

# Challenges and good practices about the exchange of data and information on transboundary groundwater, with a focus on Central Asia

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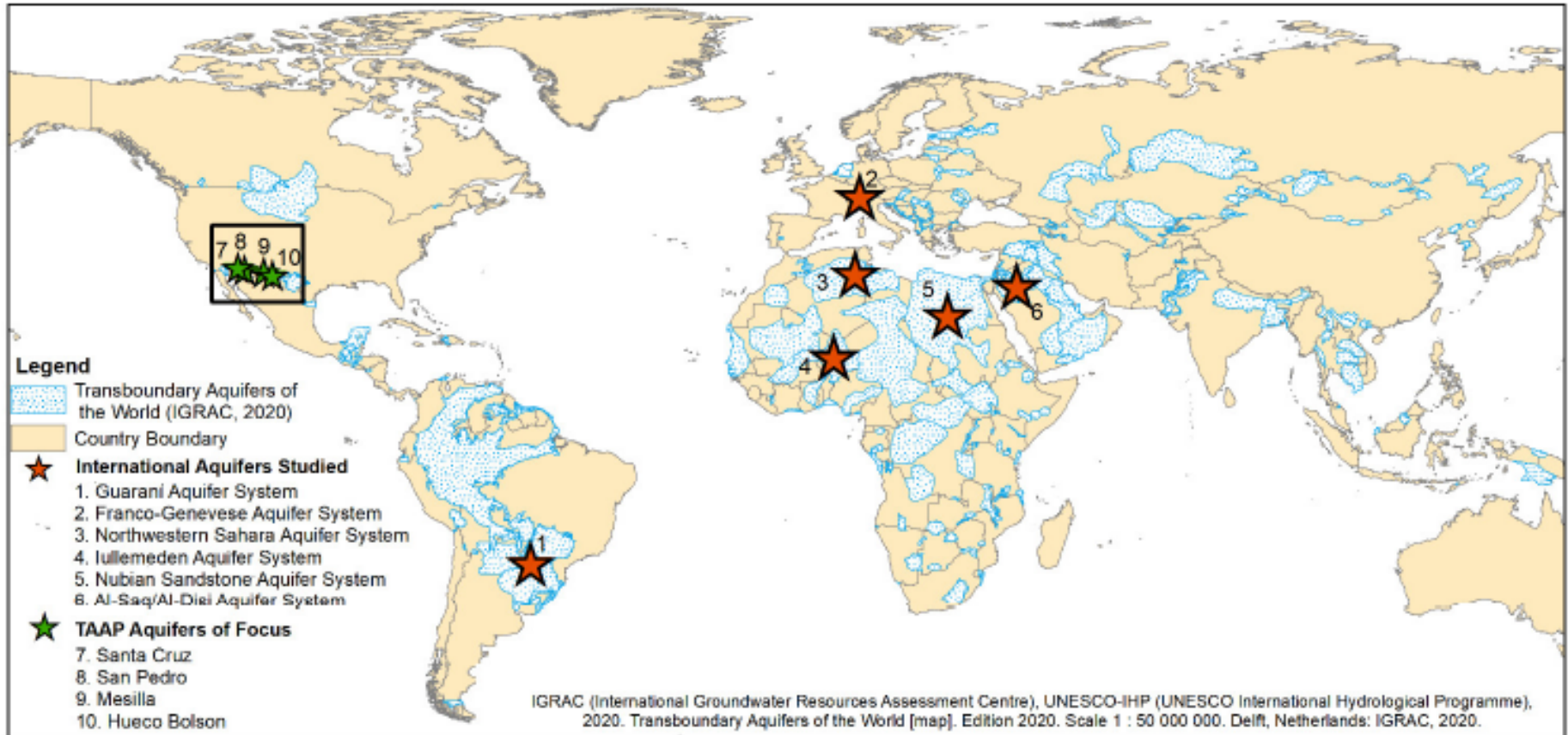
World Meteorological  
Organization



Government of  
The Netherlands

# The status of TBA cooperation

- Only a handful of groundwater-specific mechanisms of cooperation exist



Tapia-Villaseñor, E.M.; Megdal, S.B. (2021)  
<https://doi.org/10.3390/w13040530>

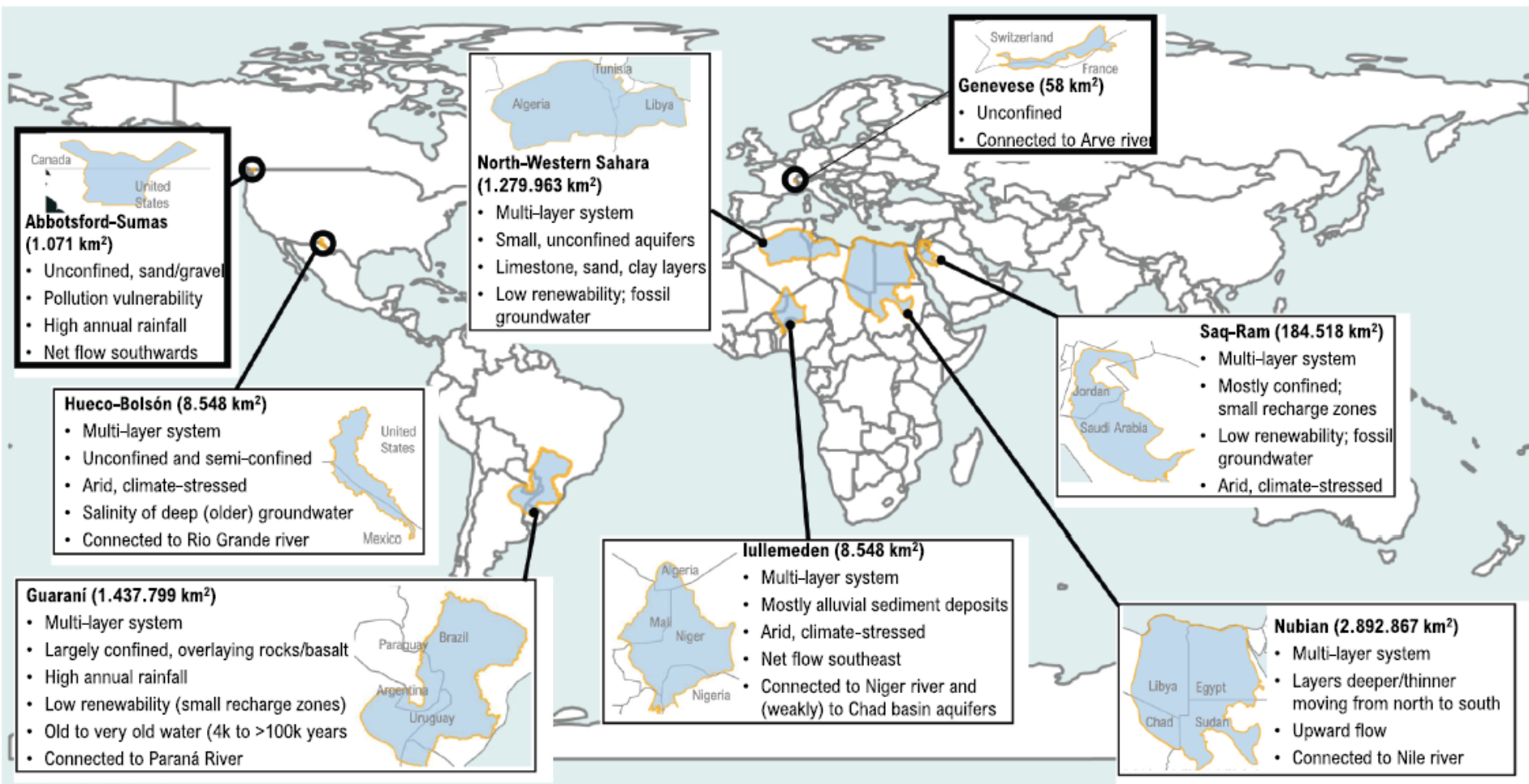


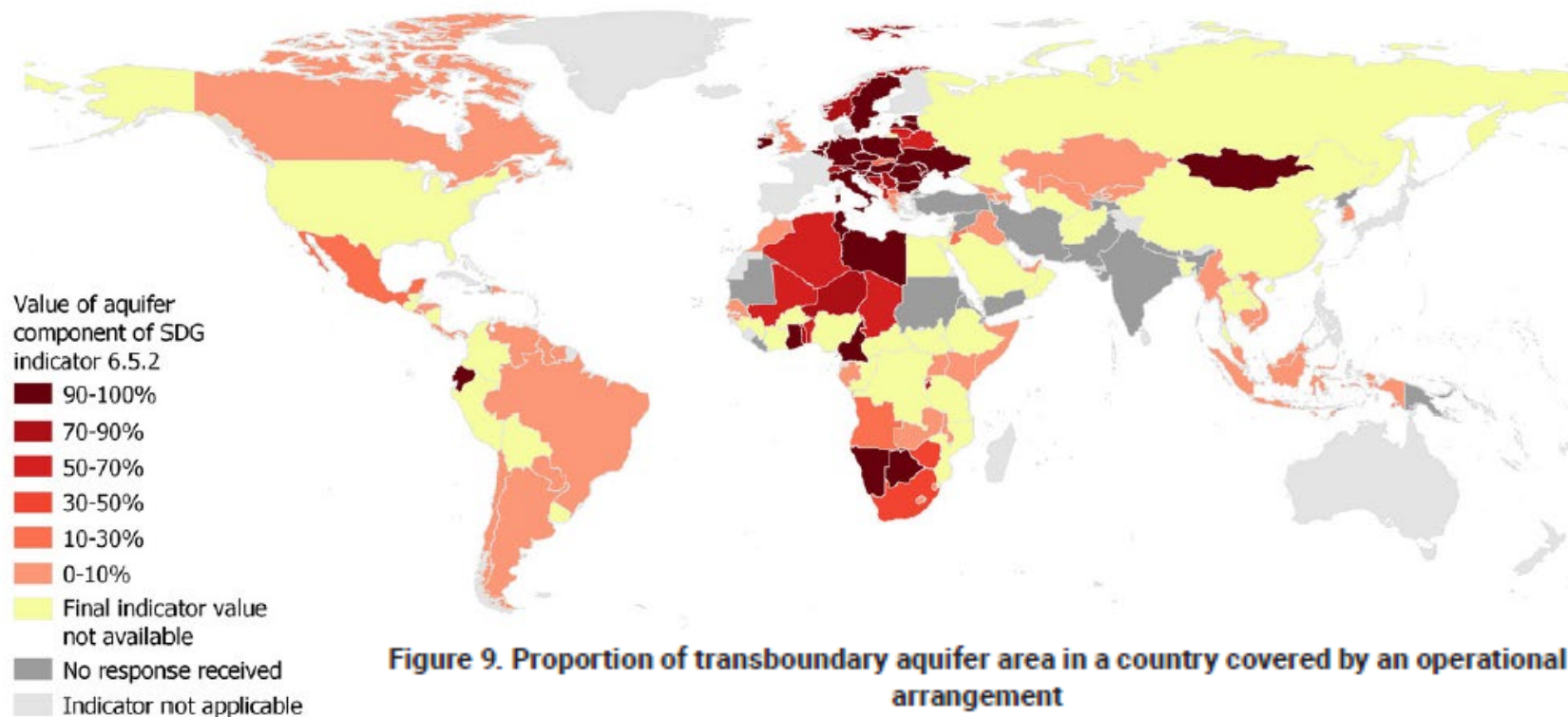
Figure 1. Geographical location and key attributes of the case studies based on the Transboundary Aquifers of the World Map (IGRAC, 2021)

Maya Velis, Kirstin I. Conti & Frank Biermann (2022)  
 DOI: 10.1080/02508060.2022.2038925

Agreements		
1	Genevois Aquifer Convention	France, Switzerland
2	Carboniferous Limestone Convention	Belgium, France
3	Nubian Sandstone Aquifer Waters Constitution	Chad, Egypt, Libya, Sudan and Tunisia
4	Northwestern Sahara Aquifer System Agreement	Algeria, Libya, Tunisia
5	Guarani Aquifer Agreement	Argentina, Brazil, Paraguay and Uruguay
6	Iullemeden MoU	Algeria, Benin, Burkina Faso, Mali, Mauritania, Niger, Nigeria
7	Al-Sag/Al-Disi Agreement	Jordan, Saudi Arabia

Arrangements		
1	Washington and British Columbia Memorandum of Agreement	Canada, USA
2	Juarez El Paso MoU	Mexico, USA
3	Salto Concordia MoU	Argentina, Uruguay
4	ORASECOM Stampriet resolution	Botswana, Namibia, South Africa
5	Ocatepeque – Citalá Sol	Honduras, El Salvador

- Status of SDG 6.5.2 reporting (2021)



According to the SDG indicator 6.5.2 methodology, an aquifer can be considered in the computation of the indicator value if: i) it is covered by an aquifer-specific arrangement; ii) it is covered under arrangements initially developed for a particular river basin that also include groundwater/aquifers, or in some cases, bilateral arrangements covering all transboundary waters.<sup>23</sup>

Only 12 countries report having a total of eight aquifer-specific arrangements in place.<sup>24,25</sup> In most cases, countries reported under the second modality.

UNECE & UNESCO-IHP (2021)  
[https://unece.org/sites/default/files/2021-12/SDG652\\_2021\\_2nd\\_Progress\\_Report\\_ENG\\_web.pdf](https://unece.org/sites/default/files/2021-12/SDG652_2021_2nd_Progress_Report_ENG_web.pdf)

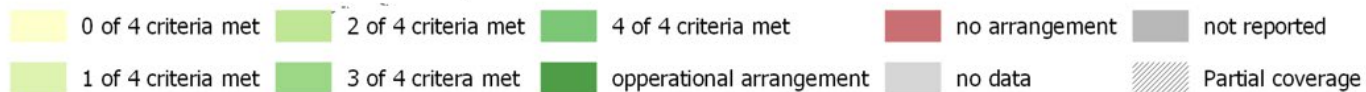
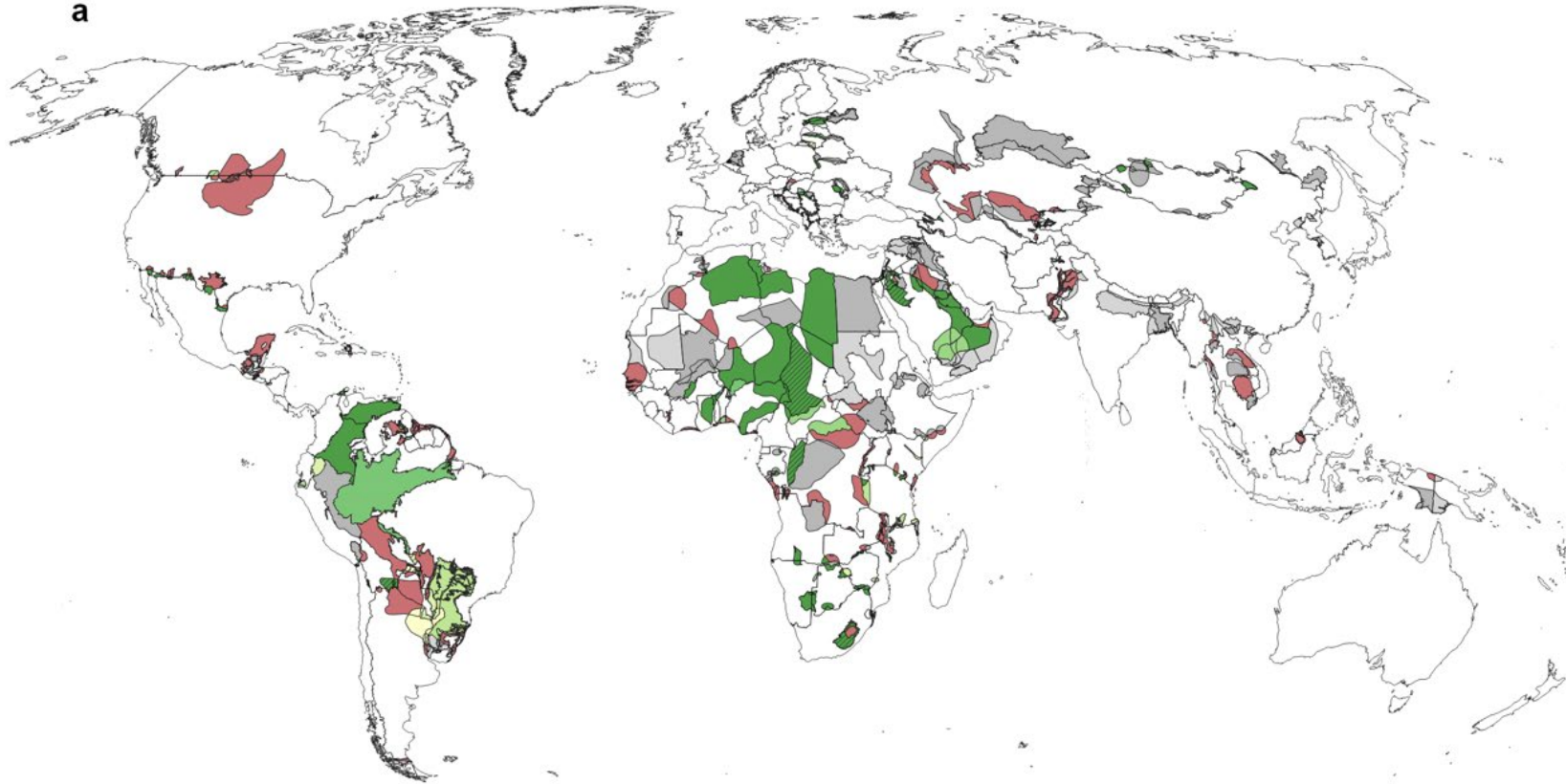
- These are:
  - i. the North-Western Sahara Aquifer System Consultation Mechanism;
  - ii. the Guaraní Aquifer Agreement;
  - iii. the Nubian Sandstone Aquifer System Board of Directors (Joint Authority for the Study and Development of the Nubian Sandstone Aquifer System, JASAD-NSAS);
  - iv. *the Statement of Intent on the Governance of the Ocotepeque – Citalá Aquifer;*
  - v. the Agreement over the Al-Sag /Al-Disi Aquifer;
  - vi. *the Cooperation Agreement between the Lithuanian Geological Survey under the Ministry of Environment (LGT) and the Latvian Environment, Geology and Meteorology Centre (LVĢMC) on cross-border groundwater monitoring (2016);*
  - vii. the 2008 Convention on the Protection, Utilization, Recharge and Monitoring of the Franco-Swiss Genevois Aquifer;
  - viii. and the Transboundary Aquifer Assessment Program between Mexico and the U.S. (2009).
  - ix. In addition, the Consultation Mechanism for the Integrated Management of the Water Resources of the Iullemeden and Taoudeni/Tanezrouft Aquifer Systems (ITTAS), initiated with the signing of a memorandum of understanding by Algeria, Burkina Faso, Benin, Niger, Nigeria, Mali, Mauritania, is also mentioned by several countries.

- Several cooperation mechanisms are not efficient. Many stem from externally funded projects. When the project stops, so does the cooperation (Sindico, 2020).
- Apart from these prominent examples of cooperation mechanisms, several TBAs have been subject to project activities to advance TBA cooperation. There too, continuation of cooperation beyond projects is challenging.
- Insufficient cooperation results from low capacity and/or low political willingness.

# The situation in Central Asia

- Once disaggregated, SDG 6.5.2 reports indicate that cooperation on transboundary groundwater is minimal.

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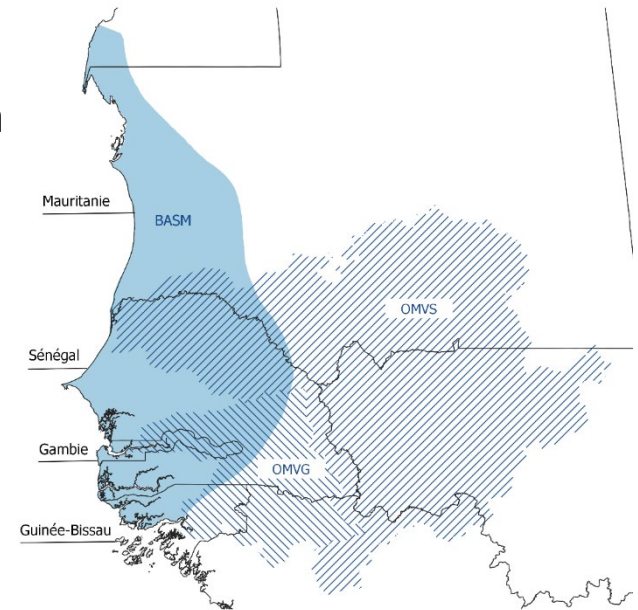
- The assessment of TBAs in the region relies on activities that are several years old, such as UNECE (2011), Zaisheng et al. (2013) or TWAP (2015).
- Some shapes suggest that TBAs are only loosely delineated.



# The way forward

- Secure political support at the highest level

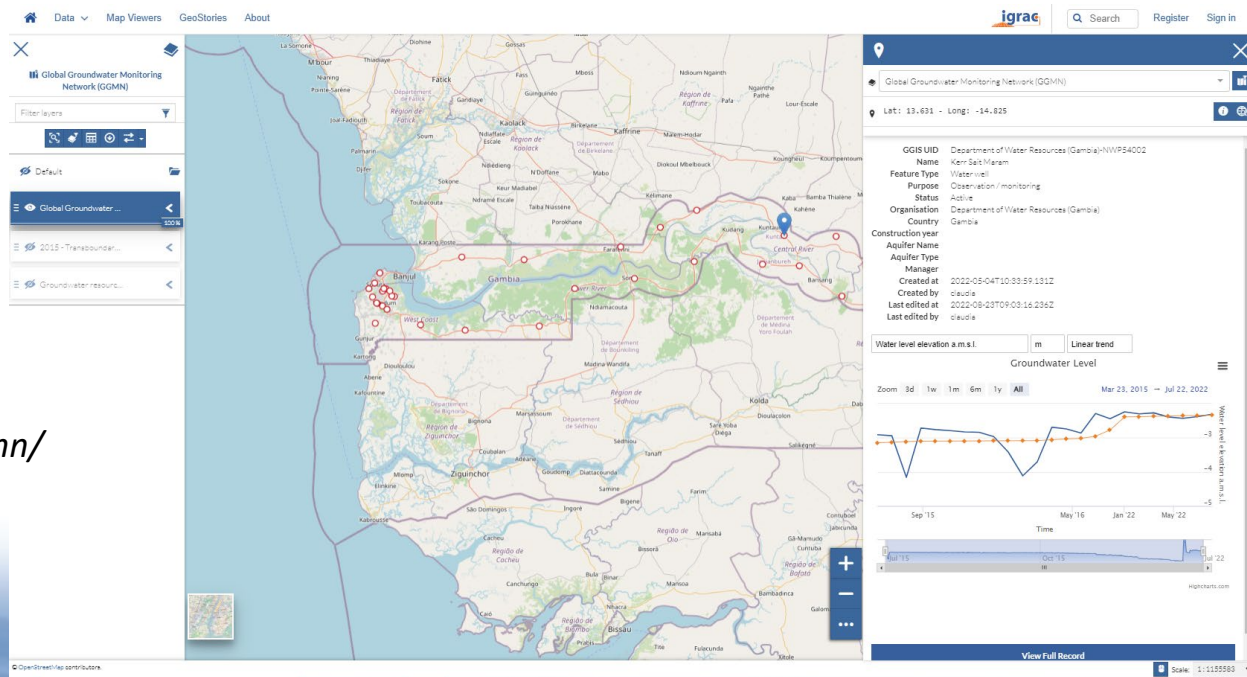
## Example of the Senegalo-Mauritanian Aquifer Basin



September 2021: Ministerial declaration on transboundary cooperation in the SMAB, strengthening the mandate of the Regional Working Group to :

- Ensure cooperation through data sharing
- Negotiate a legal and institutional framework of cooperation
- Coordinate activities and fundraising

- Share data, and adopt open data policies if possible.
- Open data can be used by a wide range of users (e.g. research, consultancy and private sector, other governmental organizations, NGOs) and at different levels (e.g. national, sub-national and regional).
- Open data doesn't necessarily require expensive IT infrastructure.
- On the other hand, not having to handle individual data requests is a significant time-saver for both data holding institutions and data users.
- Open data policies support transparency and participation of stakeholders in water management strategies.



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

*Thank you for your attention!*



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