



ENVIRONMENT

RISK MANAGEMENT



THE LEADING GEOGRAPHICAL ENGINEERING COMPANY

In view of the obligations States are faced with concerning the fight to preserve the environment, as well as prevent and manage risks, environmental information can be considered an essential and undeniable element.

On a European level, the CORINE programme (coordination of information on the environment) was launched in 1985, with data being updated every 6 years. IGN FI has held a major role since the beginning, creating and validating the geographic databases for land use such as CORINE Land Cover.

Outside of Europe, IGN FI has promoted the CORINE concept using adapted versions which take into account the specific aspects of regions and also participates in a project on ecosystem accounting of Africa's natural capital.

IGN FI can assist any type of entity wishing to obtain coherent and integrated environmental data and the tools enabling them to use the data as well as to improve its skills via specific, tailored training.

OUR AREAS OF EXPERTISE

Advise, design and implement projects specifically adapted to the different aspects of work on the environment:

- Consultancy services, studies of existing geographic data and needs for new data
- Specification of map products and databases
- Aerial photographs; satellite image acquisition
- Creation of orthophotographs or orthoimages, DTM (digital terrain models), or DEM (digital elevation models)
- Production of 2D and 3D reference data
- Production of environmental data, bring existing data into topological compliance in a reference framework
- Modeling and implementation of metadata as per international standards
- Detection of changes and statistical analysis
- Development and implementation of thematic applications; creation of thematic maps
- Quality assurance and control; validation of databases
- Theoretical and practical training
- Implementation of production lines, technology and skills transfer
- Technical assistance

OUR MEANS

IGN FI provides specialist teams to its clients:

- Sector experts (photo-interpreters, agronomists, foresters, geologists, specialists in land use planning, hydrologists, statisticians...)
- Analysts experienced in creating profession-based information systems
- Experts in teledetection
- Experts in the production and management of geographic data, in GIS
- Experienced project directors and managers

In order to succeed in these projects, IGN FI also relies on partnerships with sector entities which are references in their core businesses.



**NATURAL
RESOURCE
MANAGEMENT**

SOME OF OUR REFERENCES

CENTRAL AND WESTERN AFRICA • **Monitoring land cover dynamics using satellite images**

With the support of IGN, CNES and IRD, IGN FI coordinates a vast spatial observation programme financed by the AFD. The first phase (OSFT, from 2011 to 2015) has enabled the collection of up-to-date SPOT satellite images covering over 3 million km² in the Congo basin and their distribution to more than a hundred sustainable development projects. The programme has also produced forest maps complying with IPCC recommendations and enabled the skills reinforcement of the teams in recipient countries.

In 2016, a new phase began (OSFACO) not only to continue acquiring and disseminating images of the Congo Basin but also extending work to cover Guinea, the Ivory Coast and Benin. This phase of the programme shall also provide support to create land occupation maps locally as well as working to reinforce skills and fund micro-projects.



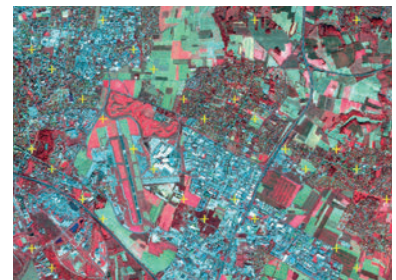
BURKINA FASO • **Diachronic analysis and land cover accounting**

Several land cover database projects (BDOT) have been worked on by a multidisciplinary team of experts. The two land cover databases that were created (BDOT1992 and BDOT2002) and the changes database between 1992 and 2002 have been a major source of information for monitoring changes in land cover as well as the implementation of biophysical accounting of land. One last and more simplified land cover database was created using image coverage from 2012 in order to reply to the needs of foresters.



EGYPT, SUDAN • **Remote sensing-based assessment of the proliferation of water hyacinths in the Nile**

The water hyacinth is considered as a very prolific plant whose serious damage in both economic and ecological terms has already been established in Egypt. In 2006, IGN FI collaborated with the Agriculture Research Center who set up a study to map the hyacinth's spread on a given date using high resolution satellite images in order to monitor the effectiveness of means used to control the species. Egypt and Sudan agreed to cooperate on the issue and IGN FI has carried out studies on a yearly basis since 2013 in the aim of estimating the water hyacinth's rate of propagation in several zones along the White Nile.



EUROPEAN UNION • **Urban atlas**

The Urban atlas project provides pan-European land use/land cover data over more than 700 urban areas with more than 50,000 inhabitants. This database was created using high-resolution satellite images and IGN FI is responsible for carrying out internal controls and validating the map products created.



AFRICA • **Observation of areas of ecological interest around Africa**

Regular mapping of the land cover within natural areas is required in order to monitor anthropogenic pressures on these areas of interest (natural parks, game reserves, biosphere reserves, etc.). IGN FI is working in collaboration with European partners on this project led by JRC (European Joint Research Center) and is in charge of the quality control and validation of the mapping products.

Find more references at www.ignfi.com

As major player in the field of geomatics, IGN FI offers its expertise in the following areas: geodesy, metrology, mapping / national spatial data infrastructures, databases, geographic information systems, portals.

IGN FI's work is entirely based abroad, using the company's know-how in various sectors: land administration, agriculture, forests, civil security, borders...

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