

A decorative wavy line in light blue and white, resembling a stylized water flow or a path, runs vertically along the left side of the slide.

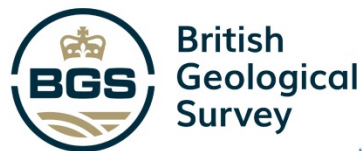
Professional Drilling Management

Online Course

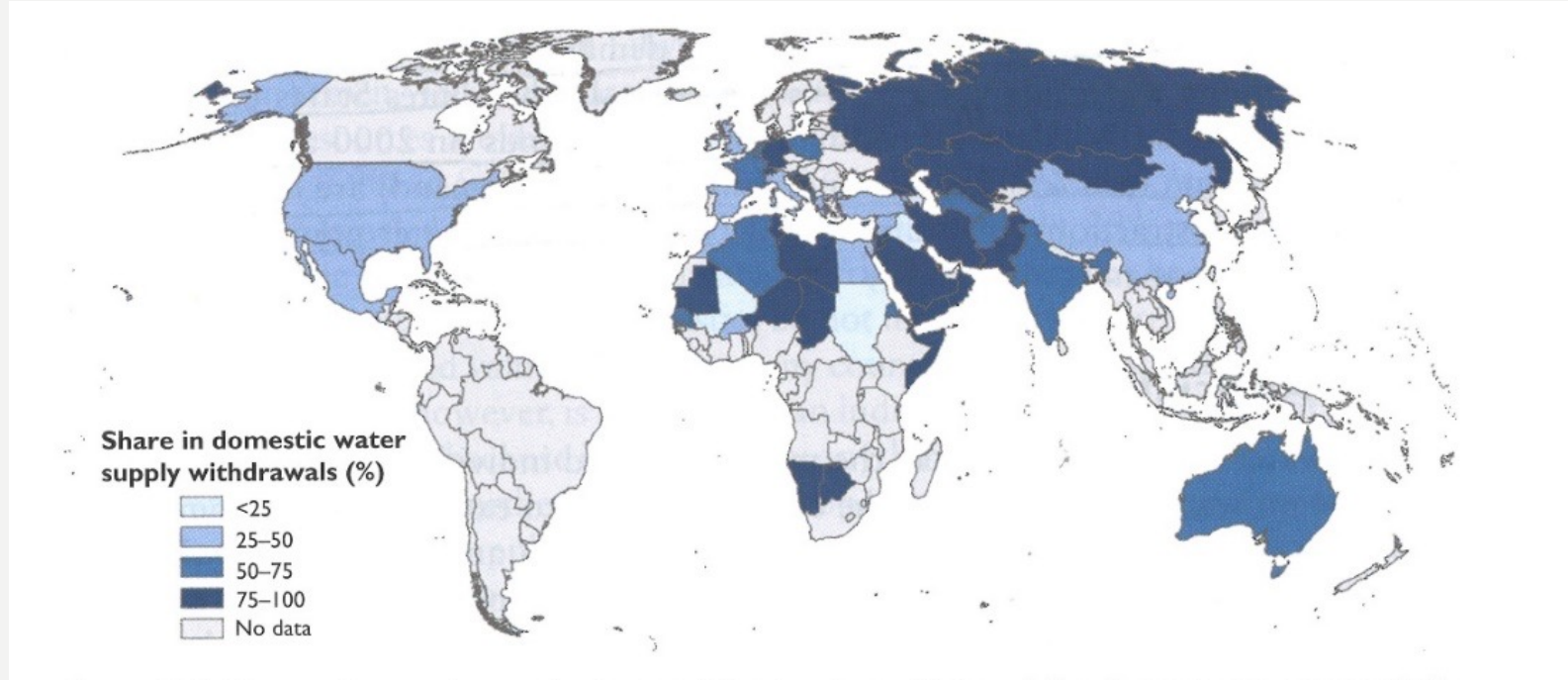
MODULE 1: GROUNDWATER INFORMATION AND SITING

ORIENTATION VIDEO





INTRODUCTION



GROUNDWATER DEPENDANCE

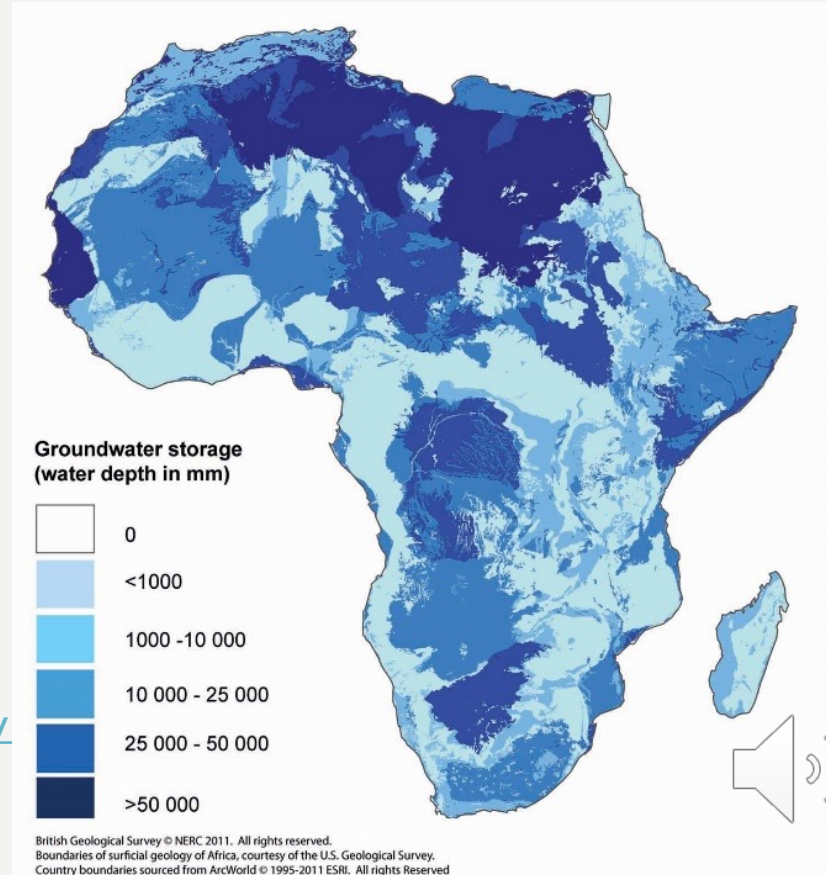
SOURCE: MARGET, J AND VAN DER GUN, J (2013) GROUNDWATER AROUND THE WORLD – A GEOGRAPHIC SYNOPSIS, CRC PRESS/BALKEMA, TAYLOR AND FRANCIS GROUP, LONDON)



GROUNDWATER STORAGE

GROUNDWATER STORAGE IN AFRICA

(SOURCE: MACDONALD, AM, BONSOR, HC, Ó DOCHARTAIGH, BÉ AND TAYLOR, RG (2012) QUANTITATIVE MAPS OF GROUNDWATER RESOURCES IN AFRICA, [ENVIRONMENTAL RESEARCH LETTERS](https://doi.org/10.1088/1748-9326/7/2/024009), AVAILABLE ON [HTTP://IOPSCIENCE.IOP.ORG/ARTICLE/10.1088/1748-9326/7/2/024009](http://iopscience.iop.org/article/10.1088/1748-9326/7/2/024009))



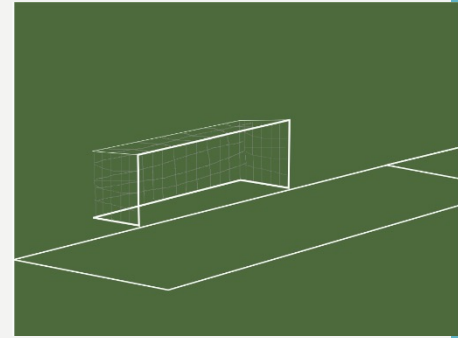
MODULE GOAL

This module introduces you to **groundwater information and borehole siting**. This module will provide you with:

- an appreciation of the importance of groundwater for drinking water supplies
- an understanding of key groundwater terms
- recognition of the value of groundwater data
- knowledge of good borehole siting and how it depends on the hydrogeological environment.

Module forum discussion:

- availability of information on groundwater
- different stages of borehole siting.



ARE YOU NEW TO THE TOPIC OF GROUNDWATER?

To learn more, please watch these two SHORT introductory videos:

- [What is Groundwater?](#)
- [Introducing groundwater](#)

To find out more, you can also consult these documents:

- [Groundwater](#) by the United States Geological Survey, Water Science School
- [Groundwater in Wikipedia](#)

Training manual on groundwater resources management:

[Integration of Groundwater Management into Transboundary Organizations in Africa](#)

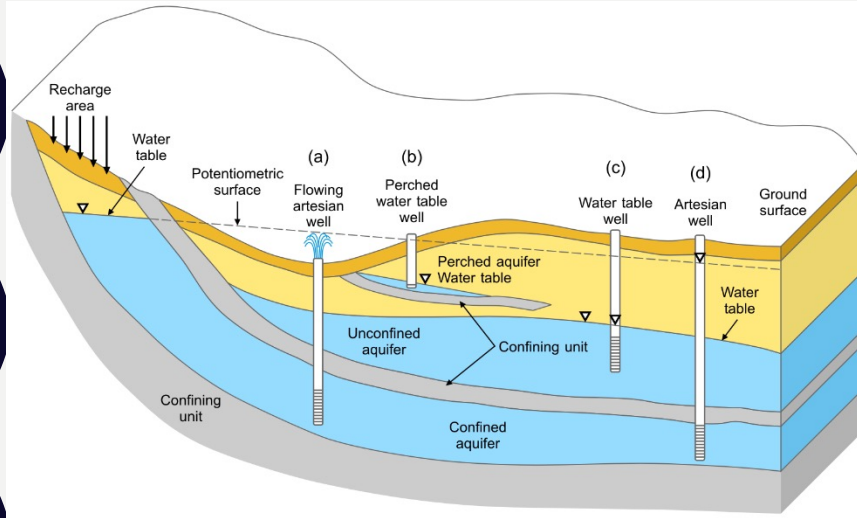


GROUNDWATER INFORMATION

GROUNDWATER - SCHEMATIC IMAGE

(SOURCE: TODD DK AND MAYS LW. 2005. *GROUNDWATER HYDROLOGY*. 3RD EDITION, WILEY.)

MANDATORY MATERIAL

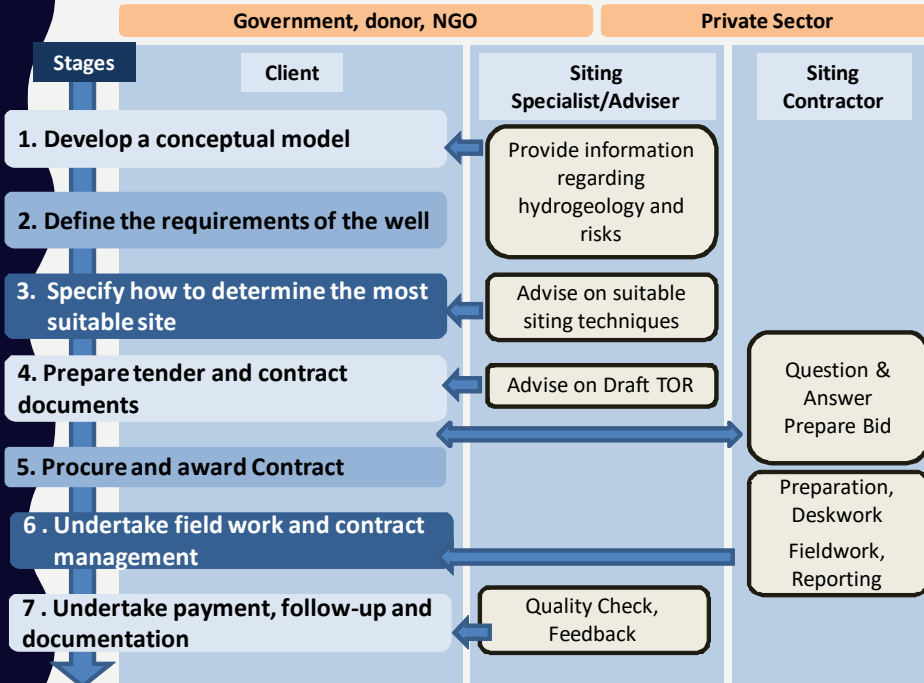


- UNESCO: [Groundwater, the Hidden Resource](#)
- UNICEF/Skat Foundation: [Value Groundwater data and use groundwater information in Professional Water Well Drilling: A UNICEF Guidance Note](#) (pp 17 to 21)



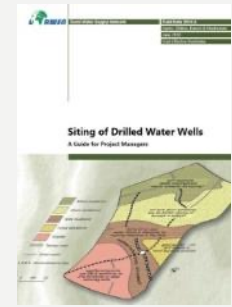
BOREHOLE SITING

WORK FLOW FOR BOREHOLE SITING

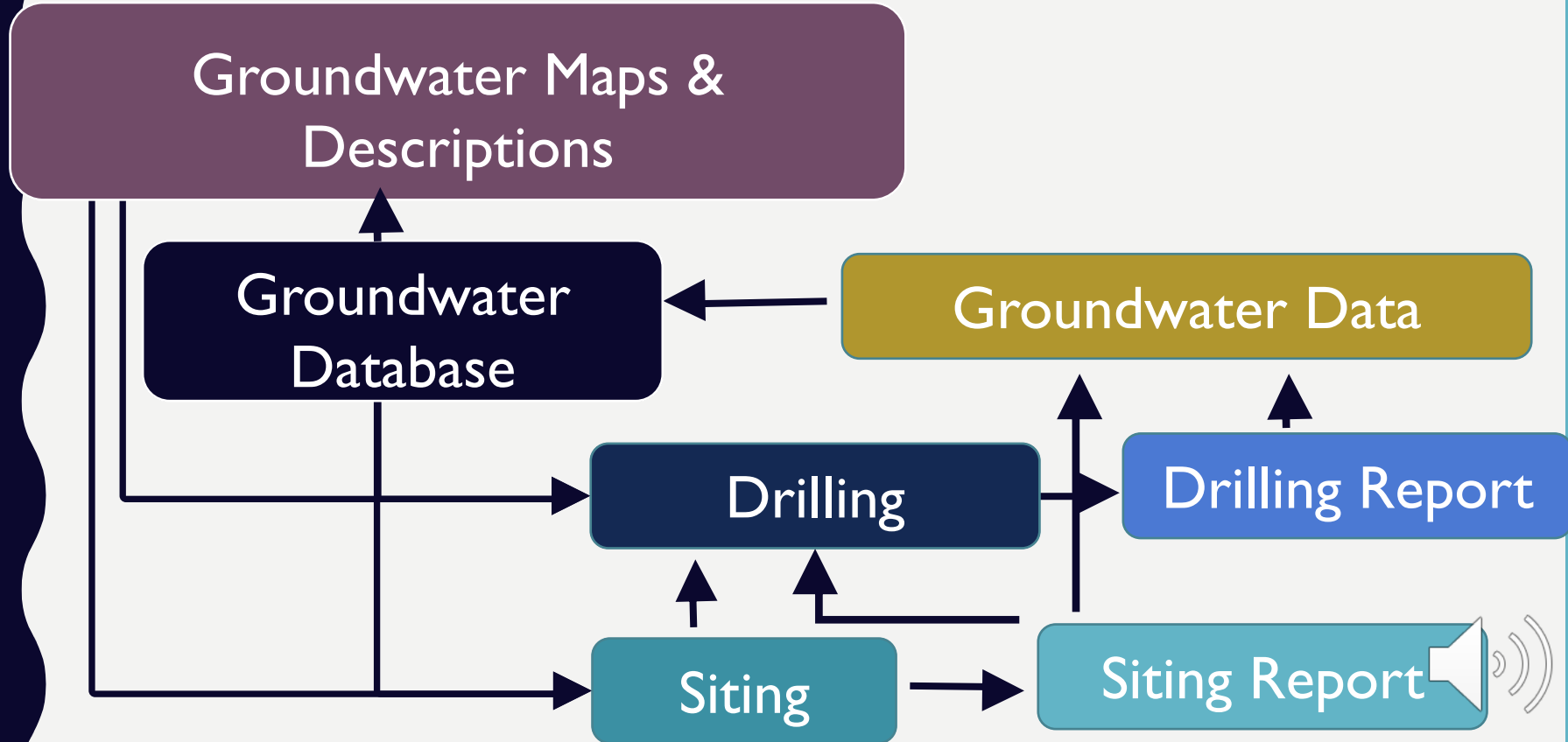


MANDATORY MATERIAL

- RWSN: [Drilling, the importance of good borehole siting](#)
- RWSN: [Siting of Drilled Water Wells. A Guide for Project Managers](#)



DATA MATTERS



KEY POINTS



1. Groundwater is crucial for domestic water supplies and can be a reliable resource.
2. Groundwater quantity and quality varies.
3. Groundwater scarcity, pollution and environmental sustainability are concerns.
4. Poor understanding undermines the potential of groundwater to contribute to development.
5. Successful boreholes require reliable information and professional siting
6. If properly located (and well constructed), a borehole can provide a good water supply.

