



BRL Ingénierie offers a wide range of services, from the production of maps to the development of applications dedicated to water and the environment.

Mapping makes it possible in particular:

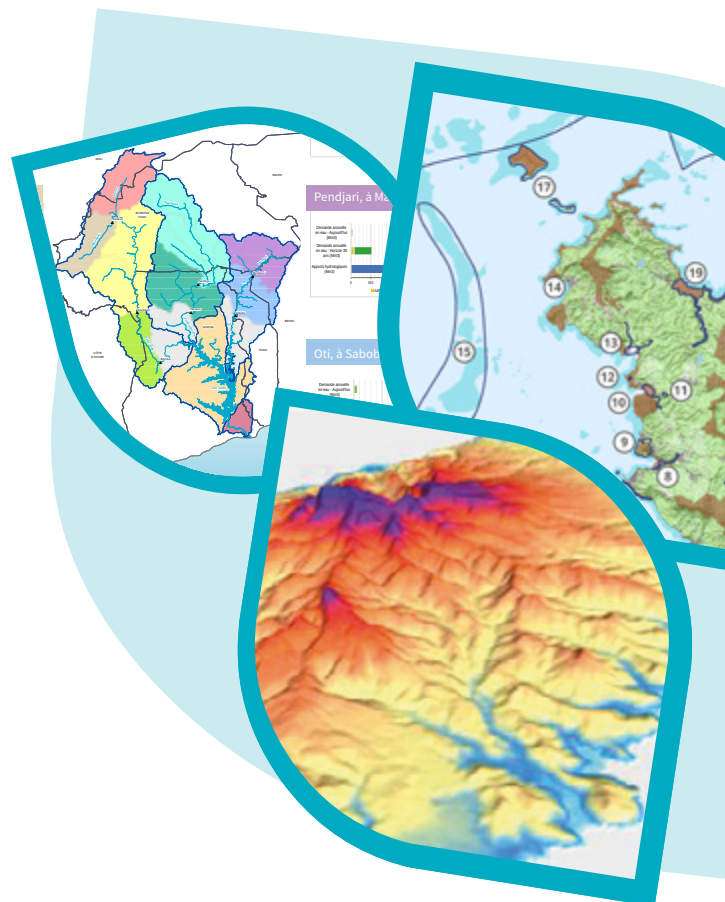
- **To improve knowledge** about the area and the living environment
- **To inform the choices and decisions** made daily by our clients
- **To communicate more efficiently** and in a synthetic way

Proven know-how

BRL Ingénierie has long, continuously improved experience in producing maps and atlases for decision-makers, local area managers and the general public in France and abroad.



- Data acquisition and processing
- Analysis methods and tools
- Communication
- Application development

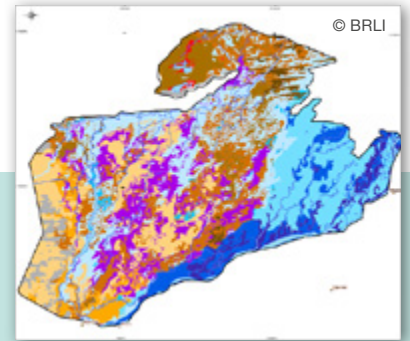


● Data Processing and Geographic Information Systems

- Organization
- Database storage of geolocalized data
- Information processing and synthesis
- Design of semiologies and cartographic charts
- Metadata database
- Creation of atlases and GIS databases



Strategic Atlas
of the Conservatoire du Littoral
et des rivages lacustres



Hydroagricultural Development
Program (PAHA) of the Office
du Niger

Technical assistance for the establishment of an Information System on the coastal zones of the Gambia

Project financed by the European Union, relating to Integrated Coastal Zone Management (ICZM), adaptation to climate change and the fight against erosion on the Gambian coast:

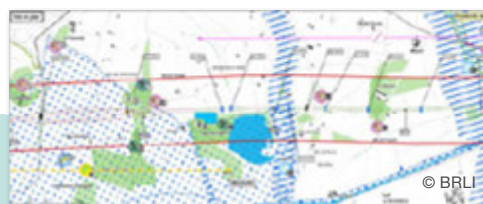
Audit, design of the information system, definition of the implementation steps, implementation schedule, definition of key personnel and training plan, drafting of the IT specifications



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● Spatial analysis and remote sensing

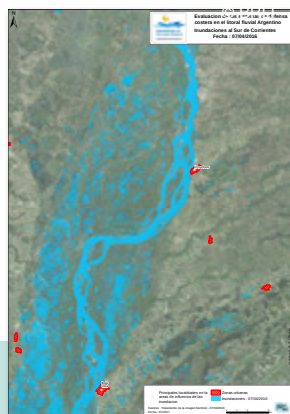
- Highlight the values of an area
- Identify survey routes using multi-criteria analysis
- Mapping the spatial distribution of a species using geostatistical tools
- Calculate the yield of agricultural plots according to physical, human and environmental criteria
- Measure the rate of coastal sand erosion
- Produce land use cover and calculate monitoring indicators (cultivated areas, urban areas)
- Assess the influence and evolution of floodplain areas over time (time-based analysis)



LGV Nîmes-Montpellier rail
bypass (France)



Restoration of Panjin Wetlands (China)



Flooding south of Corrientes (Argentina)

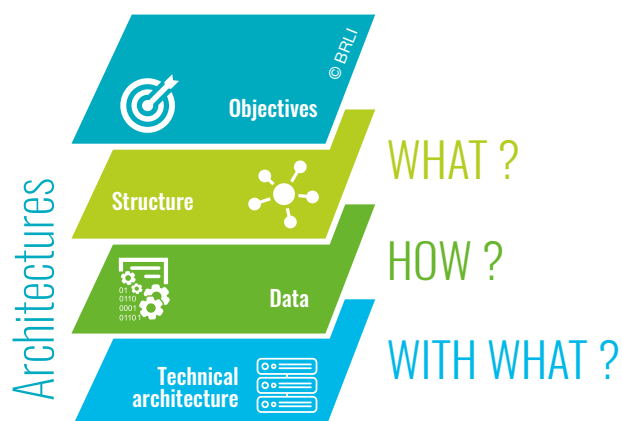
● Topographic processing and DTM

- Realization of Digital Terrain Models and derived products: 3D views, flooded areas map...
- Automatic topographic watershed and river system profiles, volume calculations
- Analysis of the covisibility of infrastructure projects (wind turbines, pipelines, buildings...)



A. Mazoyer © BRLI

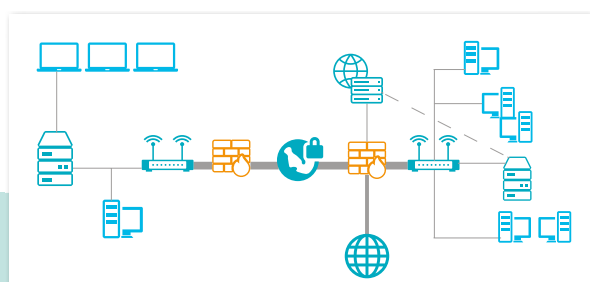
● Information Systems, Geoportals, Applications



In constant concern for innovation, BRL Ingénierie has developed **wimes®**, an Open Source information system and a modular service offer. Among others, it is possible to:

- Capitalize and store information, to capture information (geoservices data streams, mobile field collection terminals, in-field connected sensors...)
- Process the data
- Dynamically query the system
- Disseminate information in the form of tables, graphs and a metadata database
- Create and share maps via a Geoportal

It must be possible to collect, search, process, track and communicate information very easily from any terminal in the world.



Information System Design for the Tana - Beles Integrated Water Resources Management Project (Ethiopia)



wimes® Water Information System



Technical Assistance to the African Monitoring of the Environment for a Sustainable Development (AMESD)

AMESD mobilizes **56 satellites in 48 African countries** (European Union, African Union Commission). The main objective is to increase the information management capacity of African regional and national institutions and to facilitate access to environmental information thanks to Earth observation technologies.

BRL Ingénierie was a member of the consortium (Thales Alenia Space, Consorzio ITA, IRD).



Mobile application of data collection ground and of mapping(cartography)

● Our tools

Data Collection

- Robust GPS tablets with on-board GIS
- Data collection system on Android mobile terminals
- Differential GPS with very high planimetric and altimetric resolution
- Capture of geoservices (WMS/WFS), free satellite images and real time Big Data streams

Processing

- ArcGis, QGis, AutocadMap, Mapinfo, ...
- Spatial Analyst, 3D Analyst, Global Mapper, ...

● Technical Assistance - Capacity Building



BRL Ingénierie's GIS experts are experienced in technical assistance and knowledge transfer:

- Installation and configuration of computer infrastructures: networks, servers, internet connection,...
- Creation of databases
- Drafting of IT specifications for the development of business application

● Training

- Systems operation and maintenance
- GIS (HQ, ArcGis, Mapinfo, Global Mapper)
- Spatial analysis tools and methodologies
- Topography and Digital Terrain Models
- Satellite images and remote sensing
- Implementation of an Open Source Geoportal
- Implementation of an Open Source field data collection system