



After the catastrophe. Turning off or speeding up?

How French forest owners cope with Extreme Weather Events (EWE)

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	Fir forest dieback in Pyrenees mountain	Storm Klaus In Atlantic plain forest
Duration	2003-2007	2009, 23th of January
Damage (volume)	100,000 m ³	42,000,000 m ³
Cause	Severe drought + heatwaves	Windstorm (172 km/h)
Surveys+ Interviews	Qualitative (n=45 in 2017) Quantitative (n=79 in 2018)	Qualitative (n=75 in 2009 & 2013) Quantitative (n=432 in 2015)
Main species impacted	Silver fir (Abies alba)	Maritime pine (Pinus pinaster)
Main conclusion by forest stakeholders	« Silver fir will be present here for a long time to come »	95% of the reconstitution is made of Maritime pine... again



=> natural hazards have no impacts on forest owners' management practices ?

Ambiguity of disasters impacts

1) A trigger event for change

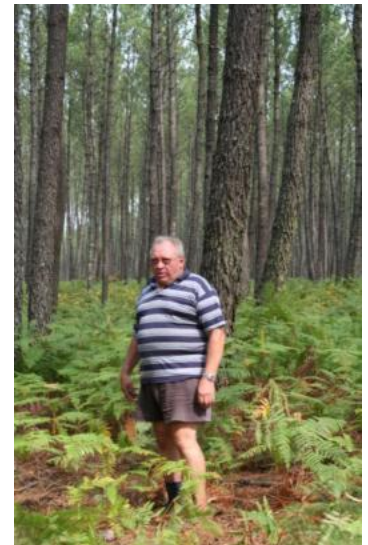
- a **window of opportunity** for major changes (Andersson et Gong, 2010; Keskitalo *et al.*, 2015),
- a **turning point** that induces a new regime of action (Abbott, 2001)

2) A progressive return to routines

- forest owners prefer continuity and give priority to **security over innovation** ((Dynes et Drabek, 1994; Lidskog *et al.*, 2014)

Research questions

- Do catastrophes really change forest owners' attitudes?
- Which factors interfere in forest owners' decision making to come back to routines or to initiate changes?



A window of opportunity just after the crisis

1. Rationalisation of the EWE

- **More rationale** and causal explanations than disaster = Act of God....
- **Connection, alignment and amplification of past similar** events to make sense of the catastrophe, to learn from experience, to use memories of EWE as a **political resource** to justify economic support

2. Disasters as a criticism of the **social order** and **former silvicultural models**

- **Put into question** experts' knowledge and their advice concerning former silvicultural practices (**human artefact** behind the “natural” hazard)

=> forest owners **seemed very open-minded** to alternatives practices (new species, new thinning regimes, to give priority to broadleaves, etc)

=> why did forest owners finally **temper their enthusiasm** for innovation?

The lobbying power of wood sector professionals

Wood sector industrialists acts as claim-makers

- Dramatization of the risks of **wood shortage** for the local wood sector industries.
- lobbying to put the issue of the **reconstitution on the political agenda asap** + Exhortation to replant asap

They steer and frame the assessment of the EWEs expertises

- **Wave aside** “too alternative” forestry models in order to keep control on the framing of a collective vision of forestry and to domesticate the victims’ critical thinking

They propose an “**assisted deviation**”, not a Copernician revolution.

- **Little time to elaborate** very innovative solutions
- propose **ready-for-use solutions** already experimented before the crisis and **in-line** with the existing forestry models and the wood market

Forest owners' trust in experts' epistemic authority

Professional expertise **remains pivotal** in transforming uncertainties into governable risks.

- **the ones who failed** and put at risk the forest owners' capital.
- the ones who hold **epistemic authority**, the main **providers of valid** and relevant knowledge (Lidskog & Lofmarck 2015). Only a few forest owners can **change their sources of** information
- What is at risk? The traditional expertise is denied but the **new one is not yet assessed and proven safe**.
- Forest owners have no hindsight of the pros and cons of the new silvicultural models; they avoid to take **unnecessary and additional risks**

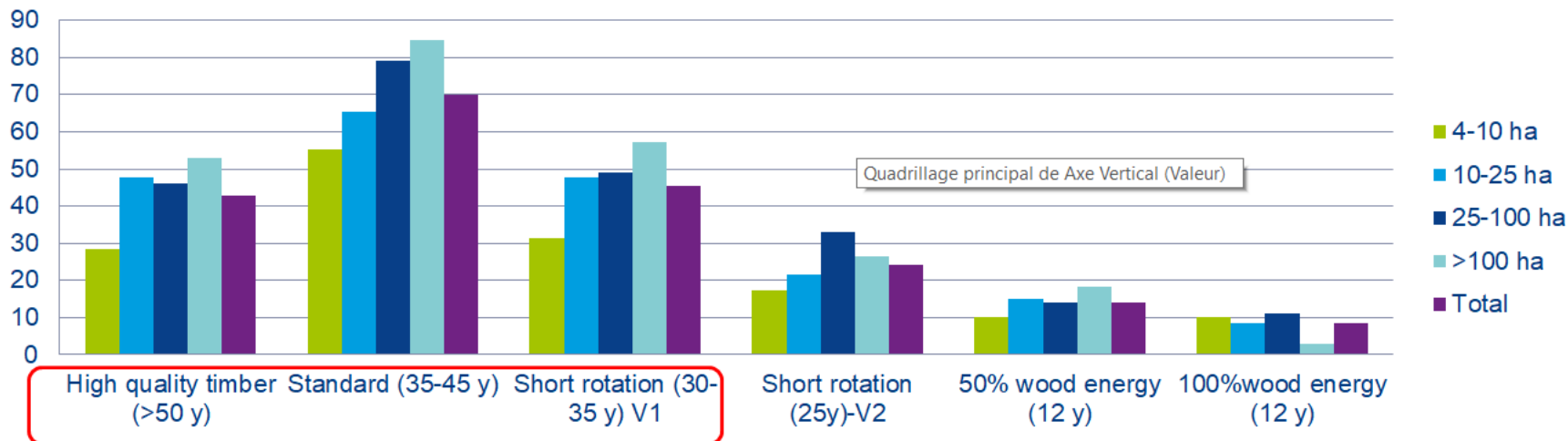
Back to routine => a **choice by default + lack of anticipation + loss of control**

A few changes anyhow

1. to shorten rotation.

- Hope to reduce risk exposure and to slip through the next catastrophe.
- Sounds **like a declaration of intent**? A decision that will be made by their children or grandchildren
- A solution strongly suggested by the wood sector industrialists and some forestry advisors

Preference of silvicultural models for next rotation

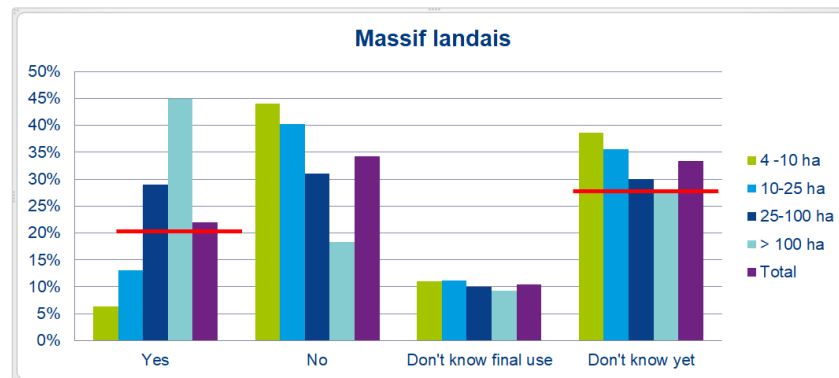


A few changes anyhow

2. Engagement in wood energy market

- New outlet, a good opportunity **to recover cash** rapidly,
- Not to make forest more resilient

Willingness to sell wood energy in the next 5 years : no rush



3. Adoption of alternatives models such as close-to-nature forestry

- a minority of forest owners with **specific profiles**: members of alternative forestry networks of information before the crisis , environmentally-oriented worldviews
- Often **tested before the disaster**
- mix of new information by discussing and assessing the range of options with peers, '**healthy skepticism**' (Millar et al., 2007).

Conclusion

- **Neither disruption** of practices, **nor status quo**
- An “**assisted deviation**” =>Very incremental and progressive changes on a longer time-scale
- Forest owners are not alone to decide ; under the influence of experts and wood industry key players matters
 - ‘**morale entrepreneurs**’ : changes in forestry models are partly supervised and under their influence
 - ‘**rule enforcers**’ : they steers forest owners’ behaviour by **suggesting** progressive changes that do not destabilize the market configuration.