reflecting the balance between water level and mineral concentration during wet & dry periods. Conductivity started at 1,208 μS in July 2024, then increased sharply to 3,287 μS in August 2024, stayed high in September and October 2024, ranging from 3,242 μS to 3,759 μS , respectively, then dropped to 2,677 μS in November, and 2,470 μS in December 2024.

In January 2025, conductivity fell further to 1,434 μS , coinciding with the decline in water level, after which it rose again to 2,840 μS in February.

Conductivity rose again in March 2025, reaching 3,503 μS , before declining slightly in April (3,360 μS) and May (2,853 μS), then stabilizing around 2,883 μS in June. As water levels declined from July onward, the water conductivity increased again to 2,716 μS in July, 3,062 μS in August, 3,499 μS in September, and 3,838 μS in October, and 4092 μS in November 2025.



Graph 8: Groundwater Conductivity & Water Level trend in Oogo Borehole

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Annex 1: List of non-functioning water sources

No	Region	District	Settlement	Borehole Name	Status	Reason for Breakdown
1	Maroodijeeex	Gabiley	Botor	Botor 24	Non-functioning	Power supply issue
2	Maroodijeeex	Baligubadle	Waddo Bariis	Waado bariis BH	Non-functioning	Borehole Collapse
3	Awdal	Boorama	Dila	Dila 26	Non-functioning	Power supply issue
4	Maroodijeeex	Baligubadle	Gumar	Gumar Bh	Non-functioning	Pump issue
5	Maroodijeeex	Hargeysa	Arabsiyo	Arabsiyo 29	Non-functioning	Power supply issue
6	Maroodijeeex	Hargeysa	Gogol wanaag	Gogol wanaag 28	Non-functioning	Power supply issue
7	Togdheer	Burco	Qoyta	Qoyta BH	Non-functioning	Main raising pipe issue

Annex 2: List of Telemetric Stations

No	Region	Station Name	Status	Reason for Breakdown
1	Sanaag	Garadag Borehole	Non-functioning	Sensor failed, or the Sensor removed from BH
2	Sahil	Kala-jab Borehole	Non-functioning	Sensor cable damaged during maintenance
3	Maroodijeex	Garbohdley Borehole	Non-functioning	Sensor failure

No	Region	Station Name	Status
4	Sool	Oog Borehole	Non-functioning
5	Togdheer	Ceel-xume Borehole	Non-functioning
6	Saaxil	Sheikh (Dubur) Borehole	Non-functioning

No	Region	Station Name	Status
7	Awdal	Zeylac(Toqoshi) Borehole	Functioning
8	Maroodijeex	Arabsiyo Borehole	Functioning
9	Maroodijeex	Gebiley (Botor BH3) Borehole	Functioning
10	Awdal	Borama (BH 19) Borehole	Functioning



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