

Bio-diversity or bio-energy.

Is dead wood conservation an environmental issue for forest owners?



Philippe DEUFFIC

CEMAGREF,

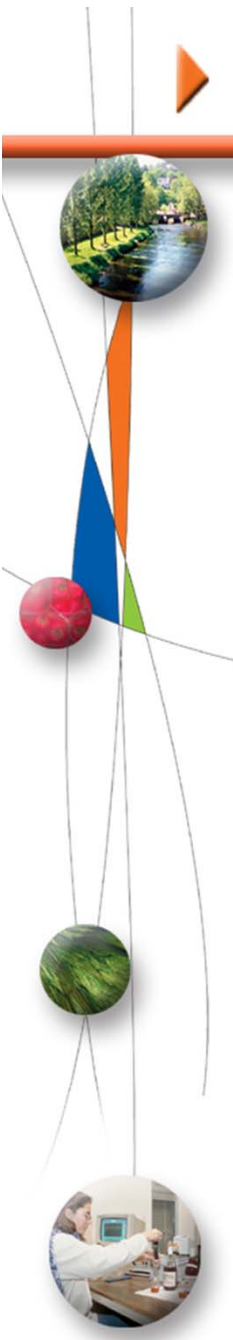
Institute for Agricultural and environmental engineering research,
50 avenue de Verdun, 33612 CESTAS, FRANCE

And

University of Bordeaux

Department of Sociology, centre Emile Durkheim
11 allée Ausone, 33607 Pessac, France

philippe.deuffic @bordeaux.cemagref.fr

- 
- **Two environmentally-friendly – but contradictory – discourses**
 - Dead wood for biodiversity, habitat, carbon, soil fertility...
 - Wood fuel : to save fossil fuels, to create new jobs, to increase incomes...
 - **RESINE : An interdisciplinary research program (2006-2009)**
 - **Research questions :**
 - Do forest owners integrate – or not – deadwood into their forest management practices?
 - How do they choose between deadwood conservation or wood fuel production?



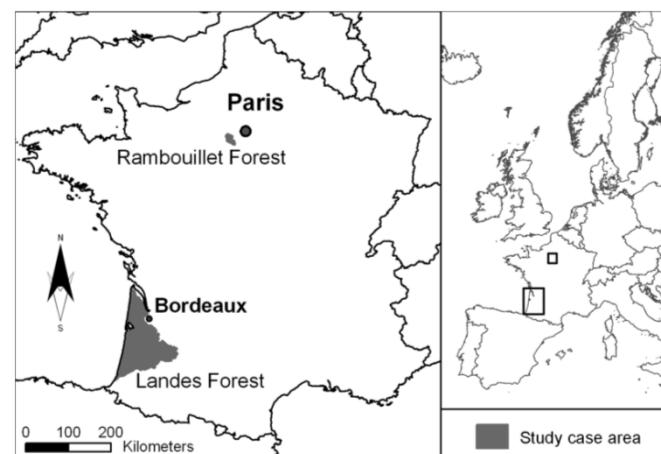
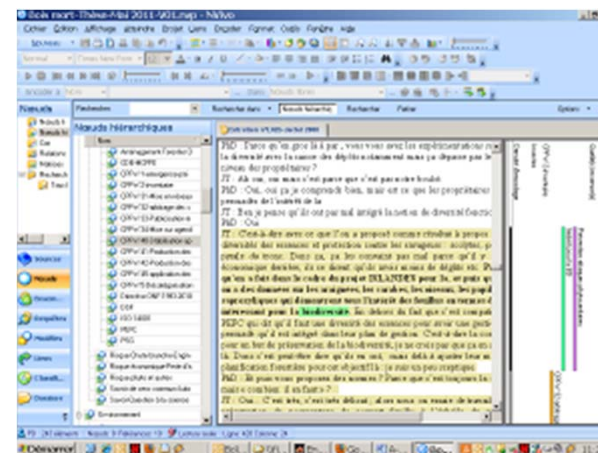
► An interdisciplinary research programme

Qualitative survey :

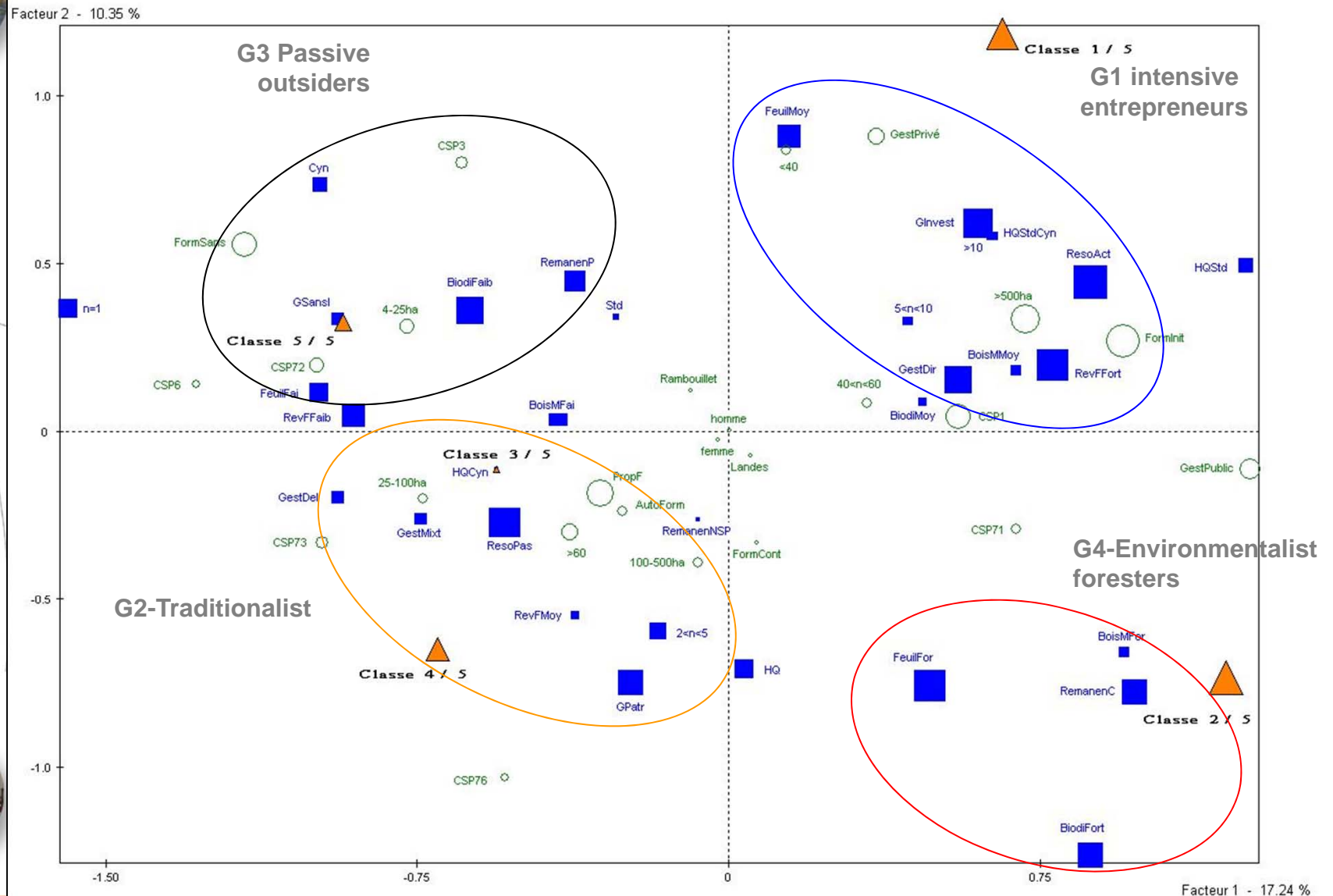
- 54 interviews with forest owners (+30 interviews with scientists, NGOs, industrialists...)
- Textual content analysis (with NVivo software)
- Multiple component analysis and Cluster analysis (with SPAD Software)

Two study case areas

- Landes Forest (1 million ha, monoculture of *Pinus pinaster*, 90% private)
- Rambouillet Forest : (20 000 ha, mixed forest, *Quercus*+*Fagus*, 66% public)



► Typology of forests owners



► Results : Group 1 : “intensive producers”

● Social profile

- S >500 ha, network leaders
- At the top of the forestry technologies
- Legitimacy of their forest management by the commercial exchanges and profitability

● Dead wood

- a waste, symbol of a lack of management, an eyesore
- A double source of risk : accident and pest invasion
- They prefer to remove the maximum of dead woods (from stump to branches)

● Wood bioenergy

- Economic opportunities : Reinforcement and optimization of their intensive forestry models
- chemical fertilizers will supply loss of soil fertility
- What will be woody biomass price ?



► Group 2: “cautious traditionalist producers”

● Social profile

- Part-time foresters, passive members of local networks, Traditionalist, $25 < S < 500$ ha
- More difficulties to invest in technologies, medium or low profits

● Dead wood

- risk of pest, ignorance of dead wood role as an habitat
- But a important source of humus

● Wood bioenergy

- The fear to decrease soil fertility
- a secondary product, an incidental income ;
- An opportunity, let's the door open



► Group 3 : the “passive outsiders foresters”

● Social profile

- Old, absent, unmotivated, passive outsider, $4 < S < 25$ ha
- Very small economic benefits,
- No financial capacity , no interest for forestry but for hunting

● Dead wood

- The least of their worries
- Symbol of dirtiness and of their lack of investment
- Dead wood “for birds and insects, nor for foresters”



● Wood bioenergy

- Not in social networks where the debate emerges
- Wait-and-see attitude,
- No money for fertilizers
- Wood fuel : a possibility to reintegrate the economic forestry sector ?



► Group 4: the “environmentalist foresters”

● Social profile

- Active members of close-to-nature forestry network,
- Economic profitability based on environmental forestry model
- Supporters of biodiversity

● Deadwood

- Dead wood as an element of close-to-nature forestry
- Faith in nature interactions to balance population of pest and antagonist predators

● Wood bioenergy

- To keep CWD for soil fertility,
- no stump harvesting : “*my forest is not a battlefield* »
- In a balanced ecosystem, natural interactions should attenuate disturbance (pest, drought...)



► Synthesis

	Social profile	Dead wood conservation	Wood Fuel development
G1	Leaders Intensive foresters	*	*****
G2	Followers Traditional foresters	**	**
G3	Passive outsider Wait-and-see	*	*
G4	Leaders Close-to nature foresters	*****	**

► Conclusion

- Individual and collective attitudes under the influence of public policies
- Dead wood : still more risks than tangible benefits?
- Future rallying of group G2/G3 to the views of:
 - the group G1 since their model is dominant and influent ?
 - the group G4 since the environment becomes a new criterion of performance?
- Their own way : to mix up bioenergy and biodiversity?
 1. To preserve soil fertility before making money
 2. To make money with subsidies (dedicated to dead wood conservation) or with the energy market (wood fuel market)?
- For the future :
 - Quantitative survey to observe the statistical distribution of these 4 (perhaps more?) attitudes
 - Evolution of the European policies in term of energy and nature conservation

► Case study area

