Spatial Distribution of Groundwater Geosites in South Africa - Nitrate

JANUARY 2026
(Publication Date)

Description:
This map indicates spatial distribution of Nitrate (NO3-) from samples collected between the years 2021 and 2025. Samples were collected from the Department of Water and Sanitation's National Groundwater Quality Monitoring Programme and from non-monitoring once off samples. The samples from monitoring data were averaged to determine a representative concentration level of Nitrate per Geosite. Each hexagon on the map represents 25km². This map illustrates the groundwater quality without considering fitness for any use.

Data Sources:
Water Management Areas: Department of Water & Sanitation (DWS), Directorate Catchment Management. Boundaries, rivers and towns: Chief Directorate National Geospatial Information (NGI), Department Agriculture, Land Reform and Rural Development (DALRRD). Groundwater data: Department of Water & Sanitation (DWS), Directorate National Hydrological Services: National Groundwater Archive (NGA), Directorate Resource Quality Information Services (RQIS): Water Management System (WMS).
Transboundary Aquifers of the World [map]. Edition 2015. Delft, Netherlands: IGRAC (International Groundwater Resources Assessment Centre), 2015, UNESCO-IHP (UNESCO International Hydrological Programme), 2015.

564 Geosites
(Borehole and Springs): 2021- 2025

Mean Nitrate (mg/L)
- ≤ 11
- > 11 - 20
- > 20 - 50
- > 50

MAP KEY
- Mayor City / Town
- 2023 Water Management Area Boundary
- Provincial Boundary
- International Boundary
- Transboundary Aquifers (TBA) 2015
- National Parks

Task Ref: GM25_682

water & sanitation
Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Directorate: National Hydrological Services