



UNITED NATIONS  
Office for Outer Space Affairs



## BURKINA FASO'S NATIONAL ECOSYSTEMS MONITORING AND DESERTIFICATION DYNAMICS PROGRAMME

**necessity of sharing network  
for its implementation in the long-term**

UN-SPIDER Regional Workshop

‘Building Upon Regional Space-based solutions for Disaster Management and  
Emergency Response for Africa’

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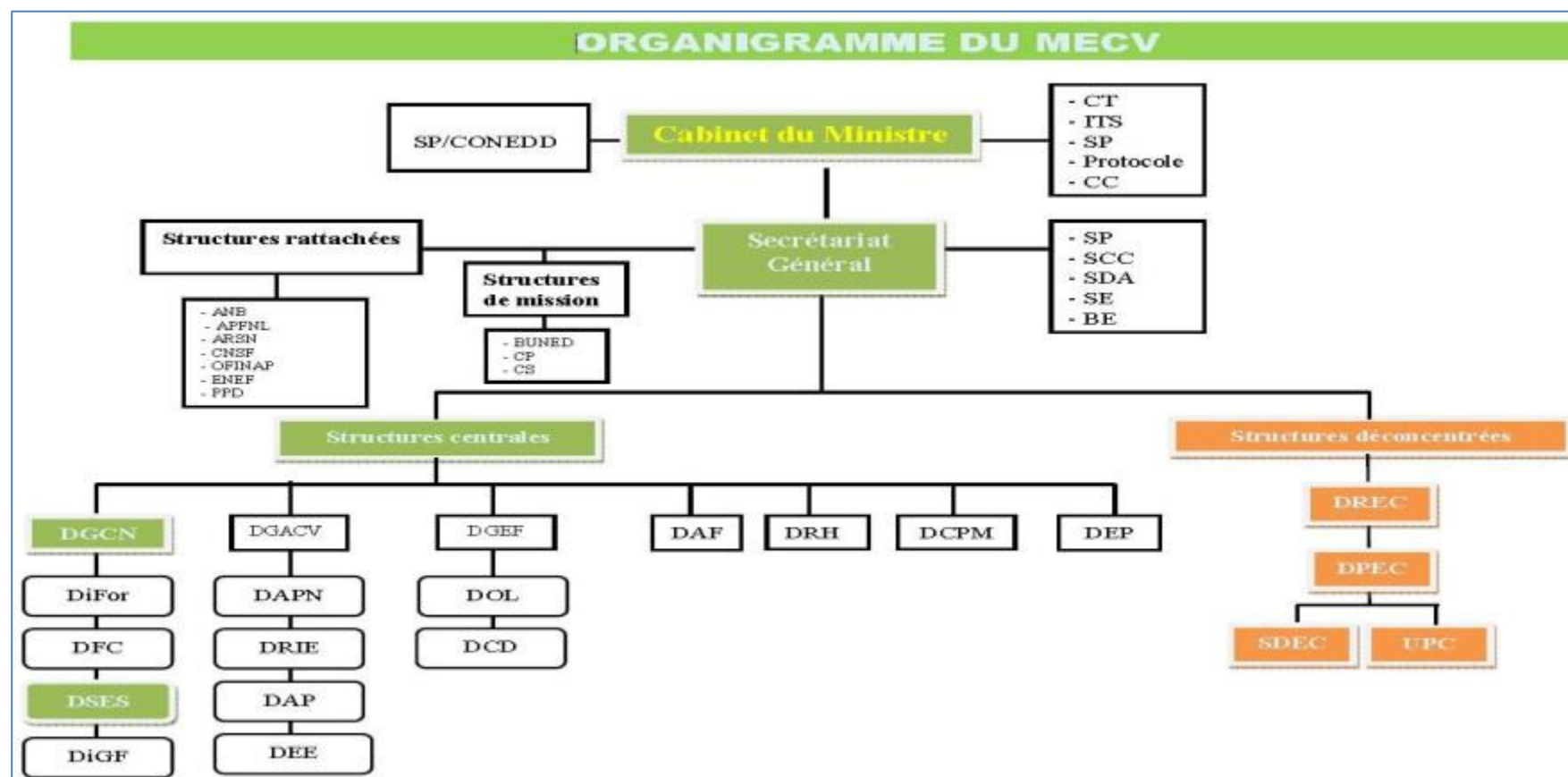
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## I. SEMD PLACE IN MECV ORGANIZATION CHART

Nature Conservation General Directorate provides design, direction, monitoring and evaluation of policies and strategies on forests and wildlife. She designs and oversees the implementation of the provisions and technical measures to protect, develop, operate and develop the forest resources and wildlife. She reports to the General Secretariat.



## 1.1. SEMD's Primary mission and organization

**Mission:** Created in 2005 within the Nature Conservation General Directorate (DGCN), Statistics and Ecological Monitoring Directorate is responsible for developing and ensuring implementation of appropriate techniques and procedures to monitor the dynamics of ecological parameters and assess the impacts of development activities on the forest types, populations and habitats of wildlife.



**Organization:** Statistics and Ecological Monitoring Directorate includes:

- ❑ Ground Ecological Monitoring Service (SSES),
- ❑ a Ecological Monitoring by Remote Sensing Service (SSET) and,
- ❑ a Statistics and Natural Ecosystems Information Service (SSIEN).

## 1.2. SEMD's attributions

As such, it is responsible for:

- developing and supporting the implementation of appropriate strategies and programs for monitoring and ecological dynamics of forest resources and wildlife;
- planning, coordinating and supporting the implementation of monitoring of forest ecosystems and wildlife throughout the national territory;
- monitoring by remote sensing of the mortality of woody species, bush fires, the process of degradation / reclamation of land and water resources in wildlife protected areas;
- capitalization of experiences and data management and statistical information on forest resources, wildlife and their habitats;



- Support capacity building of stakeholders in monitoring environmental and ecological impacts and socio-economic projects and programs of natural resource management;
- Supporting the implementation of component monitoring desertification dynamics of the system of monitoring - evaluation of national action plan to combat desertification (PAN / LCD);
- Monitoring and evaluation criteria and indicators for sustainable forest management, wildlife protection areas and wildlife;



- The establishment of a database and a participatory flow of information on forest ecosystems and wildlife monitoring activities related thereto;
- The development and maintenance of directories statistics on forest resources and wildlife.
- animating the UN-SPIDER NFP with the structures involved in the field of disaster management and emergency response



**Burkina Faso's Statistics and Ecological Monitoring Directorate is UN-SPIDER NFP. Its director is the facilitator.**

## II. NATIONAL ECOSYSTEMS MONITORING AND DESERTIFICATION DYNAMICS PROGRAMME

### 2.1. Background and justification

Burkina Faso has a major challenge facing sustainable development: that of ensuring a rational and responsible management of natural resources, ensure protection of the environment both in rural than in urban centers, providing a pleasant living environment citizens of cities and the countryside, preserving natural capital that supports economic growth benefit the present generation, while ensuring coverage of the needs of future generations.

However, one important thing missing from the device: a regular and systematic state of our environment to intervene in terms of remedial actions, but also preventive measures, taking into account the effects of climate variability and change , fueling anticipation of the latter, and thereby providing the means of mitigating the effects and adapt to these phenomena.



That is the purpose, following the creation of a Statistics and Ecological Monitoring Directorate within the Nature Conservation General Directorate, initiated a National Ecosystems Monitoring and Desertification Dynamics Programme. Burkina PNSEDD implementation ensures a continuous knowledge of the status and trends of its environment and ecosystems that make up our natural capital. It is the means to operate an early warning capabilities essential to any modern management policy is to be effective.

## 2.2. Vision and Strategic intervention



■The vision is to make Burkina Faso's PNSEDD: "a country with a system of ecological monitoring performance, coupled with a widespread ecocitizenship addressing the challenges of availability, accessibility and use of environmental information for sustainable development."

**In this perspective, the following PNSEDD axes were identified, namely:**

- (1) Create conditions conducive to the exchange and sharing of data between existing systems so common;
- (2) Strengthen the capacity of existing systems to make available industry data needed for sound environmental monitoring, both nationally and locally;
- (3) Ensure effective coordination of environmental monitoring at strategic and operational plans;
- (4) Promote and produce results that lead to action.



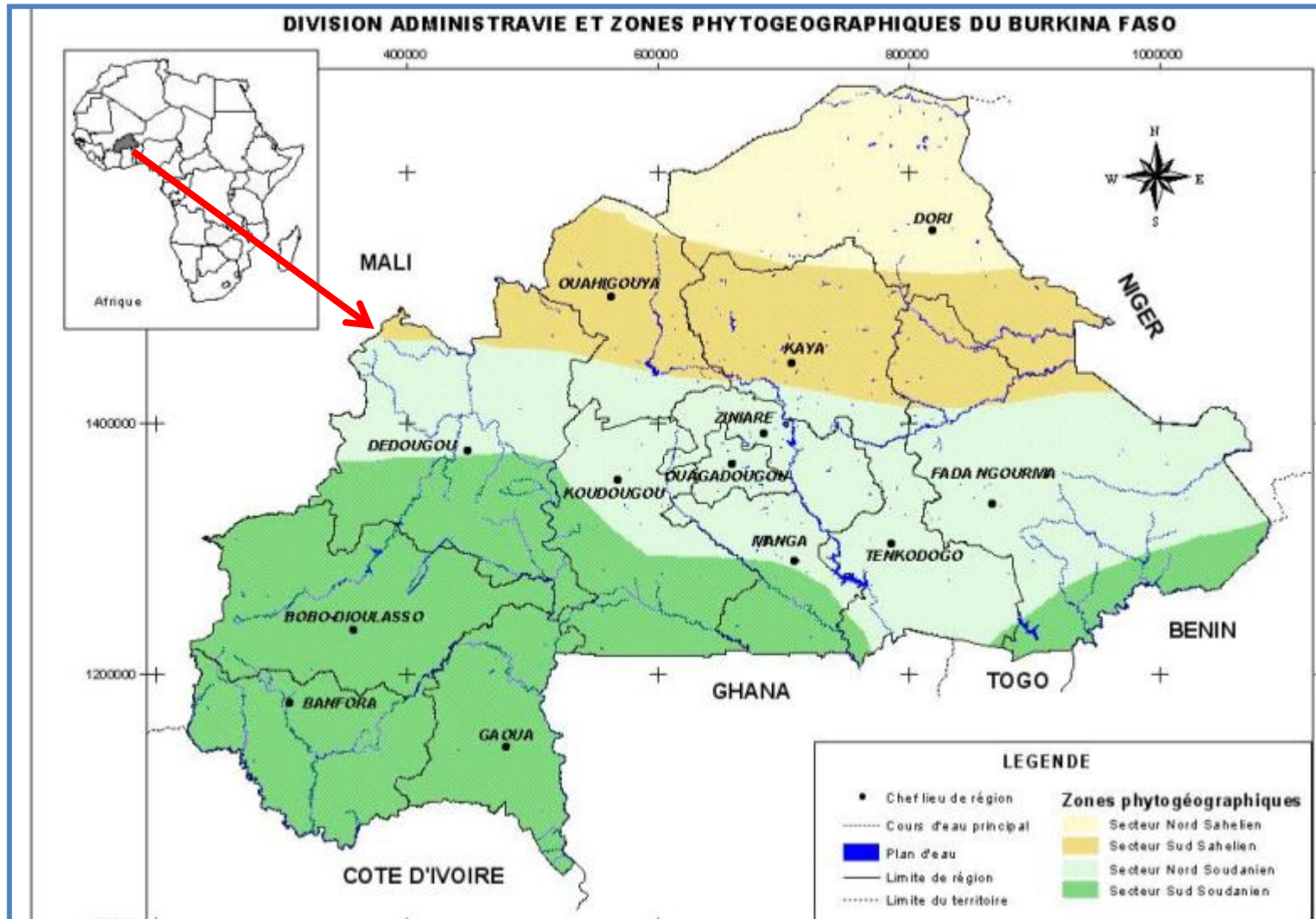
For the Programme implementation, the need for a national system for ecosystems monitoring and the desertification dynamics (SYNSEDD) wins.

It is based on the regular collection of ground data and remote sensing on the one hand, and the transaction data from existing business systems on the other.

From principles, criteria and indicators widely shared in Burkina Faso for the sustainable management of forests and fight against desertification, a detailed analysis of data requirements was conducted, which led to the identification of 191 indicators covering four types of ecosystems considered (forest, wildlife protection areas, wetlands, soil resources).

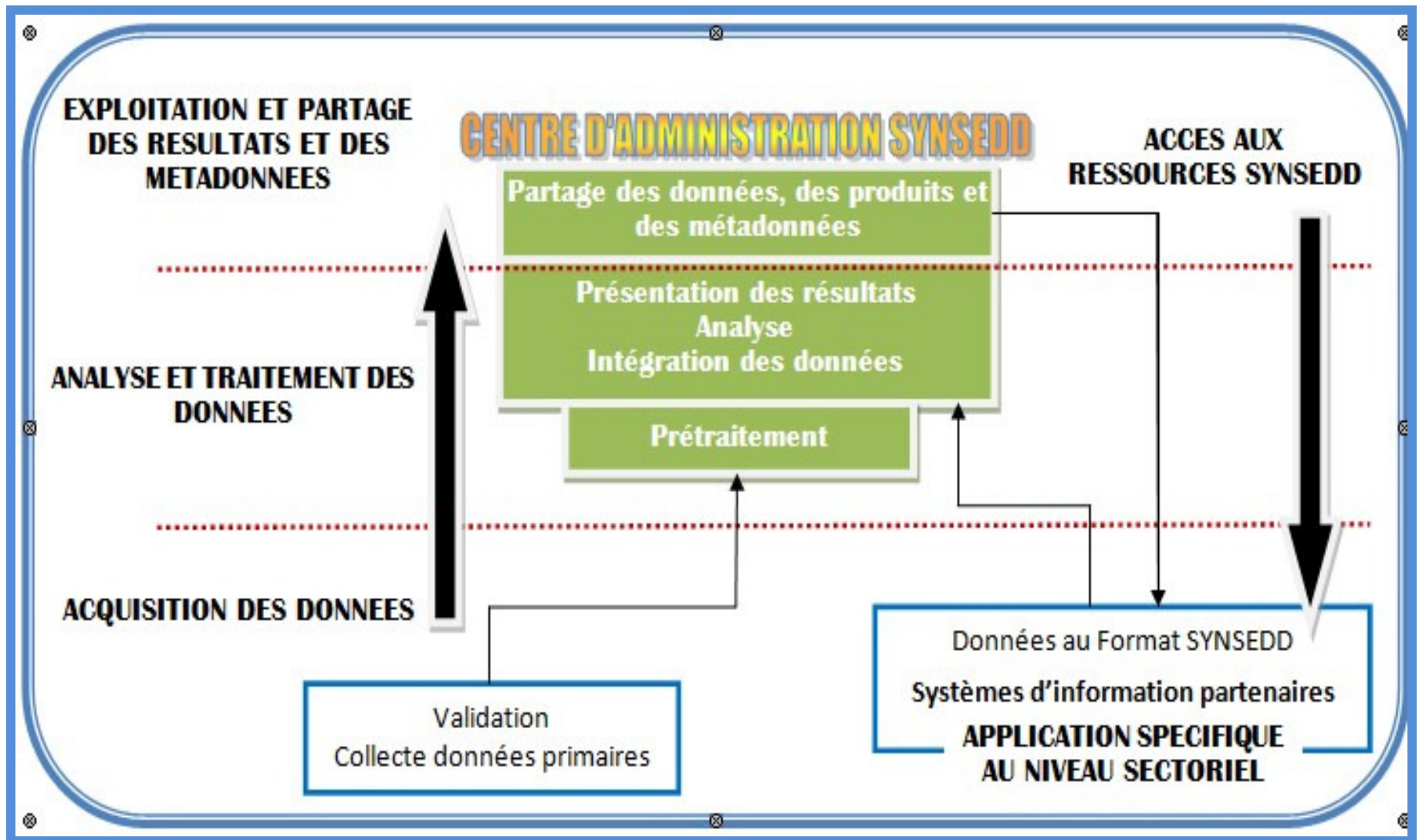


Their measure will necessarily be participatory, involving members of SYNSEDD network to implement. A viewing device on the ground is expected for operationalizing the SYNSEDD, based on phyto-geographical zoning of our country and its administrative division.





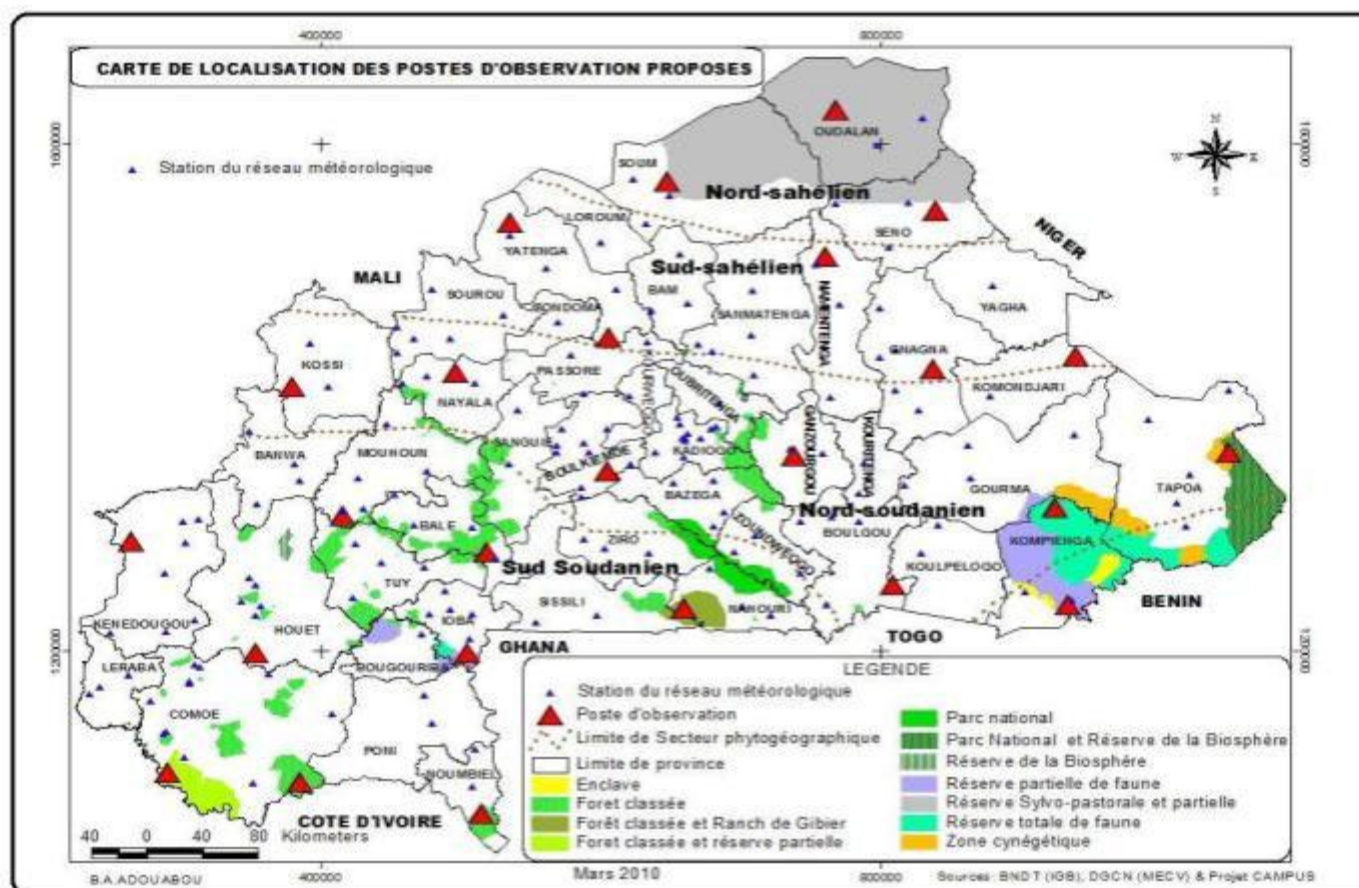
## 2.3. National ecological monitoring and desertification dynamics systems



The location of observation points guides took into account the agro-ecological zoning or phyto-geographical and the administrative division of the country. On this basis, 25 items are divided as to:

3 observation area posts in north Sahel; 5 in southern Sahel; 7 in northern Sudanian zone, and 10 in southern Sudan.

Ten points are located in state classified areas, and 15 others will be taken in areas of conservation or production at the local level. To enable desertification dynamics monitoring homogeneous, 20% of the posts, or 5, will be located in areas of production.



### 2.3.1. National scale monitoring

Monitoring will focus on a national scale using remote sensing. It will involve a priori phenomena which followed was more interesting if performed on a large scale (national or regional): it is the desertification dynamics and bushfires. But monitoring by remote sensing, which will assess the geographical extent of both phenomena, must necessarily be supplemented by ground-based observations by sampling to determine the causes (desertification) or types (fires mapped types).

But monitoring nationwide will also make the establishment of permanent sample plots in the four ecosystems. Indeed, if the permanent sample plots were located in different facies representative ecosystems along climatic gradients of the countries, monitoring will help to draw conclusions based on national interest.

### 2.3.2. Local scale monitoring

Monitoring locally will be realized by the establishment of permanent sample plots in the four ecosystems. The experimental permanent implant will be specific to each ecosystem and indicators of sustainable management to measure.

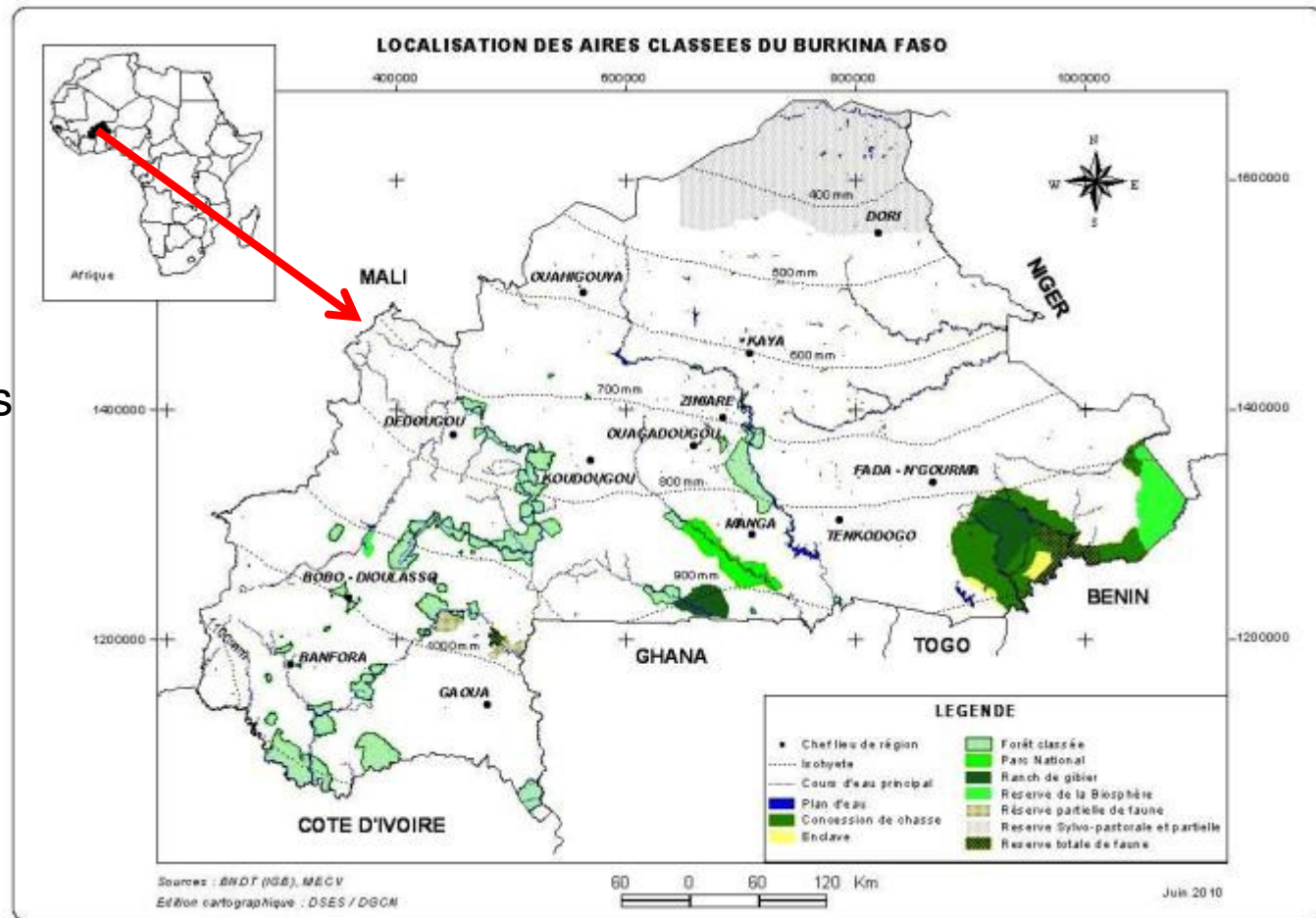
But we must emphasize that monitoring at the local level by the establishment of permanent sample plots can help in some cases, drawn from the results of national interest.

SYNSEDD Administration structure itself must be equipped to ensure the collection of data from its jurisdiction. It is for this reason have sufficient resources to deploy the device in the field of observation, ensuring its operation by a motivated and bear the cost of supervising this scheme with the assistance of local populations and authorities, the charges of his maintenance, replacement and upgrade its technology where appropriate.

It should provide regular coverage of national territory in remote sensing data on dates studied for the purpose of ecological monitoring. It must have the rolling stock adapted to this task (regular rounds on all the observation posts, and areas of study).

At central level, it must have the latest equipment in remote sensing / GIS, Database, Web mapping, production and online distribution of metadata to ISO standards, etc.

The capacity building needs will be satisfied only if the investment plans developed on a participatory basis with the structures partners are funded.





## CONCLUSION

PNSEDD and its technical instrument (the SYNSEDD) are the way to Burkina Faso to ensure effective ecosystems monitoring and desertification dynamics. It thus provides a solution to the difficulty of following the fight against desertification. It passes through a partnership with institutions working in areas related to the environment and contributing to the production of information conducive to environmental management in the spirit of sustainable development.

PNSEDD therefore fills a void by bringing together all the scattered initiatives whose individual actions have no bearing, but the synergy of capabilities can support a qualitative decision-making on environmental matters, and thus contribute to good governance.

PNSEDD implementation is supported by a vision. The realization of this vision is the commissioning of a technical tool, the tracking system and ecosystem dynamics of desertification SYNSEDD. Its operation will be based on partnership between structures with sectoral information systems operational through the concept of network information.

# THANK YOU

