



# French Forests and Biodiversity

## *State, Policies & Research*

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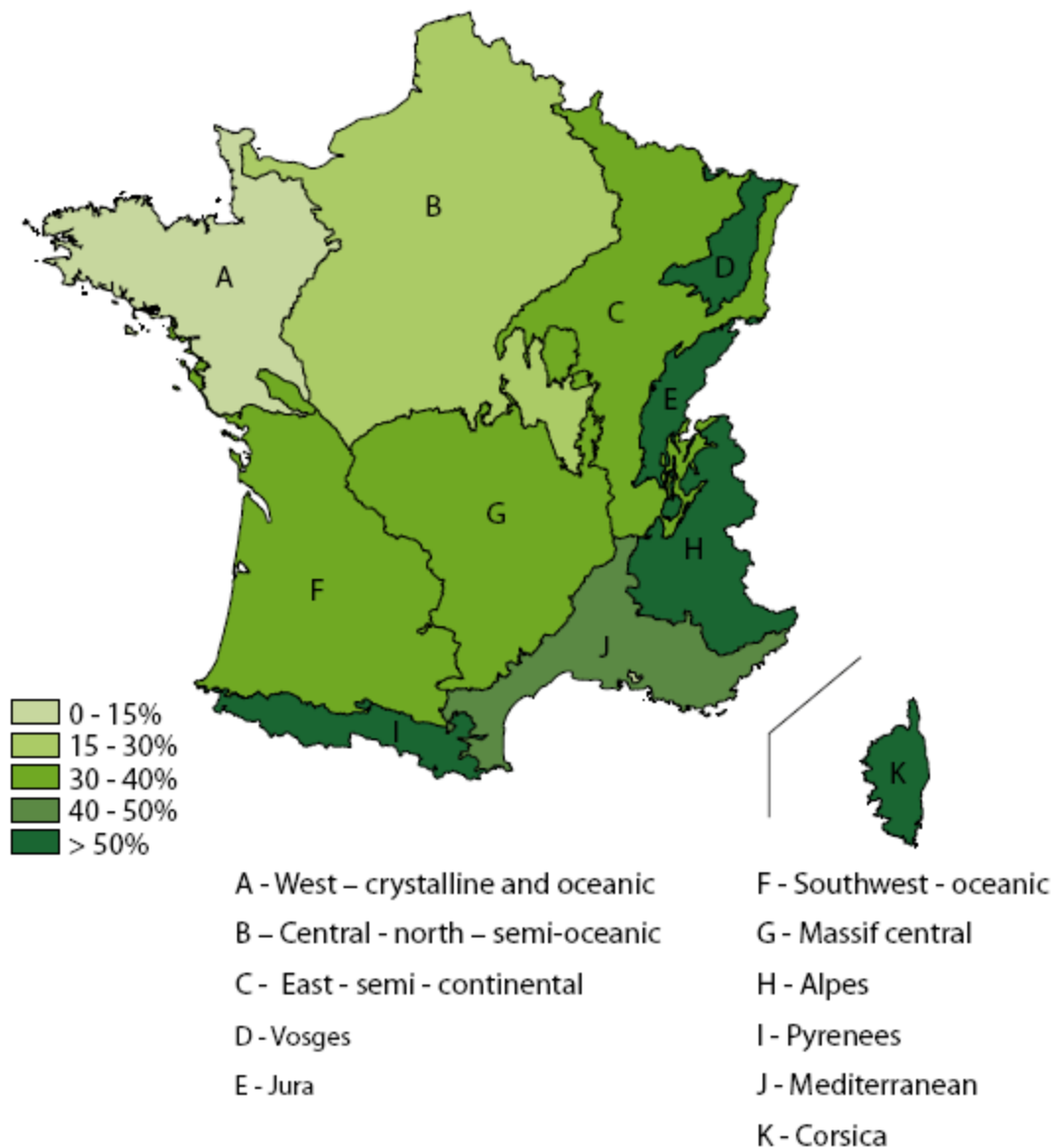
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## Context

- French Forests have mixed characteristics relative to biodiversity
  - **great ecological variety** (Atlantic; semi-Continental; Mountains; Mediterranean; **oversea forests**)



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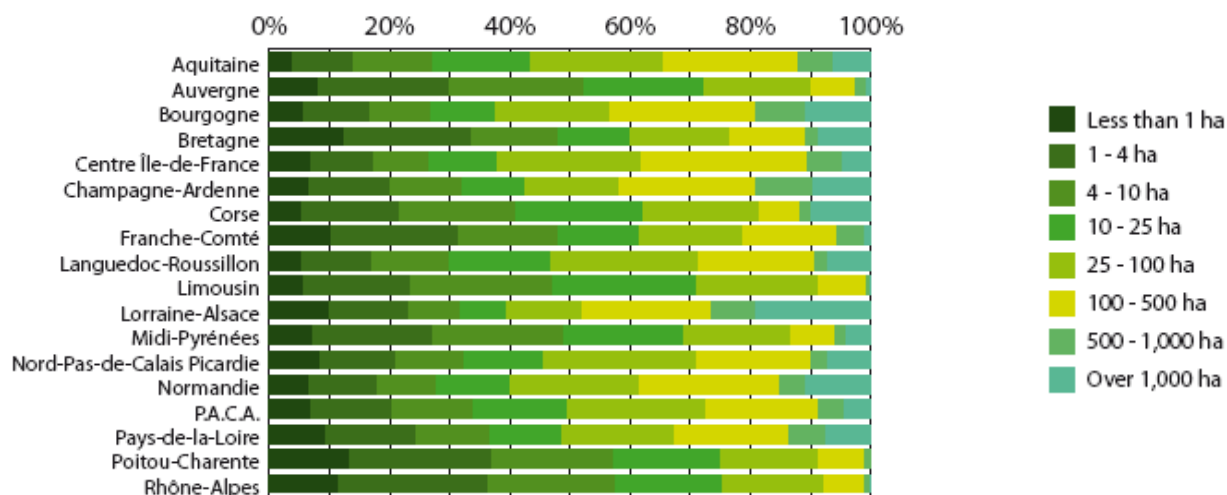
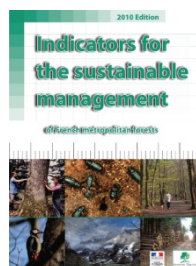
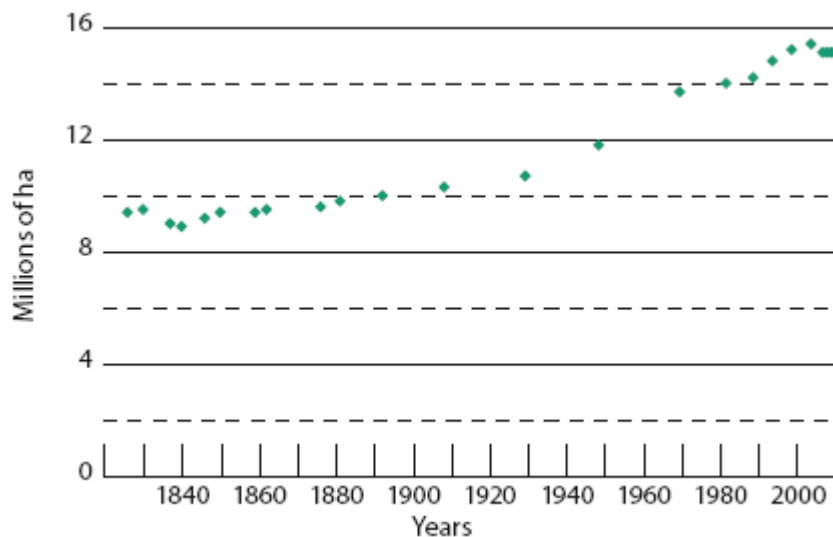


Figure 37: Percentage of private forest area ranked by size class and region, and total private forest area by size class and region.

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– **forest area** has been increasing in the last decades to 30% of the metropolitan area



- 
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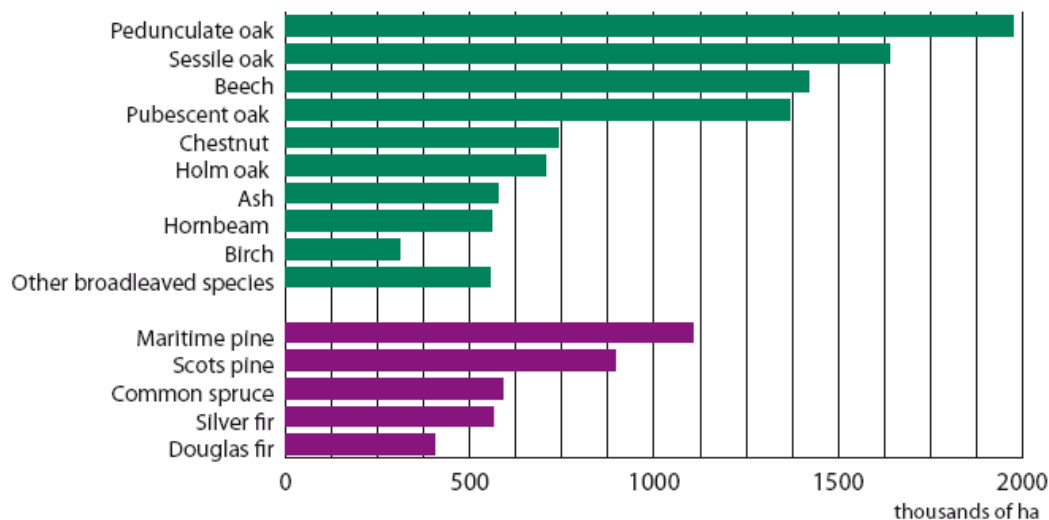


Figure 2: Forest area of the main broadleaved and conifer species.

Source: NFI, survey years 2006 to 2009.





Old coppice with standards



Old coppice with standards

Oak high forest

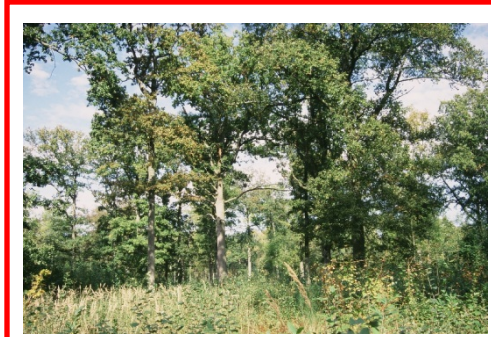




Old coppice with standards

Oak high forest

Strict forest reserves





## Context

- French Forests host an important part of French biodiversity:

- 31% of mammal species
- 19% of bird species
- around 10% of vascular plant species...

... are mainly forest species (no such figures for insects, fungi...)

## Context

- French forest biodiversity is also concerned with biodiversity erosion:

- 30% of strict forest mammal species
- 40% of strict forest bird species
- 30% of forest amphibian species...

... are threatened by extinction (IUCN categories: CR, EN & VU)



# Policies for forest biodiversity

- 0- Apart from general policies relative to biodiversity (National Parks, Regional Parks, plans for species, Habitats Directive...)...
- 1- Synthesis of the evidence and information for foresters (best practices guides...)



## Mieux intégrer la biodiversité dans la gestion forestière

Marion Gosselin et Yoan Paillet



# Best practices guides

- Easy to integrate measures  
*e.g. maintaining dead trees far from pedestrian tracks*
- A variety of actions...
- ...that need to be adapted to the regional, ecological, historical context



# Best practices guides

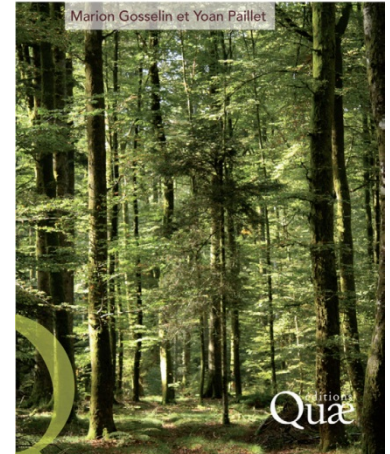
- Complementarity between individual-level measures and more collective-level ones

*from isolated tree retention to unmanaged reserves*

- Need for more monitoring

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## Policies for forest biodiversity

2- Improvement of monitoring, indicators..., in two frameworks:

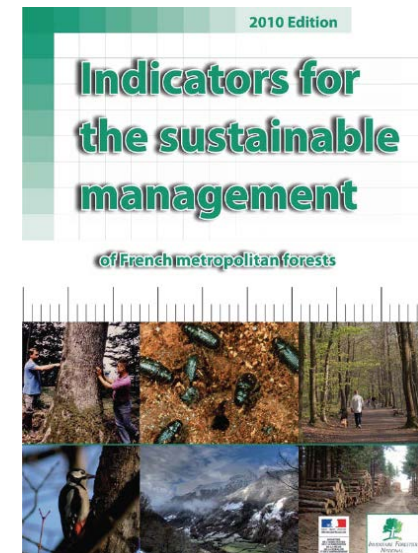
*the newer National Biodiversity Observatory (ONB), incl. a forest subset of biodiversity indicators*

*a system framed around « societal » questions*

# Policies for forest biodiversity

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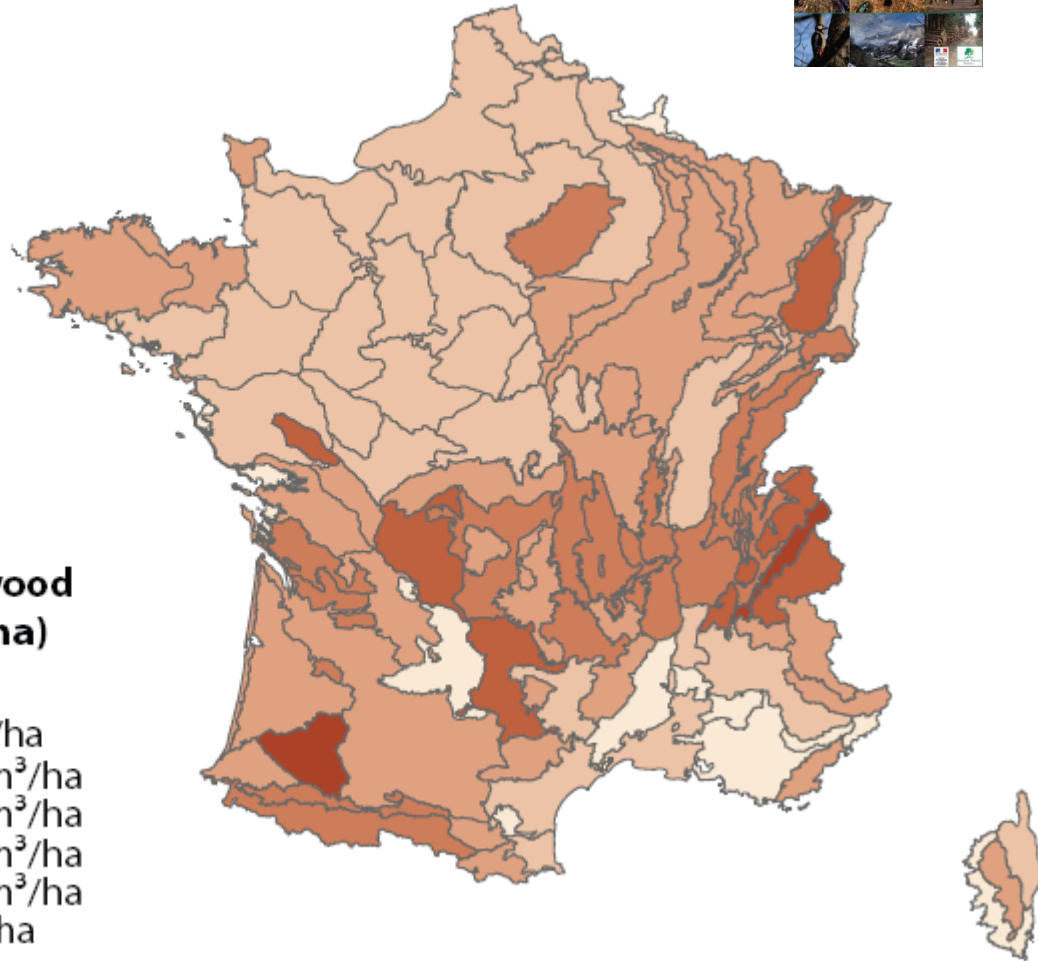
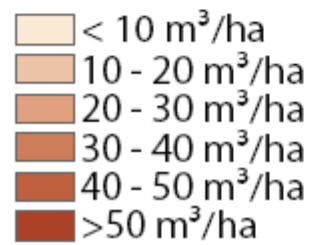
the older *sustainable forest management* framework





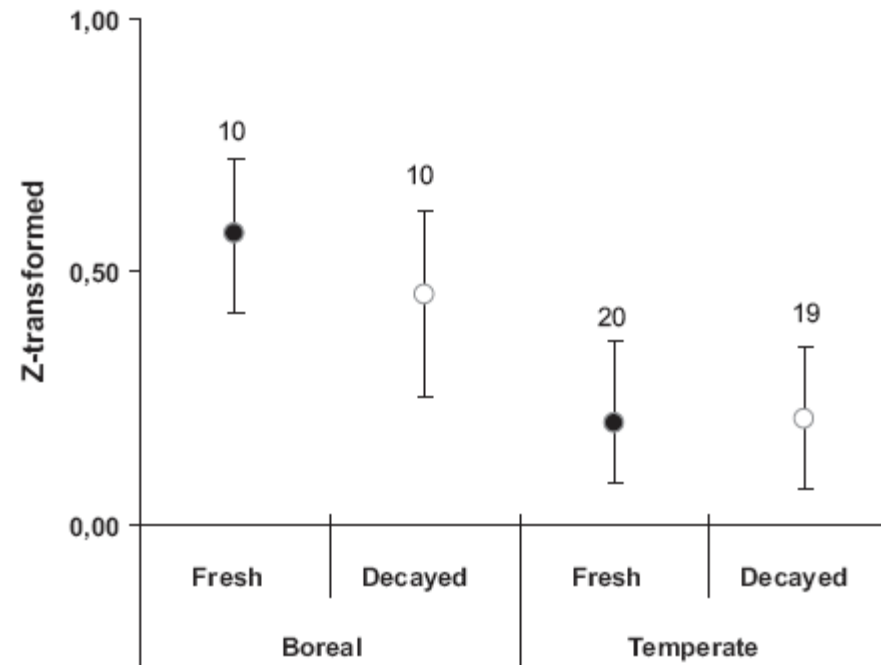
Total France : 24 m<sup>3</sup>/ha

**Per-ha deadwood volume (m<sup>3</sup>/ha)**





## Associated research results: deadwood



**Fig. 2.** Z-transformed effect size and 95% bias-corrected confidence intervals (error bars) of individual studies correlating species richness and deadwood volume for different decay stages for each biome. The numbers above represent the sample size.



## Policies for forest biodiversity

### 4- Funding of applied research in ecology & socio-economy

- ongoing since 1997
- around 7 national projects founded every 3-5 years
- mainly Ministry in charge of Ecology, also Ministry in charge of Agriculture



## Next steps (policy & associated research)

- Develop more options in terms of compensatory ecological forest engineering (deadwood, microhabitats...)
- Define and monitor a balance between intensively managed, extensively managed and unmanaged forests in France?
  - a policy that would be context-dependent?



## Next steps (policy & associated research)

- Better apprehend the link between biodiversity and ecosystem services (directly? through management?)
- Improve monitoring of the state and trend of biodiversity in forests