Presentation of the Economics, Energy and Foresight Department
General information

- **Objective**: to contribute to the improvement of the competitiveness of forest and wood based industries through research studies and consulting activities

- **Organisation**
  - Team of 5 FTP
  - Interaction with other FCBA departments
  - Connections with public or private structures (COST, Universities, INRA, Skogforsk, …)

- **Various studies** with economical, technical, technico-economical or multidimensional components

- **Missions towards**:
  - Public (National Forest Department, Regional Forest Department, ADEME, European Commission, Ministries, National Research Agency,…)
  - Private (professional organisations, entreprises,…)

Overview of the recent/current assignments

- **Multidimensional issue**
  - Multi-criteria analysis (wood sector, bioenergy incl. ligno-cellulosic liquid biofuels)
  - Climate change and forest (adaptation/mitigation)

- **Technico-economic issue**
  - Wood resource availability
  - Wood energy (quantity, quality, availability, price) / biomass
  - Transport and logistics

- **Economical issue**
  - Employment in the forest sector
  - Risks and forest management
  - Economic impacts of biotechnologies
  - Wood sector model and interactions
Harvesting more and better?

More?

- **Availability from forest data**
  - Traditional way: Forest Inventory data (Surface, Volume, Increment, Harvest); National Harvest Enquiry; Aforestation and Reforestation statistics; Wood availability in even aged stands (age classes, growth models and harvest scenarios); Wood availability in uneven aged stands (diameter classes, growth model and harvest scenarios)
  - Additional dimension: socio-economic one
  - Survey (private forest behaviours)
- **Long-term scenarios of French energetic mix incl. biomass**
- **Harvesting schemes**

Better?

- **Prices and quality for users (technico-economic)**
- **No particularly “forest and amenities driven work”**
- **Taking into consideration some impacts such as the soil impact of the forest residues or environmental criteria (LCA, multi-criteria...)**
Harvesting more (and better)?

Technico-economic wood potential (ADEME 2009)

- Total wood potential
- Sustainable wood potential
- Technical wood potential
- Economical wood potential
- Social wood potential
- Additional wood potential

*Harvesting losses, ....*
Harvesting costs and wood product price positive balance in current market conditions

*Soil quality restriction ....*

*Economic restrictions*

*Private Forest owners behaviour, Natural reserves....*

*Current harvest*
Wood availability by plot and product

Harvesting cost

Wood cost at road side of wood products

Road side price of wood products (current market situation)

Harvesting financial balance per plot

Cost < Price
Harvestable plot

Cost > Price
Non harvestable plot

Current harvest

Additionnal availability at current market price

Additionnal availability if increase of market price

A. Thivolle-Cazat (FCBA)
ECOBIOM: A spatially explicit model to analyse the regional supply of lignocellulosic biomass (FCBA coordination) – 2006-2009

- Funding by the French Research Agency (ANR)
- Model developed by INRA/CNRS/AgroPT

http://www.fcba.fr/ecobiom/index.html
Harvesting more for energy
Harvesting more for energy
Harvesting more: socioeconomic dimension

Private owners (400 postal survey returned and 30 audits in 3 French regions).

The results of the survey:
- Over-representation of large properties (> 25 ha = 50% responses vs. 5% in national survey) ⇒ ‘bias’ in our results
- An image of a ‘representative forest owner’
  - Over 60 years old, geographically close to the forest received by inheritance: “a family heritage to preserve”, but also to "produce wood"
  - Management of the forest by himself
  - Two key operations: wood harvesting and cleaning/clearing
  - Timber sale
    - is not a priority because "the forest is not a source of income"
    - is related to forestry considerations but also some financial concerns (selling price, but also opportunities to be able to do unprofitable forestry operations)
  - The sale of forest chips (from residues) ? Ok to sale, but more during silviculture operations (83%) than during cutting (50%) – not much environmental concern

No objection of forest owners to provide wood for energy (incl. forest wood chips); but it is still difficult to mobilize more in private forest (no levers)

Survey, Audit