

Support to operationalise the Senegal River Quality Network by setting up a Durable, Interoperable Information System



PROJECT TITLE:

SUPPORT TO OPERATIONALISE THE SENEGAL RIVER QUALITY NETWORK BY SETTING UP A DURABLE, INTEROPERABLE INFORMATION SYSTEM

COUNTRY:

Senegal

LOCATION :

Senegal River basin

SCALE OF INTERVENTION:

Regional

INCUBATION LED BY:



Map of the Senegal River Quality Network © OMVS

LOCAL CONTEXT AND ISSUES:

The deteriorating quality of water in the Senegal River basin, regional life source, results from demographic growth, mining operations and the expansion of farmland, compounded by climate change. Although water is available for the different threatened usages, an absence of regular, standardised data makes it difficult to define the extent of these alterations and the development of pollution.

Based on this observation, the Organisation for the Development of the Senegal River (OMVS) is studying options to put a quality monitoring network into operation. This also raises the question of how to organise access to existing and future data, given that storage of data by national services, operators and the OMVS is currently fragmented, non-standardised and dispersed. The Senegal River basin's priority is therefore to set up a durable information system for water quality adapted to realities on the field and stakeholder diversity, and based on interoperability.

Knowledge of water resources, in particular surface water quality, is a key focus for the OMVS in setting up an efficient IRWM and Climate Change Adaptation strategy for the Senegal River basin.



Staff gauge on the Senegal River © OMVS

PROJECT GOALS:

The general goal of the project is to improve knowledge and monitoring of water quality in the Senegal River basin following on from the study “Operationalisation of the Senegal River Quality network / Current situation and potential scenarios ” (CNR & Hydreco Guyane) carried out in 2019:

- O1 – Build capacities to integrate and enhance existing data within each state, and at transboundary level between states and the OMVS, with an aim of standardisation.
 1. Support the definition of national data masterplans on hydrology and water quality, and a regional plan
 2. Support storage and interoperability between the information systems of the various actors:
 - Within each country for data integration/enhancement at national level
 - Between the countries and the OMVS
 3. Support to process and transform data into useful information for making decisions and to inform partners and the public (online visualisation, newsletters, etc.)
- O2 – Develop production of missing data aiming at synergies between the states and the OMVS
 1. Build monitoring capacities at the level of state actors in line with requirements and available resources
 2. Create complementary stations at international level that can be managed by the OMVS
 3. Exploit satellite images to produce supplementary data/information
 4. Analyse potential development of crowd sourcing related to water quality

SDGs TARGETED BY THE PROJECT:



CHALLENGES FACING THE PROJECT:

Monitoring network – Water quality – Information system – Transboundary cooperation – OMVS – Senegal River basin

SECTORS CONCERNED:

Agriculture – Industry – Health – Water supply and sanitation – Protection and management of water ecosystems – User resilience

EXPECTED OUTCOMES:

New Information and Communication Technologies (NICT):

- Water quality information system

Capacity and knowledge building

- Knowledge building and improved water quality monitoring

PROJECT STAKEHOLDERS:

Stakeholders involved:

Organisation for the Development of the Senegal River (OMVS) and National Water Services

Project leaders:

OMVS, International Office for Water

Project operators:

OMVS, member states and associated managers

Technical partners:

CNR, Hydreco Guyane, CACG

Funder of the incubation process:

Adour-Garonne Water Agency

ESTIMATED COST OF PROJECTS IDENTIFIED FOR INCUBATION:

>1 million EUR

SHORT-TERM ACTION (3 YEARS)

- Status report
- Inventory of existing and future data sources
- Data sorting
- Production of a metadata catalogue
- Development of a pilot Information System to visualise data and provide indicators
- Automatic data integration
- Transfer and deployment of the platform
- Participative workshops and training

LONG-TERM ACTION (10 YEARS)

- Management and sharing of knowledge at Senegal River basin scale
- Maintenance of monitoring network and data collection
- Storage of national data