The KINDRA project contribution: Making groundwater visible

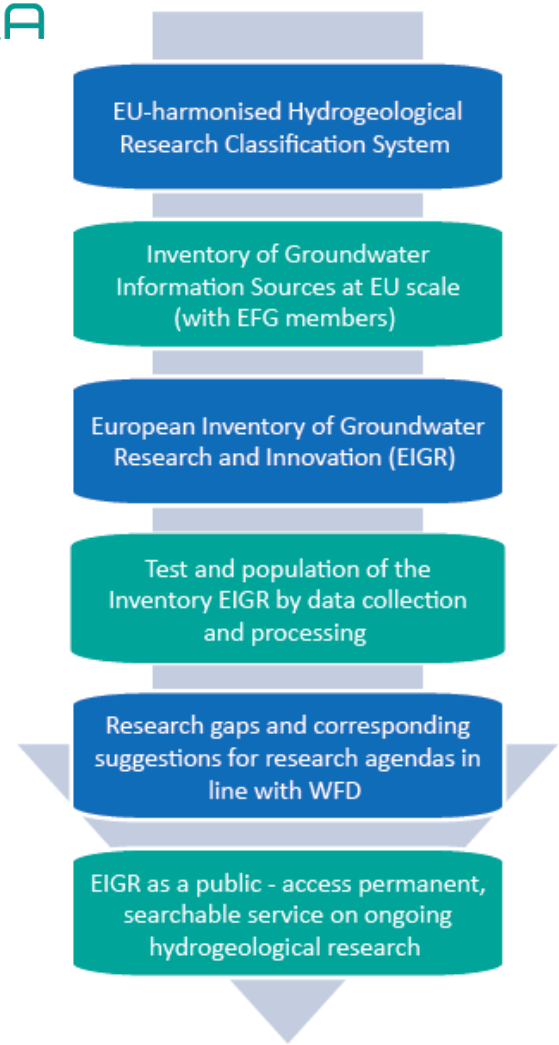
Technical/Scientific session –
Villa Colombella, November 22nd 2018

Marco Petitta
Sapienza University of Rome, Italy
International Association of Hydrogeologists

Project aims (2015-2018)

To create an inventory of GW knowledge and use the inventory to identify critical research challenges in line with the implementation of the WFD and new innovation areas within integrated water resources management based on the latest research.

- **Making groundwater visible:**
  by dissemination activity along the project, but also raising its role on technical and decision-makers tables inside the "water" community
- **Making groundwater accessible:**
  By classifying groundwater research & knowledge, intersecting themes in a multidisciplinary approach with reference to societal challenges, and collecting existing information in a public access metadata tool (EIGR)
- **Making groundwater treasured:**
  By analyzing gaps&trends in groundwater research & knowledge, to identify actions aimed at recognize the fundamental role of groundwater resources in Europe (policy support, research development, knowledge sharing, etc.)



Classification of GW research

A list of about 280 keywords have been organized in a ***tree hierarchy***, identifying ***three main categories***: Societal Challenges (SC), Operational Actions (OA) and Research Topics (RT). In each of these three categories, ***5 overarching groups*** have been defined for easy overview of main research areas, representing level 1. The intersections among SC, OA and RT define the coordinates of each information groundwater related

Societal Challenges

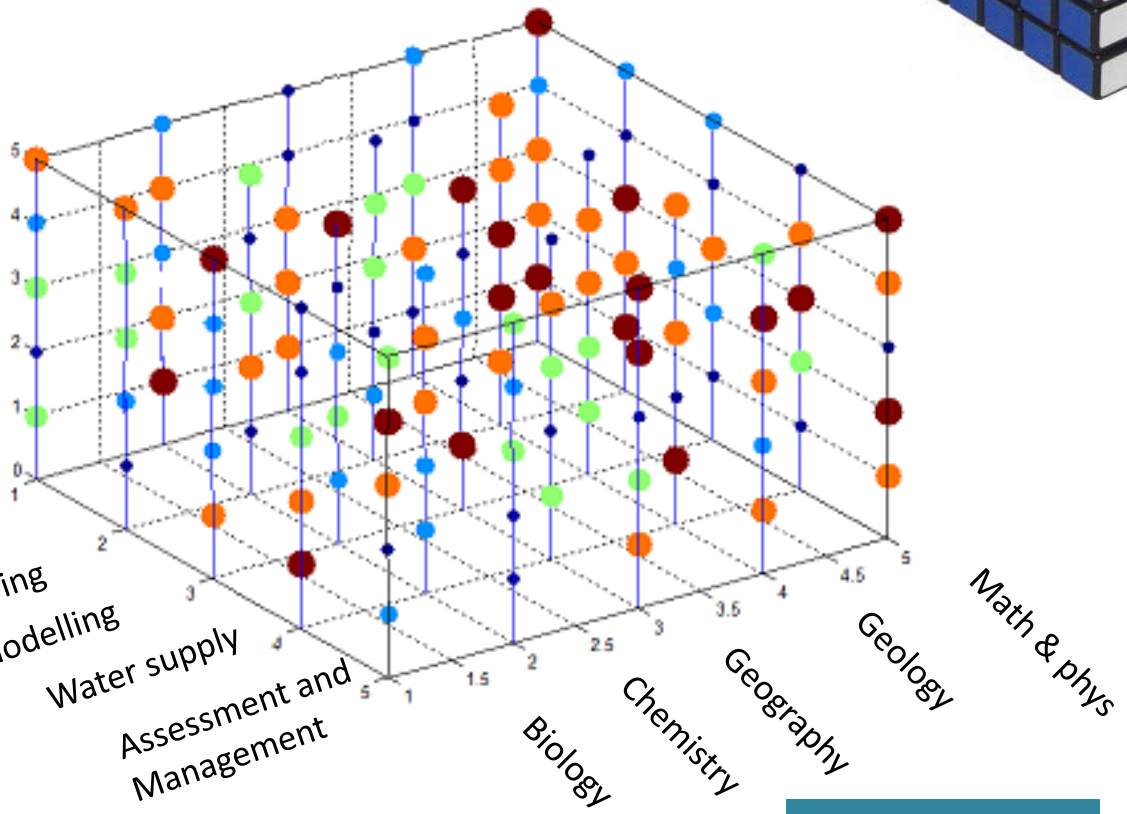
Policy & innovation

Climate & environ.

Energy

Food

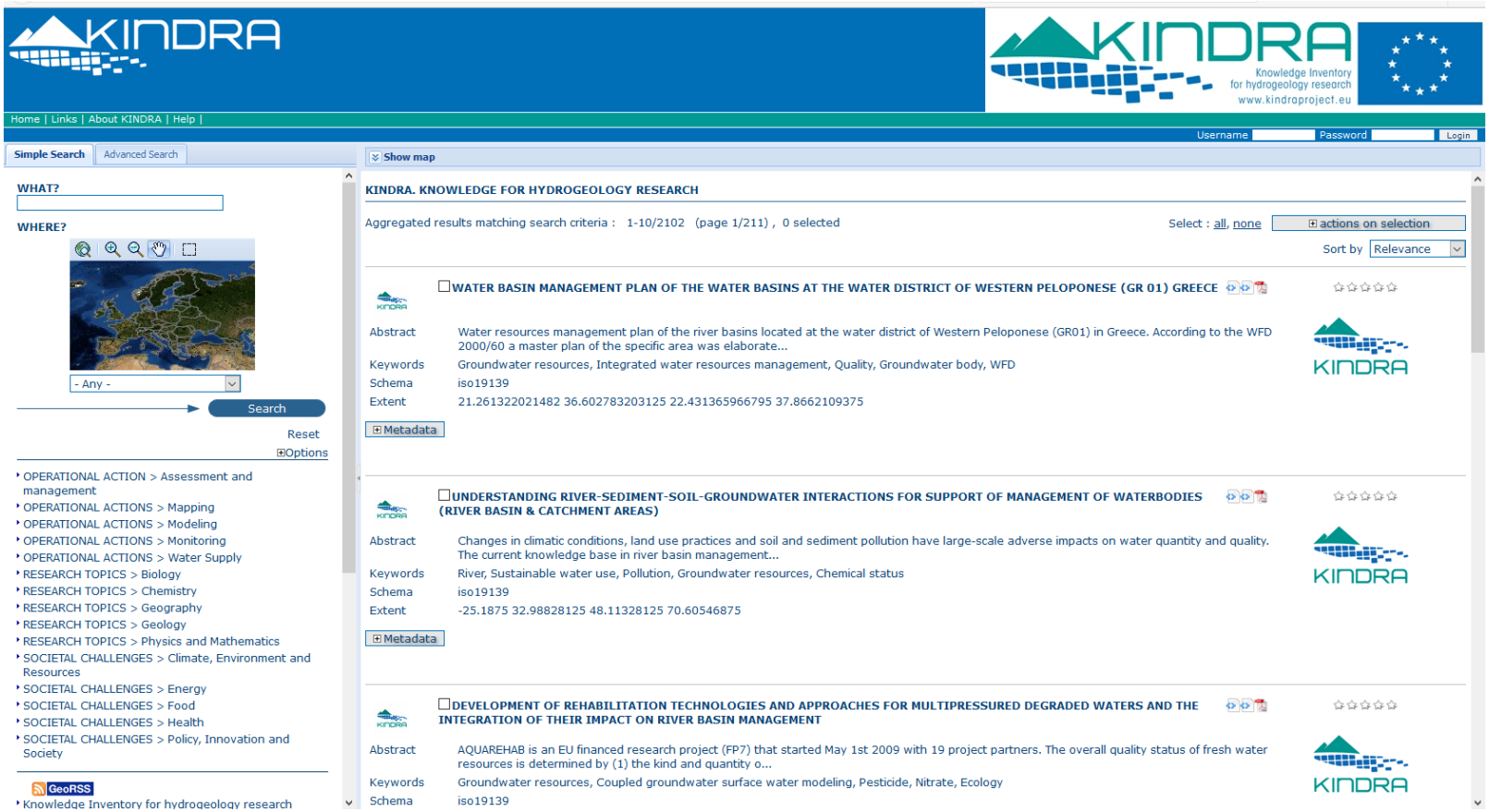
Health



Operational Actions

Research Topics

The European Inventory of Groundwater Research EIGR



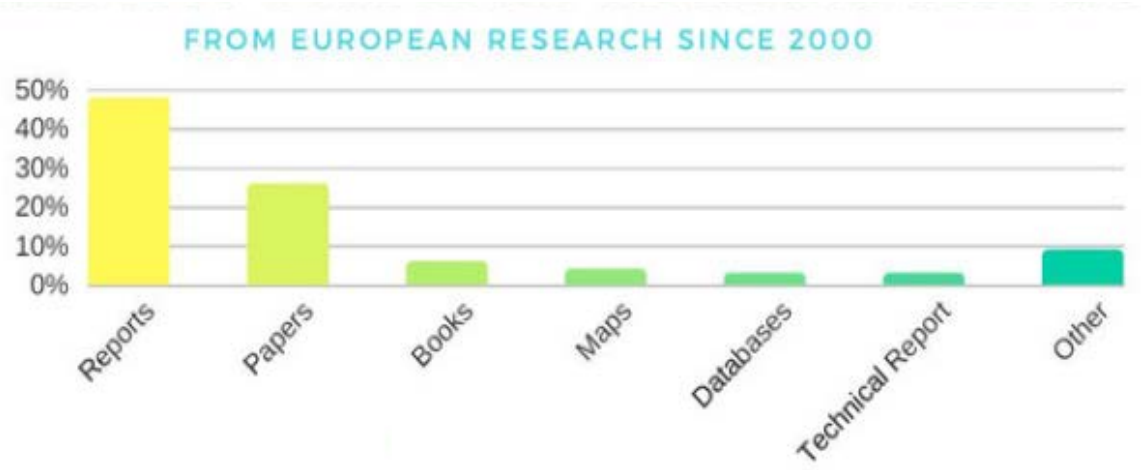
http://kindraproject.eu/eigr/

EIGR User Interface: based on Geonetworks.

EIGR: not only research but also knowledge

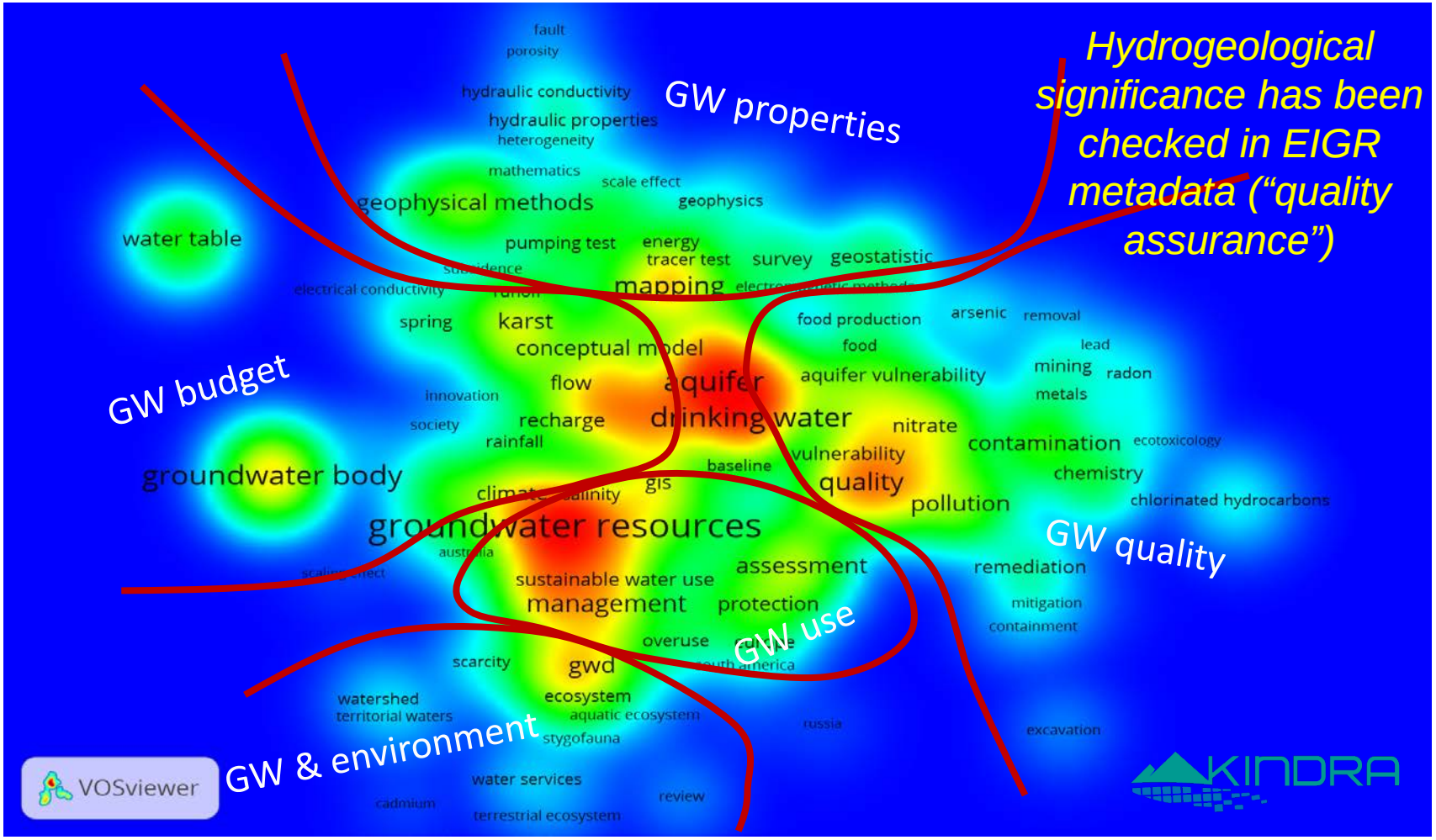
Not only peer review papers, but mainly reports, guidelines, databases, etc.

Grey and national literature are included!



- **Databases**
- **Surveys including relevant data and maps**
- **Consulting reports for ministries and other authorities**
- **Peer review papers**
- **Technical reports and guidances**
- **Books and book chapters, monographs, etc.**
- **Research and applied research projects (e.g. EU and Interreg projects)**

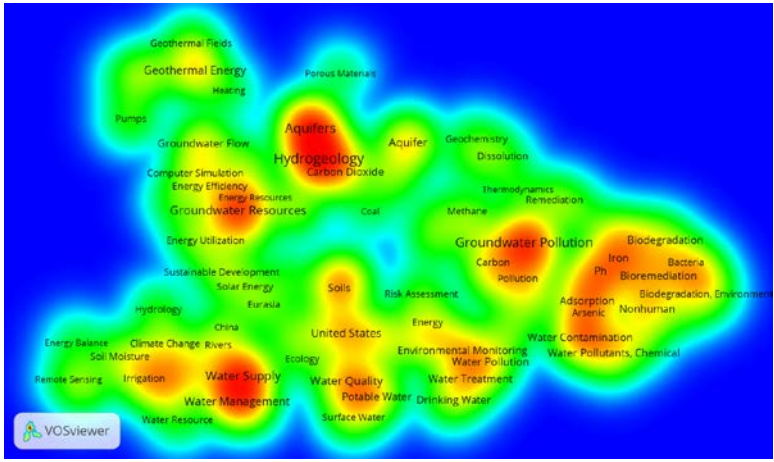
Gap Analysis on EIGR content vs SCOPUS content



Challenges/Lessons/Conclusions

- Collection of papers/report/databases/grey literature (2/3 of records) on groundwater issues previous scattered among EU
- Adoption of a new classification hierarchy by keywords and 3 main categories (societal challenges, operational actions, research topics)
- Inserted metadata (more than 2200 records from 20 countries) subjected to a gap&trend analysis

- Involvement of the hydrogeological community, including researchers and pratictioners, both as users and as editors (future insertion of new records, access ensured by KINDRA partners)
- Final results to be used for EU policy support and implementation of water directives (recommendations



Next steps

- Integration of KINDRA results in new projects is recommended, to extoll groundwater information at EU level.
- Possible developments include:

✓ adopt and/or test our KINDRA classification system in GW researches (e.g. GeoERA EGDI)

✓ increase the number of records of EIGR inserting metadata related to activities and existing databases ("harvesting") by Geological Surveys and/or Environmental Ministries

✓ integrate our platform with other existing ICT platforms and other databases/projects

Contact info:

@kindraproject

www.kindraproject.eu

coordinator@kindraproject.eu