

Example of a success story related to transboundary water data management

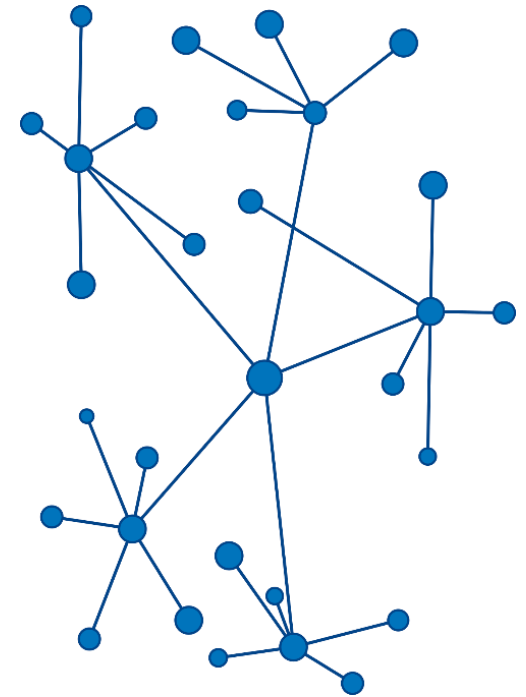
Case of the OMVG data platform



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Geneva- UNECE- April 2022

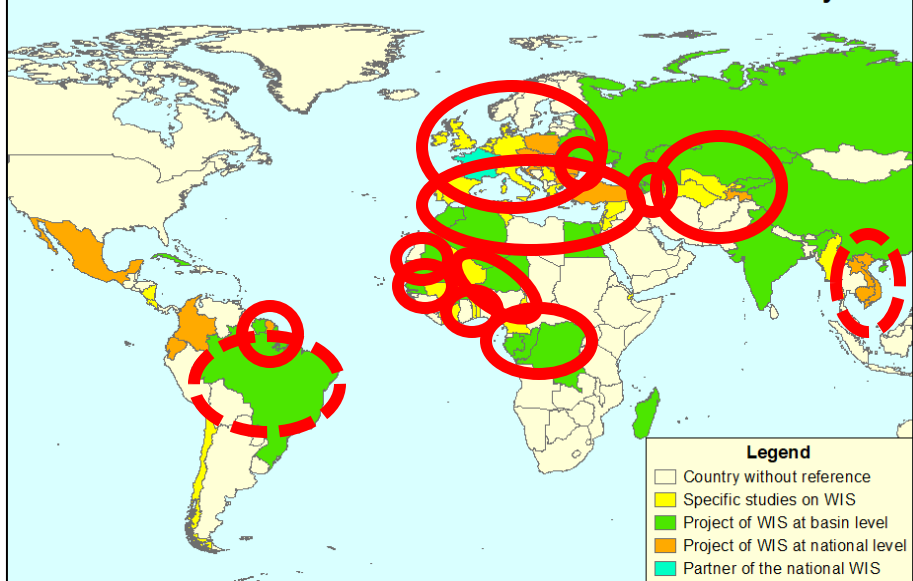
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INBO/IOWater : 30 years supporting transboundary, national and basin organizations in the development of their Water Information System

Countries with IOWater references related to Water Information Systems



 Projects with activities of water data management at transboundary level

... with specific actions related to transboundary water data management:

- FFEM-EECCA project developed with the “Working Group on Monitoring and Assessment” of the “Convention of the Protection and Use of Transboundary Watercourses and International Lakes”/UNECE
- Various past and running projects on transboundary water data management development reinforcing the data exchange procedures between / with the country levels
- MOU recently signed with MRC (Mekong basin) and OTCA (Amazon basin) with a focus on integrated data management development in link with the countries

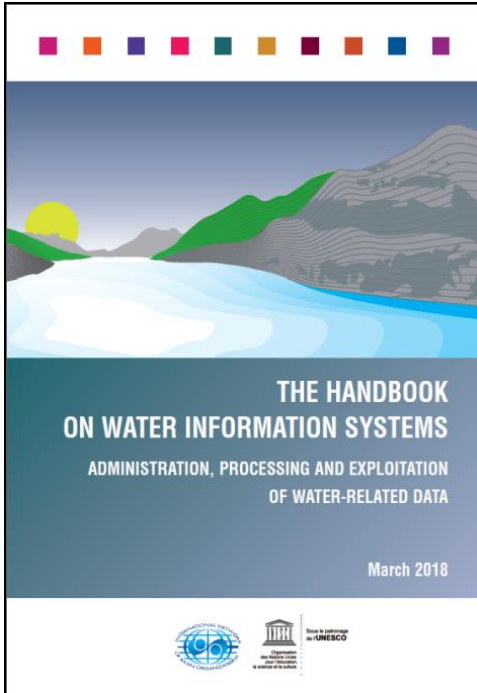


HANDBOOK ON WATER INFORMATION SYSTEMS

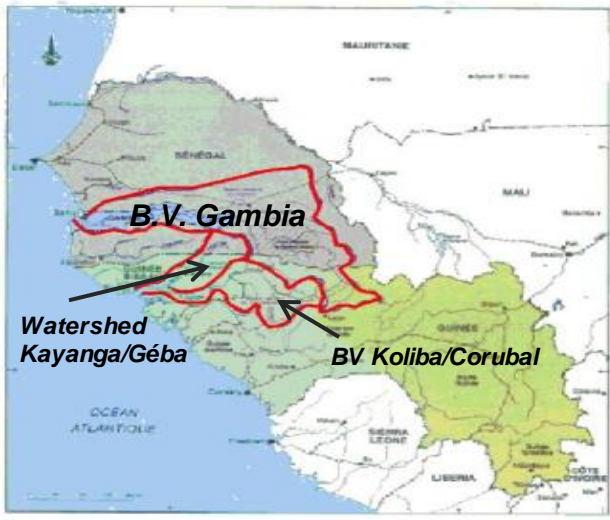
- Joined production from INBO/UNESCO with contributions from WMO, WWDI(WMO/BoM-Australia), under the coordination of IOWater
- Underlines why water data management is so important for efficient water resource management
- Introduces **five main processes** to be considered:



- Presents a picture of the main challenges and case studies showing how information systems are implemented to meet needs in various water sector management domains ... with a total **47 case studies** from all continents provided by the partners and by INBO network members
- Firstly addressed to water-sector decision-makers (considering the importance of water data management in IWRM) and to all organization willing to reinforce their capacities in data production, data administration and data exploitation for a better water resource management
- Available at <https://www.riob.org/pub/HandBook-SIE-en/>



OMVG basins / Data management challenges



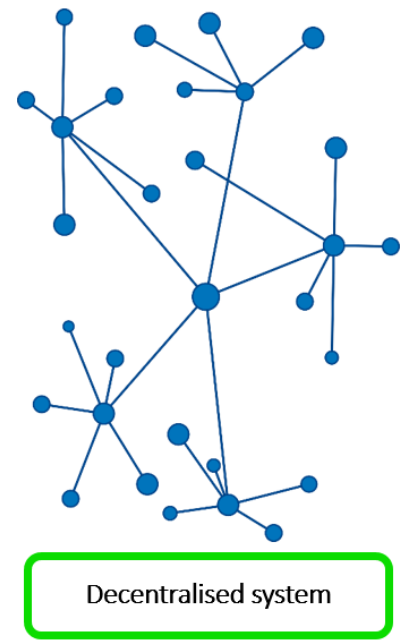
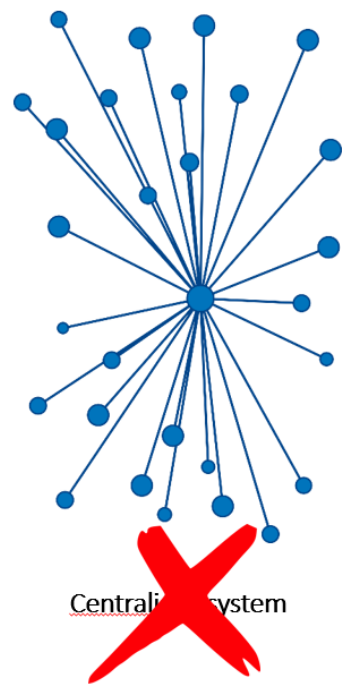
**Three Basins: Gambia, Kayanga-Geba , Koliba-Corubal ;
Four countries: Gambia, Guinea, Guinea-Bissau and Senegal;**

Mission of the OMVG: Development of watersheds, economic development, improvement of the living conditions of local populations, fight against poverty in a context of Sustainable Development, through programs and projects common to the four countries.

- **ACCESS TO DATA IS PARTICULARLY FUNDAMENTAL FOR :**
 - **PROJECT IMPLEMENTATION AND MONITORING**
 - **DIAGNOSES AND DECISION-MAKING ON INVESTMENTS AND MEASURES PROMOTING THE DEVELOPMENT OF THE BASINS, ECONOMIC DEVELOPMENT, IMPROVEMENT OF THE LIVING CONDITIONS OF LOCAL POPULATIONS, THE FIGHT AGAINST POVERTY**
- **HOWEVER, THE EXISTING DATASETS ARE PRODUCED IN A HETEROGENEOUS WAY BY**
 - **MULTIPLE NATIONAL AND LOCAL BODIES WITHIN EACH STATE**
 - **THE OMVG IN THE CONTEXT OF DEVELOPMENT PROJECTS (SURVEYS, MONITORING)**
 - **VARIOUS ORGANIZATIONS INTERVENING AT THE INTERNATIONAL LEVEL, PARTICULARLY IN THE CONTEXT OF THE PROCESSING OF SATELLITE IMAGES**

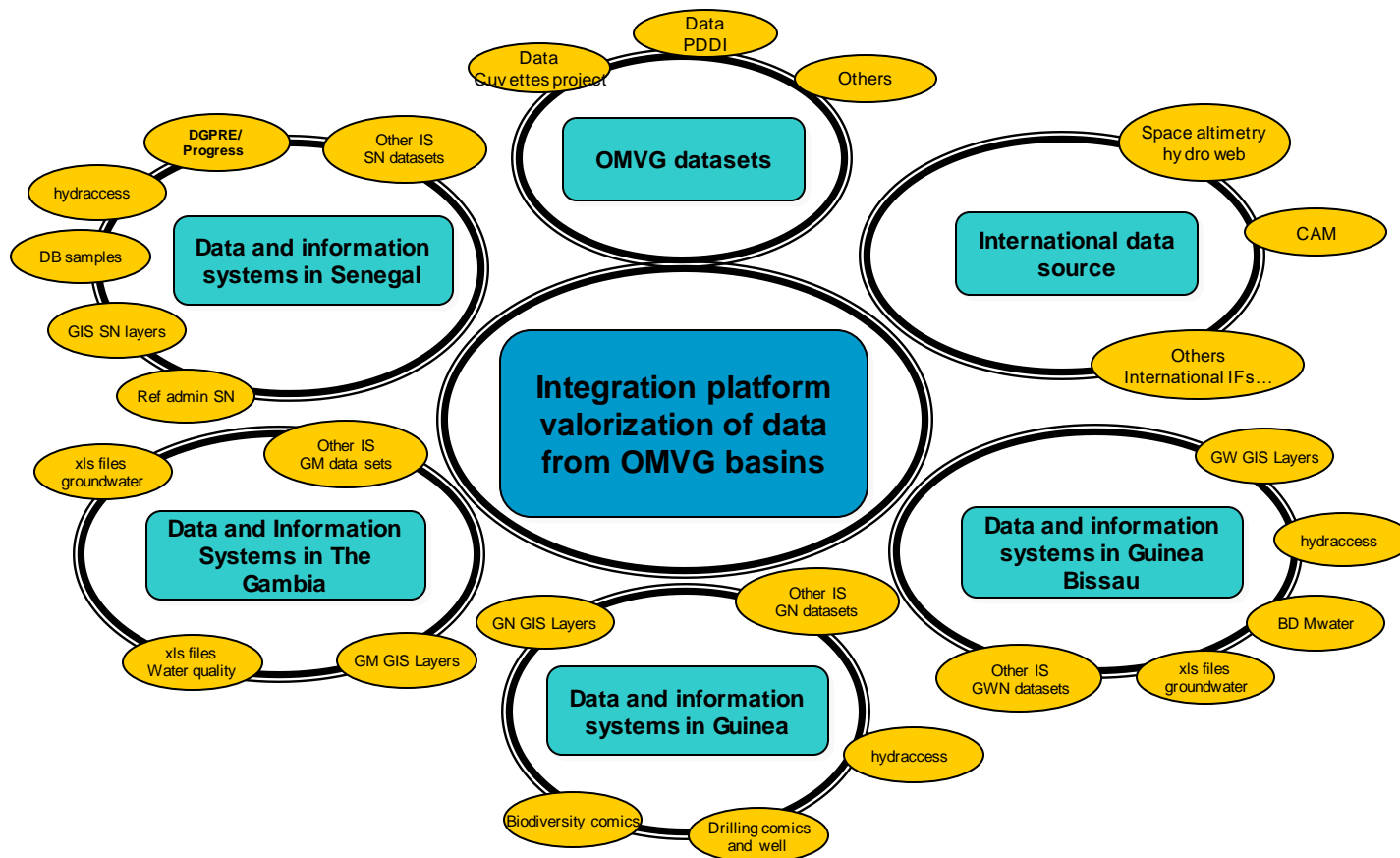
Towards an OMVG platform for shared management, integration and enhancement of data made available by the partners

- **A SHARED MANAGEMENT AND DATA ENHANCEMENT PLATFORM UNDER DEVELOPMENT SINCE JANUARY 2021**
 - FINANCIAL SUPPORT BY SWISS COOPERATION, UNDER THE COORDINATION OF THE GENEVA WATER HUB
 - TECHNICAL ASSISTANCE BY IOWATER/INBO
- **COLLABORATION WITH THE STATES: THE OMVG PLATFORM RELY ON THE EXISTING DATA SETS AND INFORMATION SYSTEMS AT THE LEVEL OF THE NATIONAL AND INTERNATIONAL PARTNER ORGANIZATIONS**
 - PRINCIPLE OF SUBSIDIARITY
 - PROCESS (AUTOMATED DIALOGUE BETWEEN INFORMATION SYSTEMS)



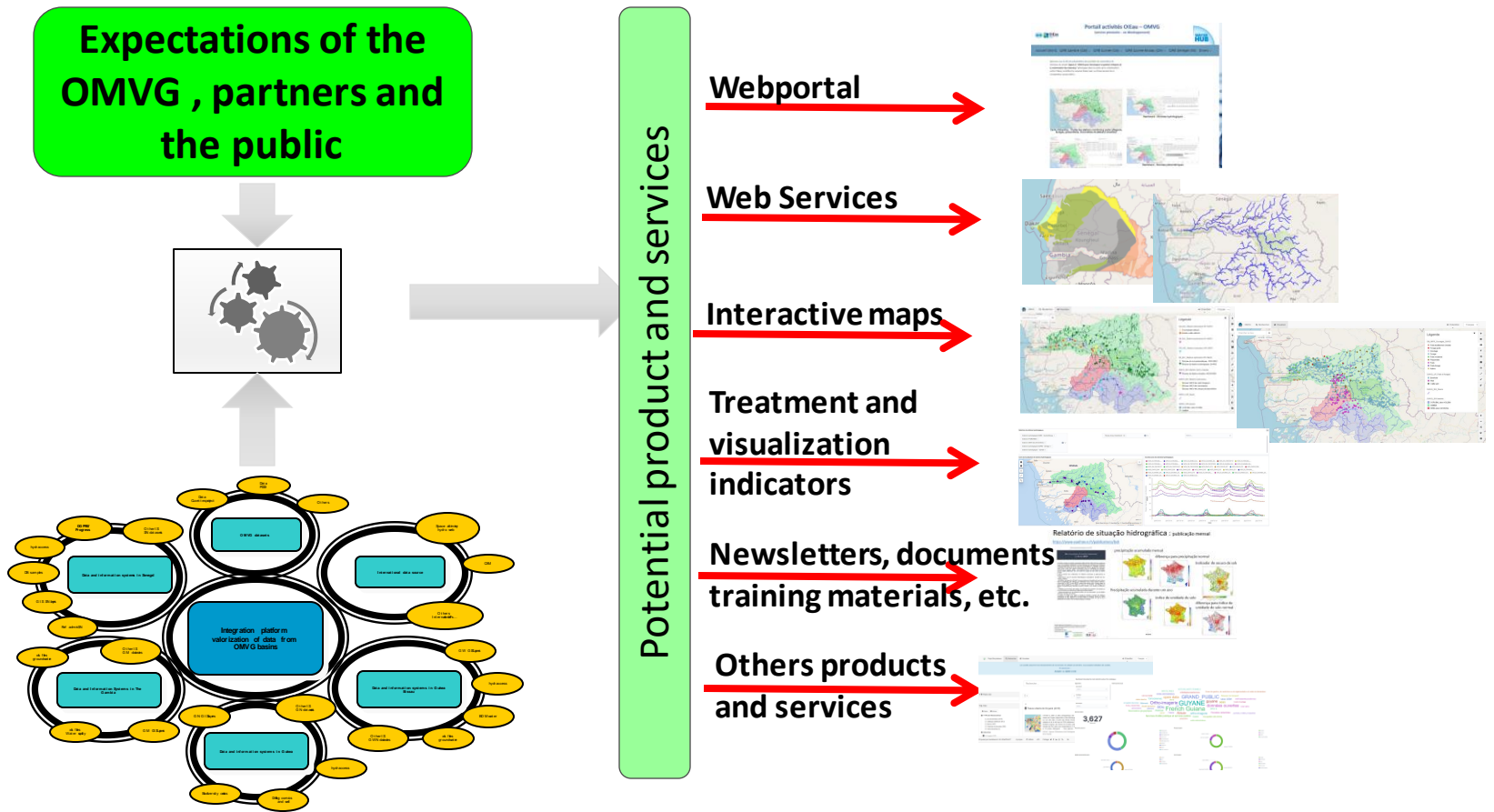


A logic of networking actors based on existing data sets and information systems





Aiming to produce the expected products and services

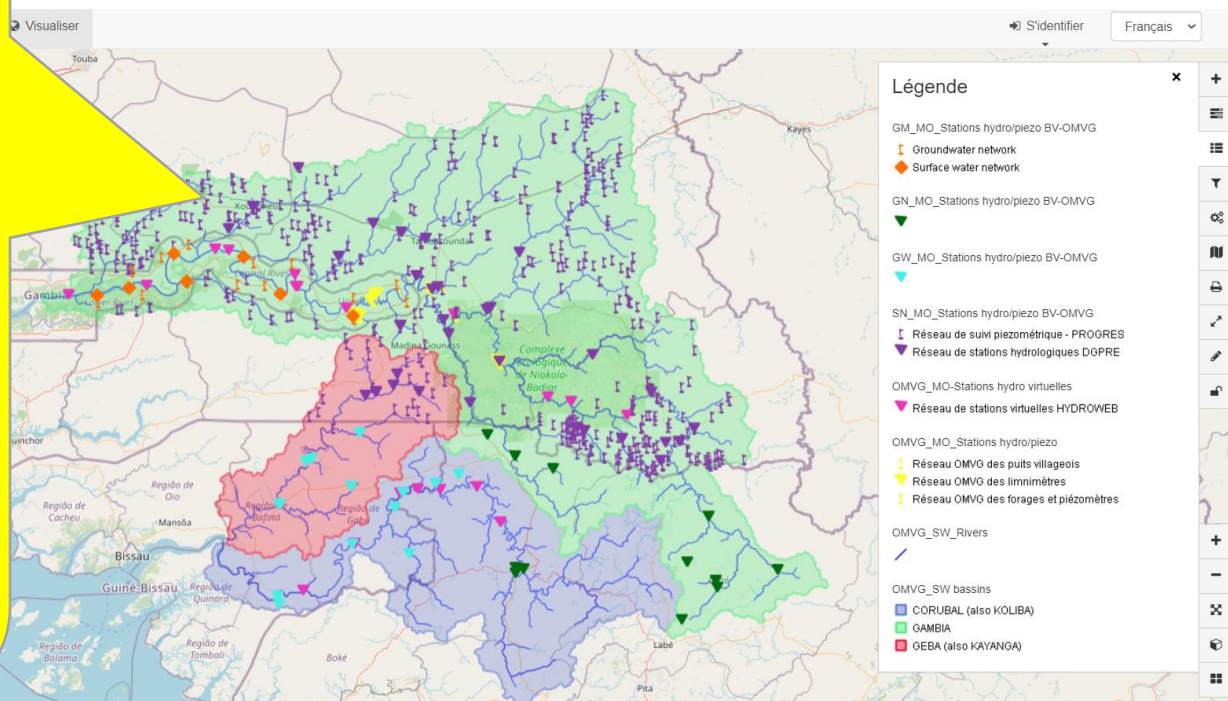


Example of product n° 1: Dynamic map of location of monitoring points on the basins

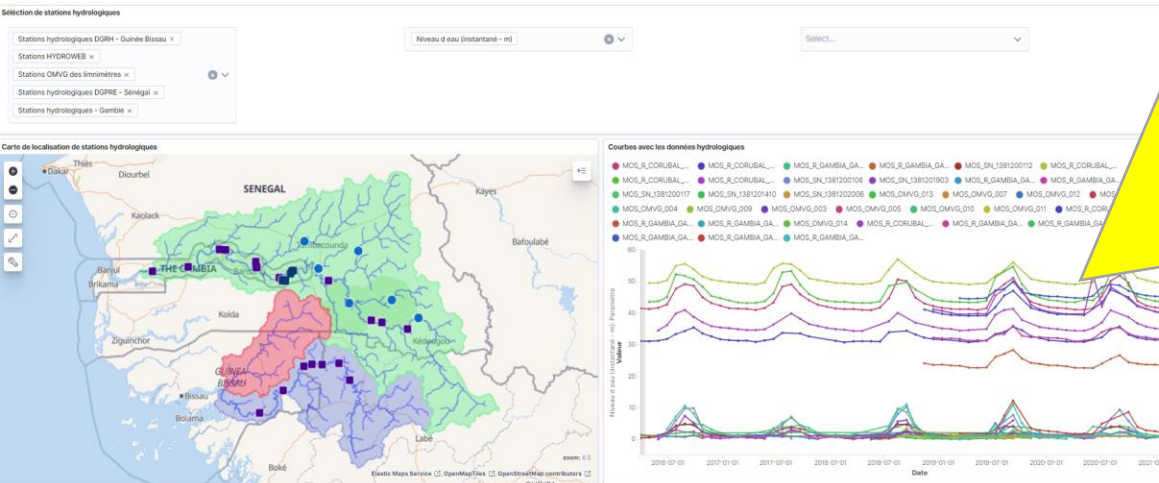
A concrete example of interoperability:

Points with piezometric monitoring in Senegal are displayed on this OMVG map, thanks to the web services made available by the DGPRE/Senegal

Advantage: the OMVG map is thus automatically updated (without human intervention) each time the national database is updated by the DGPRE



Example of product n° 2: Dashboard of hydrological monitoring (virtual satellite stations and in situ monitoring stations)



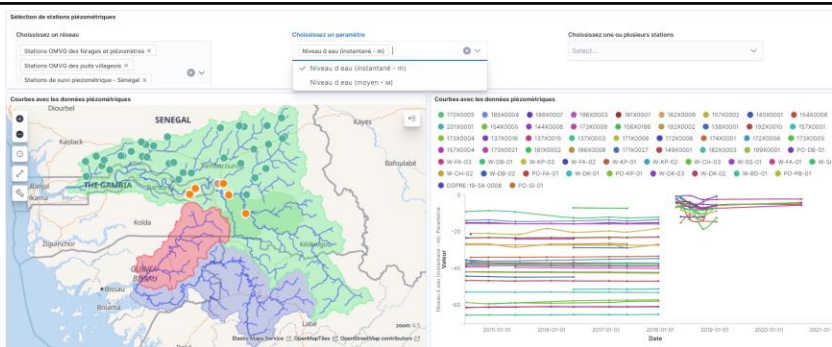
Another example of interoperability:

The water level data of the virtual stations resulting from the processing of satellite images (source "Hydroweb") are automatically updated on a daily basis

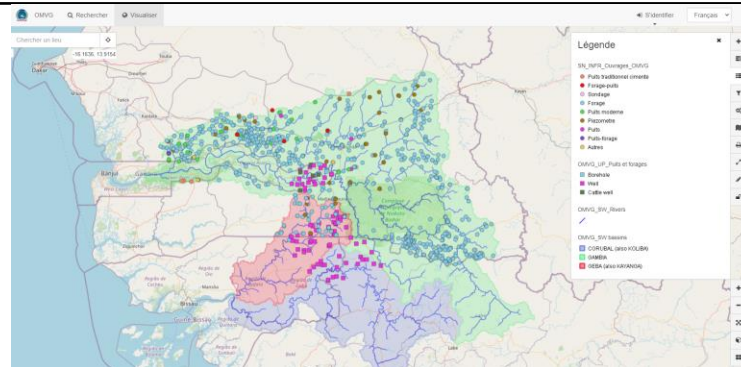
The short-term objective is that the water level and flow values of the national hydrological stations are also automatically updated from the content of the databases of the hydrological services of Senegal, Gambia, Guinea, Guinea Bissau.

Other examples of OMVG regional/basin products and services made available via the OMVG platform

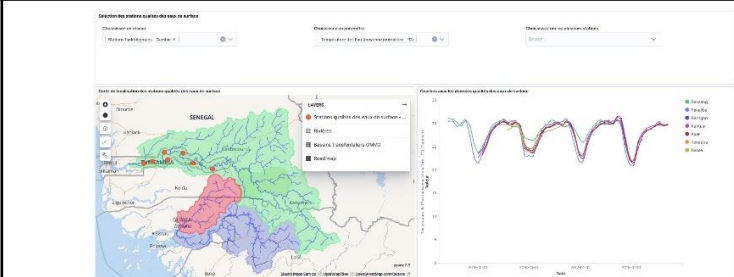
Dashboard piezometric data / OMVG basin



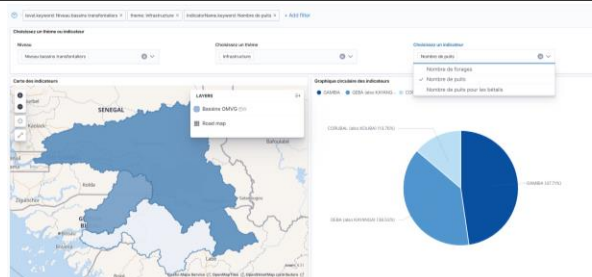
Interactive map of boreholes and wells / OMVG basins



Quality data dashboard / OMVG basins



Dashboard infrastructure indicators by basin or by country

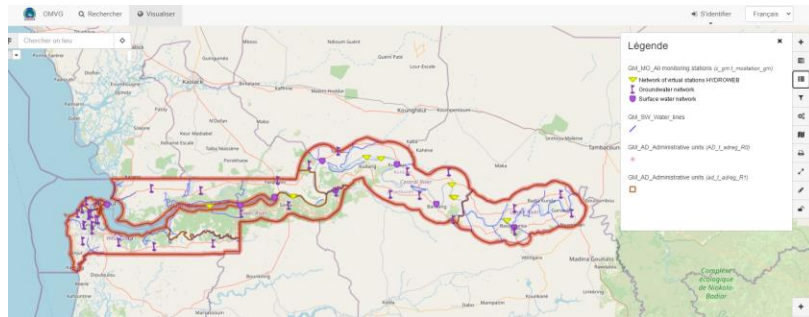


➤ THE DATASETS BEING ALSO AVAILABLE THROUGH WEB SERVICES FOR REUSE BY VARIOUS PROJECTS (PDDI, BASM, ...)

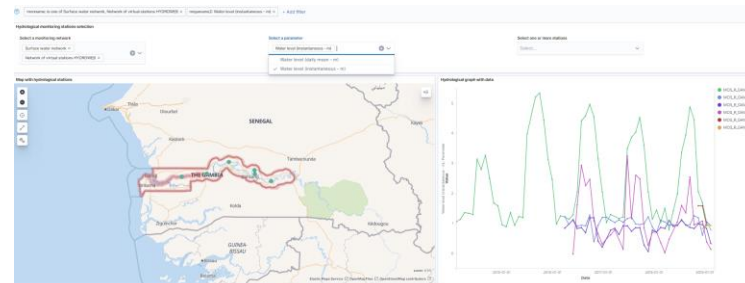
Examples of products of national interest made available via the OMVG platform in support of national services



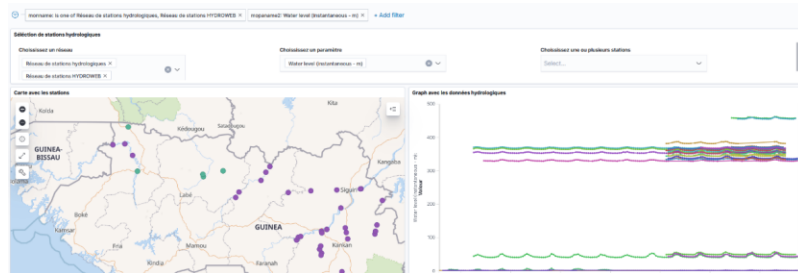
Gambia case: National interactive map of location of monitoring stations



Gambia case: Interactive dashboard of hydrological data



Case Guinea: Interactive dashboard of hydrological data



Case Guinea Bissau: Interactive dashboard of hydrological data



➤ AND MANY OTHER DATASETS UNDER INTEGRATION SUCH AS:

- PROTECTED AREA IN SENEGAL
- MONITORING POINTS OF « ENVIRONMENTAL DNA » ON THE CORUBAL IN GUINEA-BISSAU

➤ ...

Conclusion/ Some key points allowing short term visible results with limited cost

- **ACTION LED BY THE TRANSBOUNDARY BASIN ORGANIZATION IN COLLABORATION WITH NATIONAL REPRESENTATIVES IN THE FRAME OF “AGREEMENT PROTOCOLS”**
 - WITH TECHNICAL/ORGANIZATIONAL SUPPORT (CAPACITY BUILDING)
 - LOOKING FOR WIN-WIN RELATIONS FOR DEVELOPING LONG TERM COOPERATION

- **RELYING ON THE EXISTING NATIONAL INFORMATION SYSTEMS AND DATA SOURCES**
 - NEED TO DEVELOP NATIONAL INTER-INSTITUTIONAL COLLABORATION / NATIONAL POLICY DIALOGUE
 - NEED TO REINFORCE NATIONAL INFORMATION SYSTEMS
 - NEED TO REINFORCE NATIONAL DATA PRODUCTION PROCESSES

- **MAKING THE LINK WITH INTERNATIONAL DATA SOURCES (SATELLITE, INTERNATIONAL ORGANIZATIONS DATA SOURCES)**

- **APPLYING BASIC PRINCIPLES RELATED TO SHARED INFORMATION SYSTEMS**
 - SUBSIDIARITY
 - INTEROPERABILITY
 - ELEMENTS OF COMMON LANGUAGES/ COMMON REFERENTIALS

Some suggestions on chapter 8



- **TO REVISE THE CHAPTER 8.1 ON DATA MANAGEMENT IN ORDER TO BE MORE PRACTICAL, AS EXAMPLE IN INCLUDING KEY POINTS SUCH AS:**
 - **ENABLING INTERINSTITUTIONAL COOPERATION AND DATA SHARING FIRSTLY AT NATIONAL LEVEL AND THEN AT TRANSBOUNDARY LEVEL (DATA SHARING POLICY)**
 - **DEVELOPING STRATEGY AND ORGANISING GOVERNANCE FOR BETTER DATA MANAGEMENT/SHARING IN LINE WITH EXISTING NATIONAL E-GOVERNANCE AND OPEN DATA STRATEGIES**
 - **ORGANISING/SHARING DIAGNOSIS OF EXISTING SITUATION WITH FOCUS ON ACTORS, DATA PRODUCTION PROCESSES , METADATA OF DATASETS AND DATA SOURCES, LEGISLATIVE CONTEXT**
 - **THE NEED TO REINFORCE THE CAPACITY OF EACH DATA PRODUCER FOR QUALITY CONTROL AND DESCRIBING THEIR DATASETS/ DATA SYSTEMS AND FOR GIVING ACCESS TO THE DATASETS THEY AGREE TO SHARE WITH INDICATION ON ACCESS RIGHTS (METADATA/ INTEROPERABILITY/ WEB SERVICES / API)**
 - **THE NEED TO DEVELOP ELEMENTS OF COMMON LANGUAGE (DEFINITION, CODIFICATION) AND COMMON REPOSITORY (REFERENCE DATASETS) TO FACILITATE THE SHARING OF COMPARABLE DATA AND INFORMATION**
 - **THE NEED TO DEVELOP NATIONAL AND TRANSBOUNDARY PLATFORM RELYING ON THE EXISTING INFORMATION SYSTEMS AT THE LEVEL OF THE DATA PRODUCERS**



Thanks for your attention
and at your disposal for any questions



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