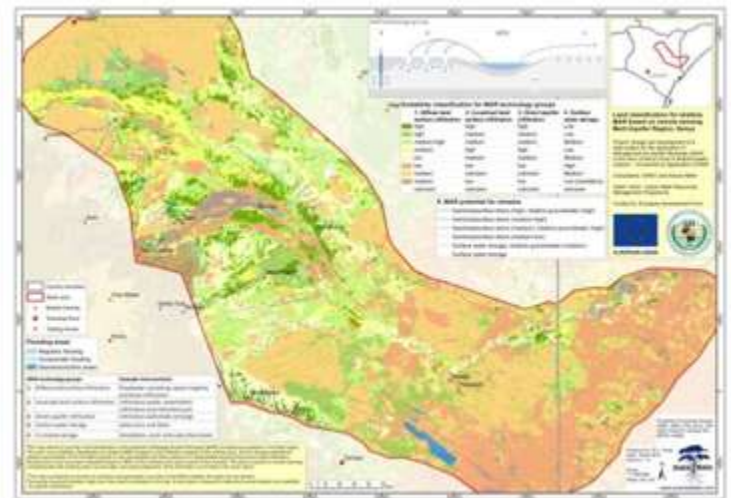
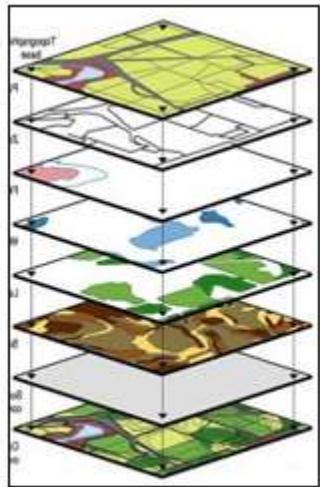
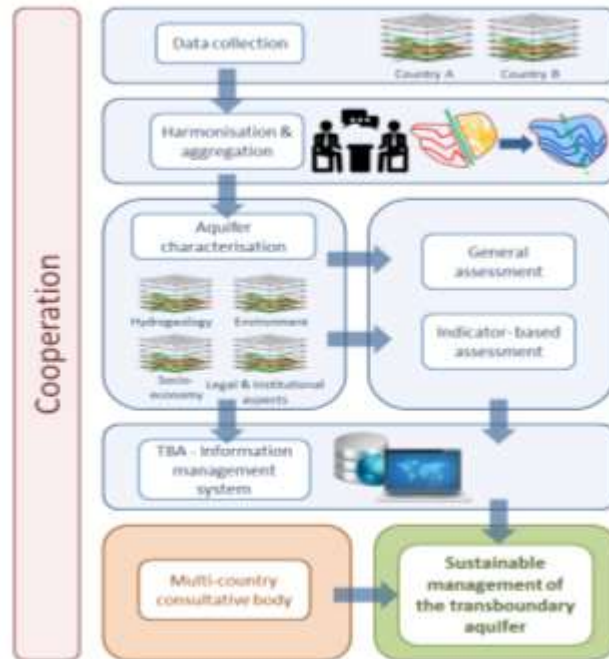


Groundwater data sharing: the challenge of spatio-temporal data

Arnaud Sterckx and Claudia Ruz Vargas, IWRA Conference, October 2020



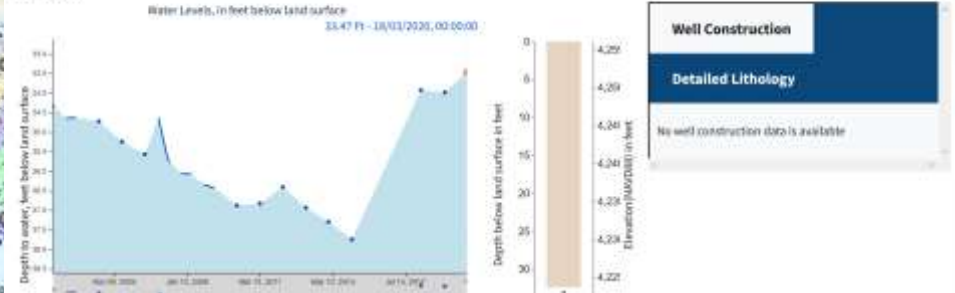




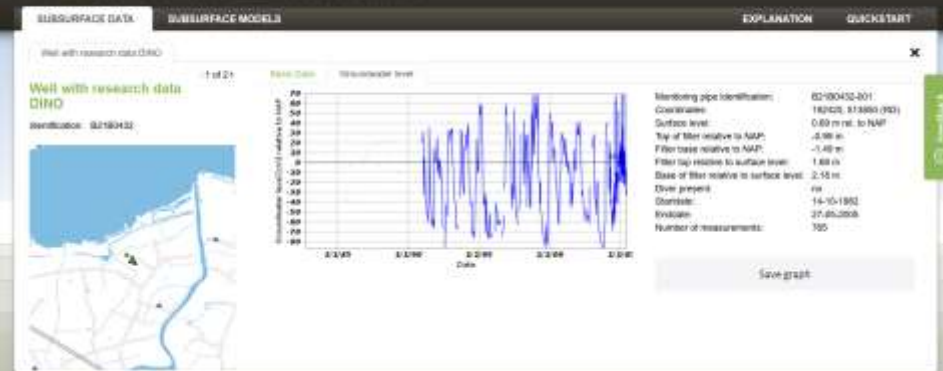
19N 54W 18DDDD:G-100670A

University of Nebraska-Lincoln, Conservation and Survey Division

Located in Banner County, Nebraska, this groundwater monitoring location is associated with a water well in the High Plains aquifer.



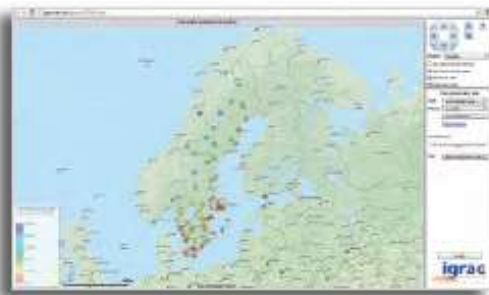
<https://cida.usgs.gov/ngwmn/index.jsp>



<https://www.dinoloket.nl/en/subsurface-data>



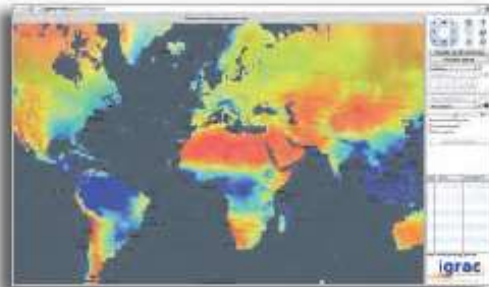
<https://www.dov.vlaanderen.be/portaal/?module=verkenner>



1. POINT MEASUREMENTS



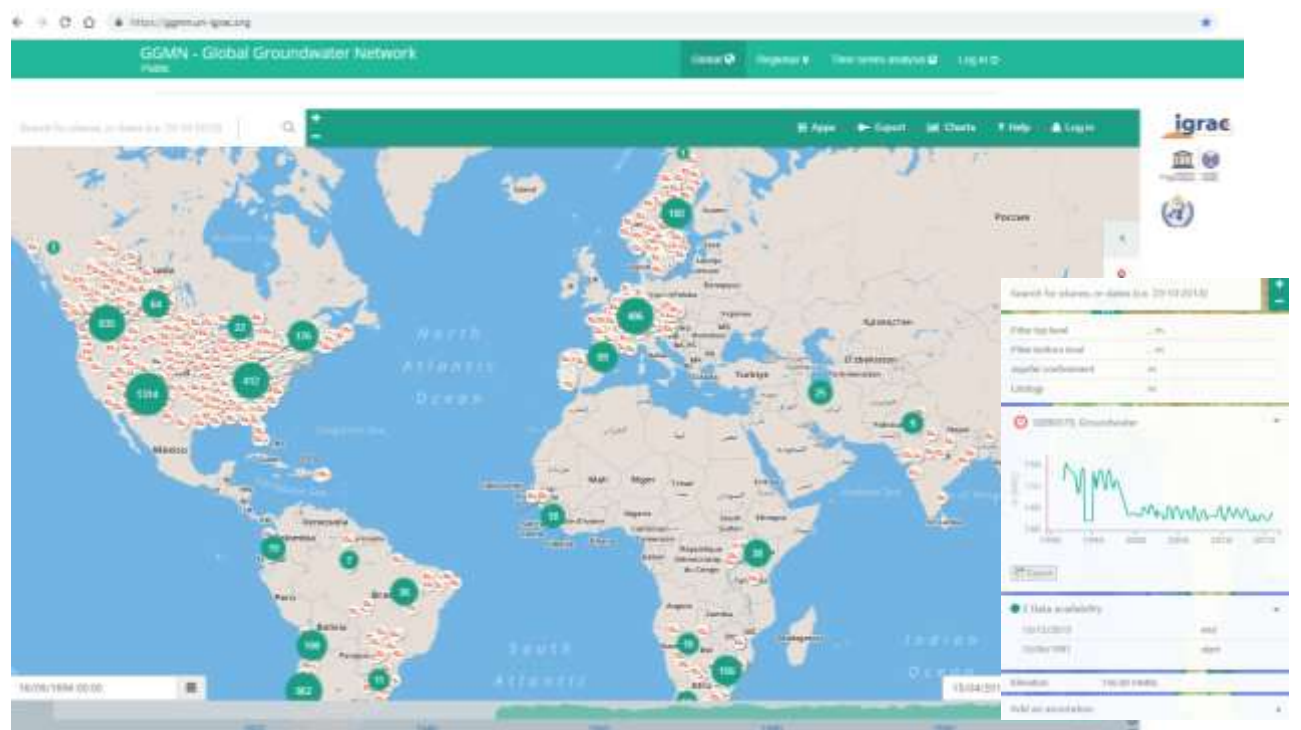
2. AGGREGATE GROUNDWATER DATA



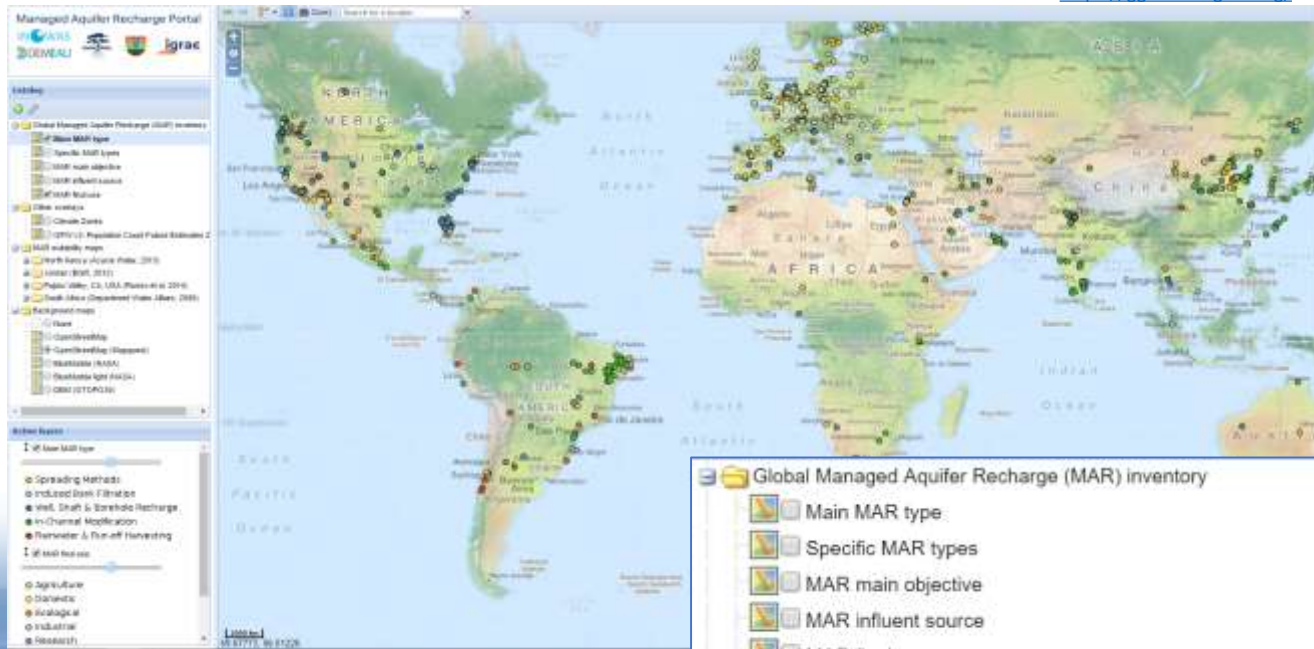
3. PROXY INFORMATION



4. TIME SERIES ANALYSIS



<https://ggmn.un-igrac.org/>



<https://www.un-igrac.org/global-groundwater-information-system-ggis>

- Global Managed Aquifer Recharge (MAR) inventory
- Main MAR type
 - Specific MAR types
 - MAR main objective
 - MAR influent source
 - MAR final use

[Home](#) [Layers](#) [Maps](#) [Library](#) [People](#) [Groups](#)

Welcome to the Water Information Network System

by the International Hydrological Programme of UNESCO

IHP WINS

[About Us](#) [Terms of use](#) [Get Started](#) [Powered by GeoNode](#)

Explore Maps

Create a New Map

4 Maps found

Selected Maps: No list items selected. Use the selection fields to add.

Filters: TEXT

Search: [Search]

KEYWORDS: [Keywords]

CATEGORIES: [Categories]

Boreholes in the Stampriet Transboundary Aquifer System (STAS)
 This map shows the boreholes in the Stampriet Transboundary Aquifer System (STAS) which is shared between Botswana, Namibia and South Africa.
 9 Oct 2018 • 128 • 0 • 0 • View Map

[About Us](#) [Terms of use](#) [Get Started](#) [Powered by GeoNode](#)

<http://ihp-wins.unesco.org/>

ORASECOM GIS Server

[Data](#) [Maps](#) [About](#)

Welcome to the Orange-Senqu River Basin GIS Server. This server shares spatial data and maps related to the Orange-Senqu River Basin under the custodianship of The Orange-Senqu River Commission (OSRC) to the benefit of all member Basin States, i.e. Botswana, Lesotho, Namibia and South Africa. More information and data on the Orange-Senqu River Basin can be found on the ORASECOM Water Information System (OWIS).

Explore Maps

Create a New Map

5 Maps found

Selected Maps: Add maps through the "checkboxes".

Filters: TEXT

Search by text: [Search]

KEYWORDS: [Keywords]

CATEGORIES: [Categories]

Stampriet Transboundary Aquifer System Land Use
 Name: Kape, 11 Nov 2019 • 67 • 0 • 0 • View Map

<http://gis.orasecom.org/>

GEOGRAPHICAL DATA REPOSITORY

[Data](#) [Maps](#) [About](#)

642 Layers 78 Maps 0 Services 424 Users

Explore Maps

Create a New Map

78 Maps found

Selected Maps: Add maps through the "checkboxes".

Filters: TEXT

Search by text: [Search]

KEYWORDS: [Keywords]

CATEGORIES: [Categories]

Ghana_Flow_Gauges_Sept2020
 19 Sep 2020 • 11 • 0 • 0 • View Map

<https://geonode.wfp.org/>



SADC
Hydrogeological Map & Atlas

GROUNDWATER MANAGEMENT INSTITUTE

Data Maps Users More

Search Register Sign in

Selection

No list items selected. Use the selection fields to add.

Create a Map

Filters Clear

TEXT

Search


KEYWORDS

TYPE

Raster Layers 9

Vector Layers 95

113 Layers found



Cross-sections of the hydrogeological map of Swaziland

This shapefile results from the georeferencing and vectorization of the Hydrogeological map of Swaziland, scale 1:250 000, published in 1991 by the Canadian International Development Agency and the Kingdom of Swaziland Department of Geological Surveys and Mines. The map was georeferenced and vector...

IGRAC Admin 13 Oct 2020 0 0 0

Create a Map

☆

📅

📄

View our latest and current available vacancies or tenders with SADC-GMI. Register here for all SADC-GMI's upcoming Events and Conferences. Read or download our latest newsletters and important publications.

<https://sadc-gip.org/>

[Data](#) | [Map Viewers](#) | [About](#) | [Disclaimer and License](#)

[admin](#)

The Global Groundwater Information System (GGIS)

is an interactive, web-based portal to groundwater-related information and knowledge.

The GGIS consists of several modules structured around various themes. Each module has its own map-based viewer with underlying database to allow storing and visualizing geospatial data in a systematic way. The following [disclaimer and license](#) are applicable to the GGIS, as well as to all other IGRAC products.

[Visit IGRAC Website](#)
[Hide this banner](#)

Explore the viewers

Study Area of Ramotswa Project - Phase 2

The map of study area of Ramotswa project - phase 2.

Borehole Database Madagascar

This map contains the borehole database compiled by the SADC Hydrogeological Mapping project (2010).

Settlements

BW digitized by IBM from Google Earth SA. Statistics South Africa

[Data](#) | [Map Viewers](#) | [About](#) | [Disclaimer and License](#)

[admin](#)

Explore Layers

[Upload Layers](#)

Selection

No list items selected. Use the selection fields to add.

[Create a Map](#)

Filters Clear

TEXT

Search

KEYWORDS

TYPE

20 Layers found

Groundwater_Well

No abstract provided

admin | 24 Jun 2020 | 16 views | 0 likes | 0 stars | [Create a Map](#)

[View all Layers](#)

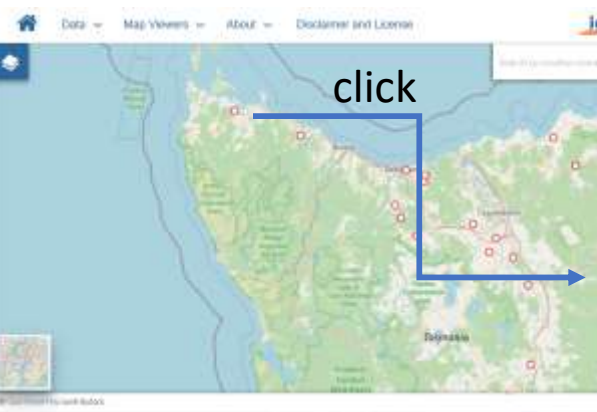
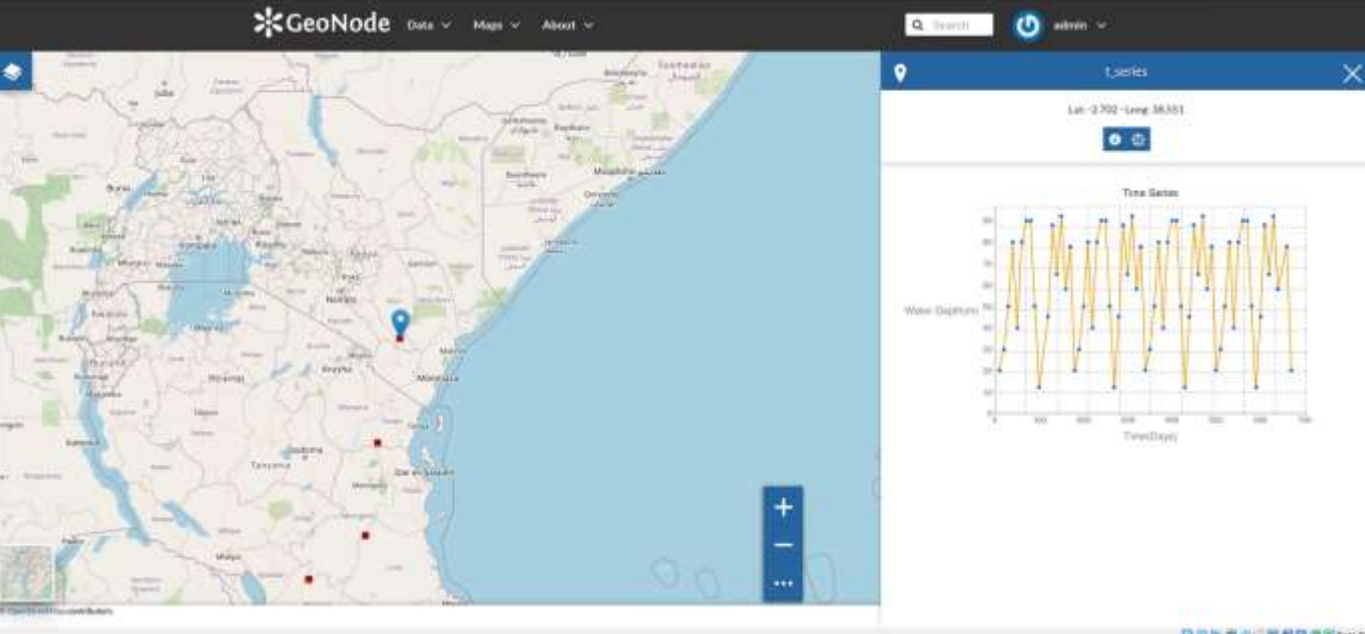
Brought to you by Web site developed by (2019) Mozambique

[English](#)

TinyMCE Fiddle

```

function type="text/javascript">
function iigManager_jsdn: "function: iigManager_jsdn";
// Add a toolbar that shows a dialog
editor.addButton('showDialog', {
  icon: 'dialog',
  tooltip: 'Show Dialog',
  onclick: function() {
    // Show a dialog
    var dialog = new dialog({
      title: 'Show Dialog',
      content: '<div style="text-align: center;">
        <div style="border: 1px solid black; padding: 5px; display: inline-block;">
          IIG Manager
        </div>
      </div>
    });
    dialog.show();
  }
});
  
```



Groundwater Point Form

General Information

Description	
Information	
Latitude	-40.96388
Longitude	147.541722
Elevation	0.0 m
Country	
Address	

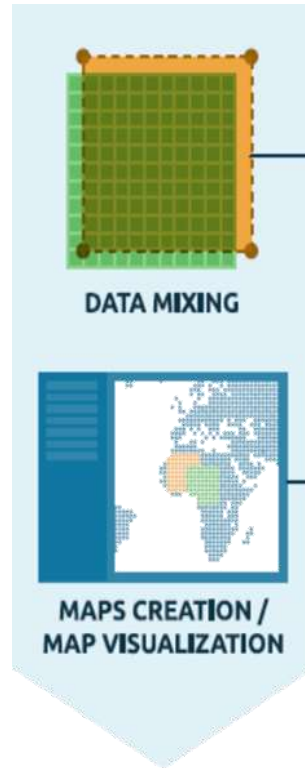
Go to form

Location map showing Tasmania, Australia.



django

OGC[®]
Making location count.



QGIS



GitHub

The Global Groundwater Information System (GGIS)

Thank you for your attention



International Groundwater Resources Assessment Centre

info@un-igrac.org

www.un-igrac.org

Delft, The Netherlands



United Nations
Educational, Scientific and
Cultural Organization



International
Hydrological
Programme



World Meteorological
Organization



Government of
The Netherlands