

AFORCE - ECOGEODYN

Innovative multiactors project and Innovative network

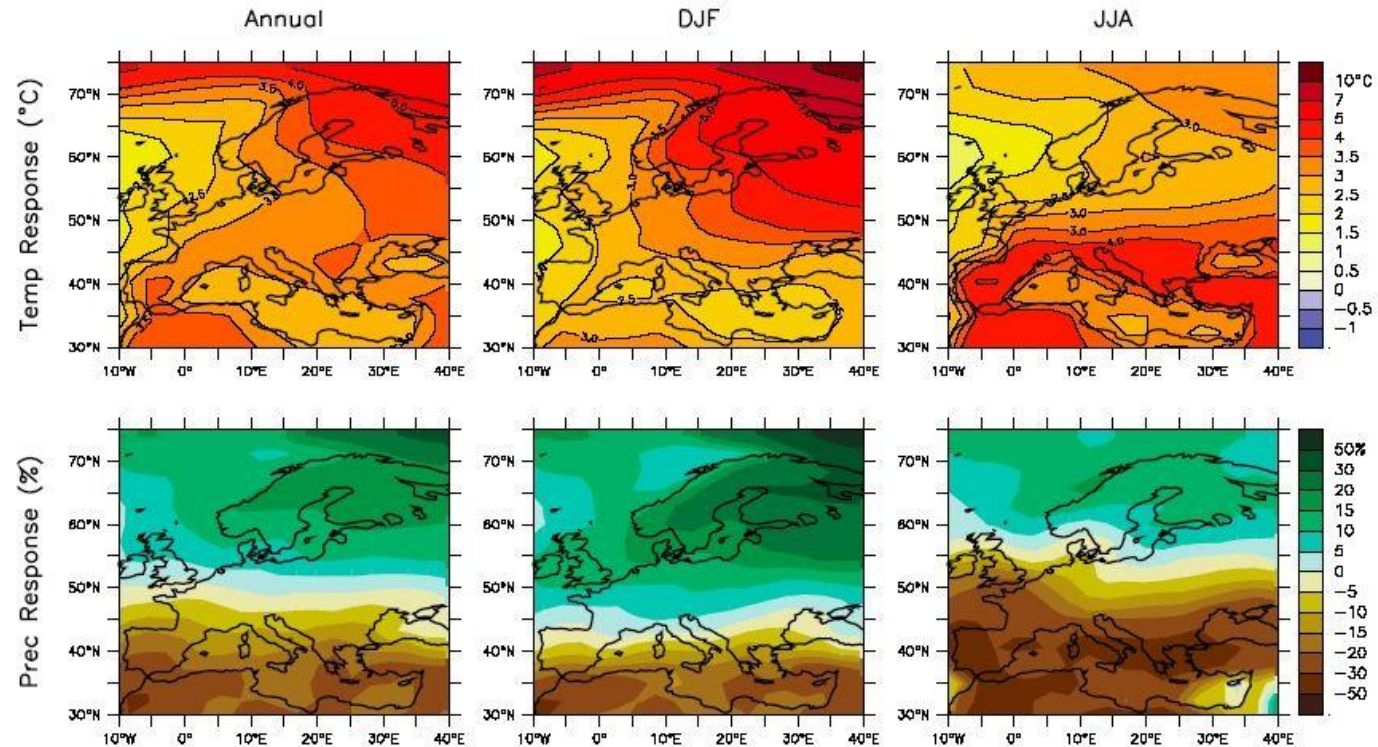
**Regional Delegation of Normandie (CRPF Normandie)
National Center for Forest Ownership (CNPf)**



Establishing Operational Groups under Rural Development Programmes – 22 th May 2014

Climate change : the impacts ..

- + 1,3°C during the last century
- ↘ precipitations in South regions et ↗ in North
- More numerous extreme events (floods, droughts, heat waves, forest fires)



=> rapid shift to less favorable conditions for the growth of trees

Challenges for forest

In contrast to other systems, the forest cannot dodge and must undergo the climate or adapt to new constraints ...

This is essential :

- to **help forest owners and managers** to take now, some concrete forest management choices that will be relevant in that uncertain future
- to **know and understand better the impacts** of climate change on forests, to help them adapting
- to **improve the resilience of the forest systems** and maintain their ability to supply their multiple functions, and the ecosystem services

**Knowledge, preservation of the forest soils,
and adapting the choice and the diversity of tree species to forest
stations are the main practical keys for increasing the resilience of our
forest systems**

What's going on to face these challenges ?

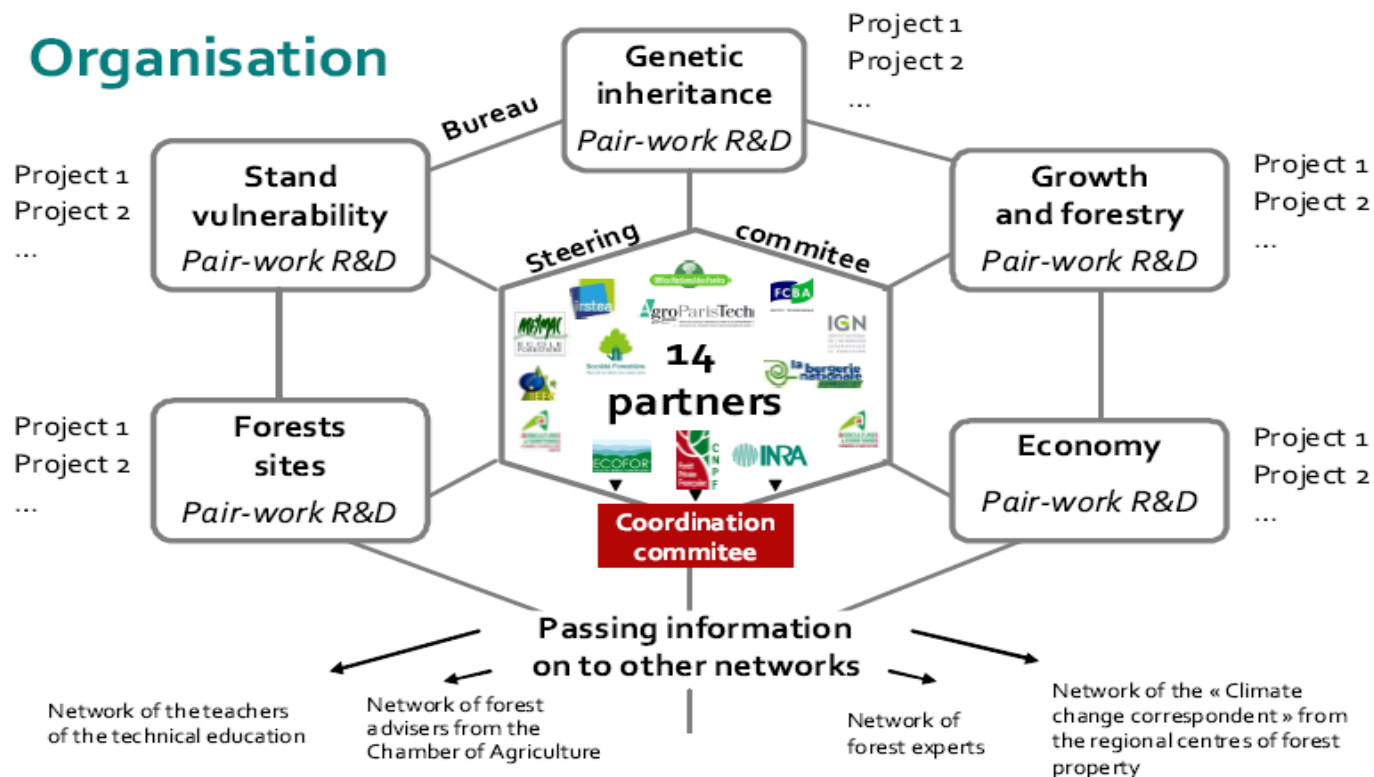
- **Many bottom-up local and regional initiatives and projects, and among them ...**

Ecogeodyn

What's going on to face these challenges ?

- And, in synergy with them, an innovative network (**Aforce**) since 2008 ...

Organisation



Ecogeodyn

Origine of the project

Cross interests of forest owners and managers, who expressed their concerns since 2007, and their desire to have practical tools concerning the adaptation of species to climate change.

Objective

To develop a predictive mapping of forest stations in Lower Normandy in order to integrate climate change and tree-species vulnerability.

A successful story

- Two groups of **forest owners** (Cetef) had since 2007, developed some technical work on the evolution of forest sites
 - **Cooperatives and experts**, expressed their training needs on the choice of species, in the context of renewal of forests and soil conservation
 - The **CRPF Normandie** had initiated in 2011 a preliminary study on the revision of the catalog of the forest sites, which retained the a method developped by the **LERFOB from AgroParis Tech**
- ➡ **the idea of the project came to fruition at this time, thanks to a relevant regional call for projects**

A successful story ...

- Partners and contributions**

ECOGEODYN : main partnerships	Involvements	Roles	Human ressources
CRPF Normandie	Technical and financial	Project manager : technical developments	Project leader and technical support
Conseil Régional Basse-Normandie	Financial : "Synergie partenariale in Basse-Normandie"		Steering committee
AgrosParisTech (LERFOB- ENGREF)	Scientific	Methodological support	Student interships, Steering committee
Institut Geographique National (IGN)	Technical	Provider of a large ecological dataset	Steering committee
Institut pour le Développement Forestier (IDF)	Technical	Coordinator of the RMT AFORCE and mapping the vulnerability of tree species	Steering committee
CETEFs Basse-Normandie	Technical and financial	Technical support for testing the tools in some forests with their owners	Steering committee and practical tests
Forest managers (ONF, cooperatives, experts)	Technical	Reflexion for adapting forest management to climate changes	Steering committee and practical tests

A successful story ...

Results

Achieved (may/june 2014):

- Identification and description of the environmental factors structuring the Lower Normandy forest sites
- Harmonisation of the typology of the sites units in Lower Normandy
- Creation of an harmonized phytoecological database for modelling ecological factors;
- Modelling and predictive mapping of the trophic, hydric and waterlogging levels.

In progress (available during summer 2014):

- Map of the forest stations crossing the spatial models depending on the type of station units and climate vulnerability maps (BioClimSol-IDF)

A successful story ...

What's coming ...

From September 2014 :

- Implement practically these typological and mapping tools in pilot forests (partnership with CETEF);
- Develop a technical field guide for the adaptation of forests to climate change (complementary tool to the predictive maps, allowing a detailed analysis on the forest stations and a synthesis of the silvicultural recommendations for the adaptation of forests to climate change ;
- Elaborate training sessions regarding the use of these tools (forest managers and owners).

A successful story ...

Success factors

- A shared reflection process between the scientists, the extension and technical services, and the forest owners and managers to produce some robust tools, to be used practically on the ground
- The financial and technical participation of the CETEF showing the strong involvement of forest owners in this project.
- The relevance of the targeted call for projects, regarding the objectives of the partnership

A successful story ...

Bottlenecks

- **Data : high cost; accuracy of geological and climatic data difficult to evaluate difficult to obtain**
- **No long-term financing to guarantee the sustainability of the approach and a more effective monitoring of the project**
- ↪ **A national and/or European funding would develop these tools more effectively**
- ↪ **Studies of the climate vulnerability of forest stations would require implementation and funding at a multi-regional scale**