SIMWOOD
Sustainable Innovative Mobilisation of Wood

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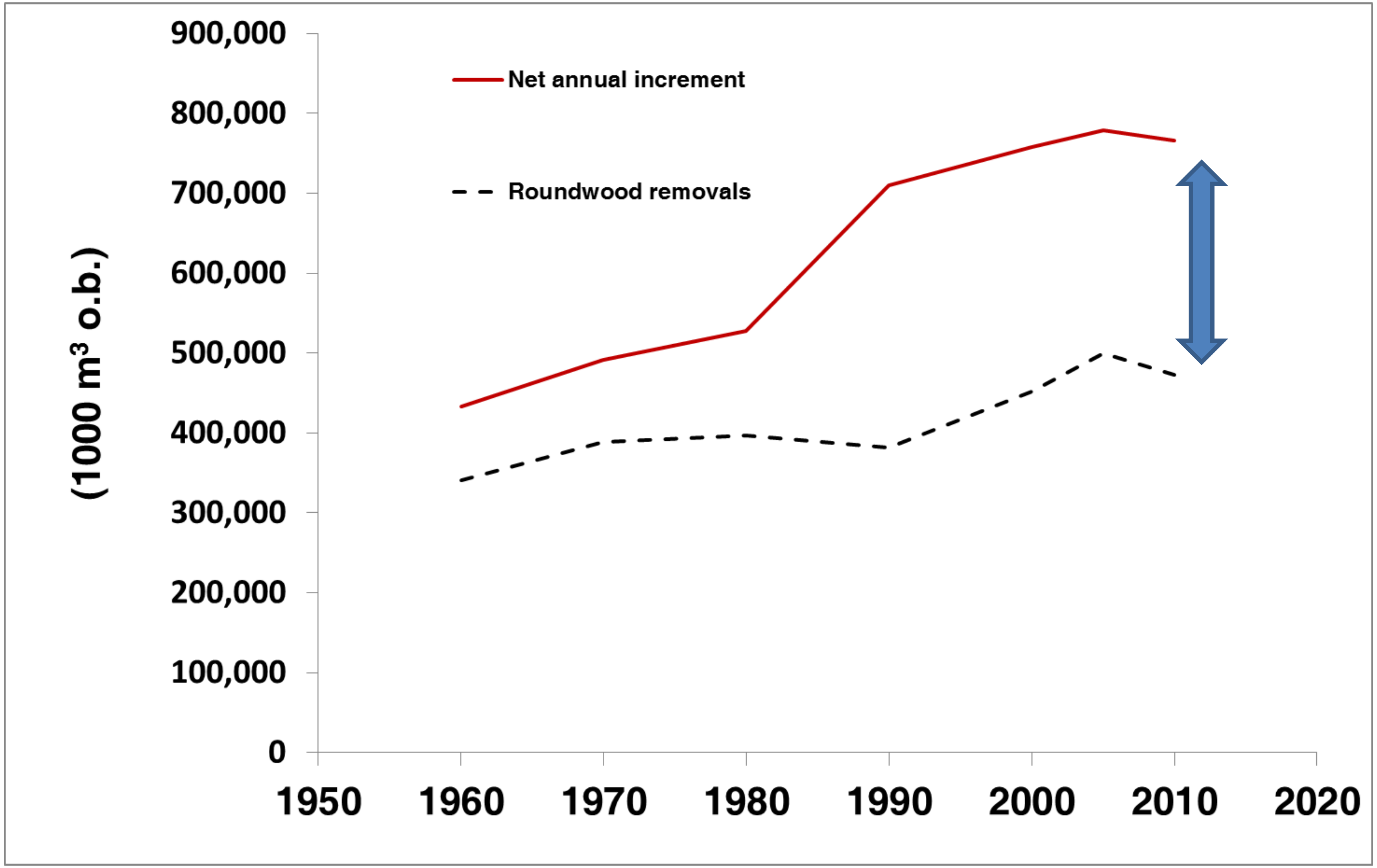
Gary Kerr + all regional case people

Wood mobilisation potential – a modelling approach

Paris 13 October 2017

ALTERRA
WAGENINGEN UR

The apparent potential in Europe



Nabuurs et al. 2013

UNECE data

Very different situations in the SIMWOOD regions

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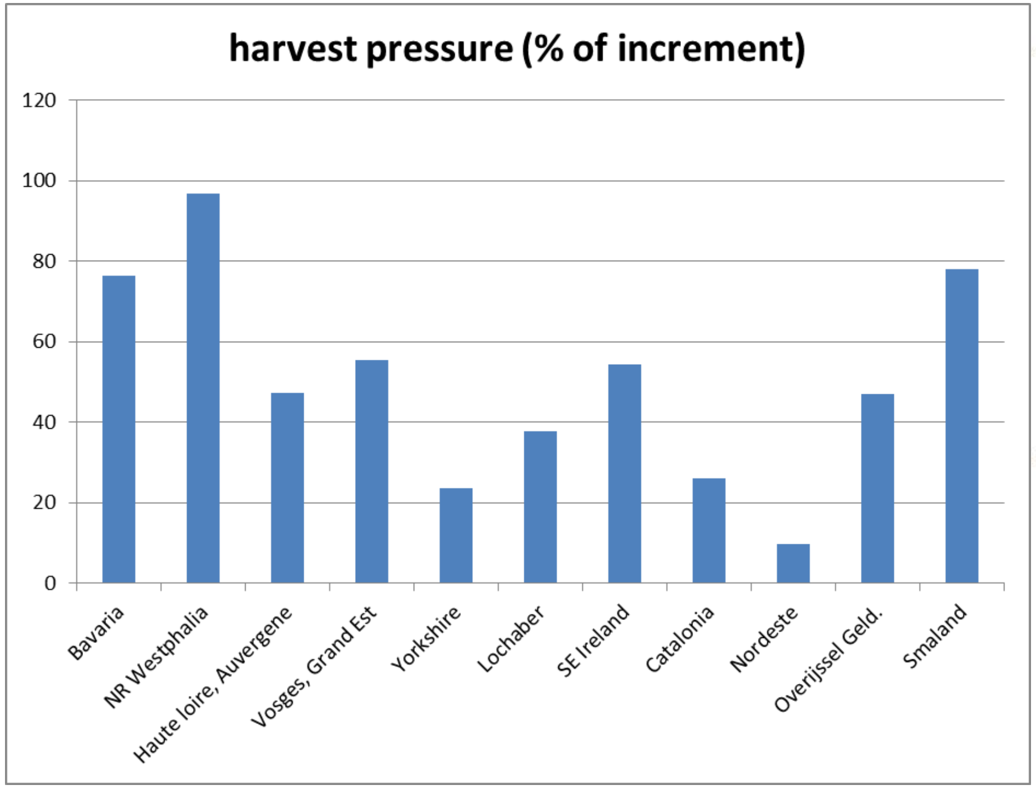
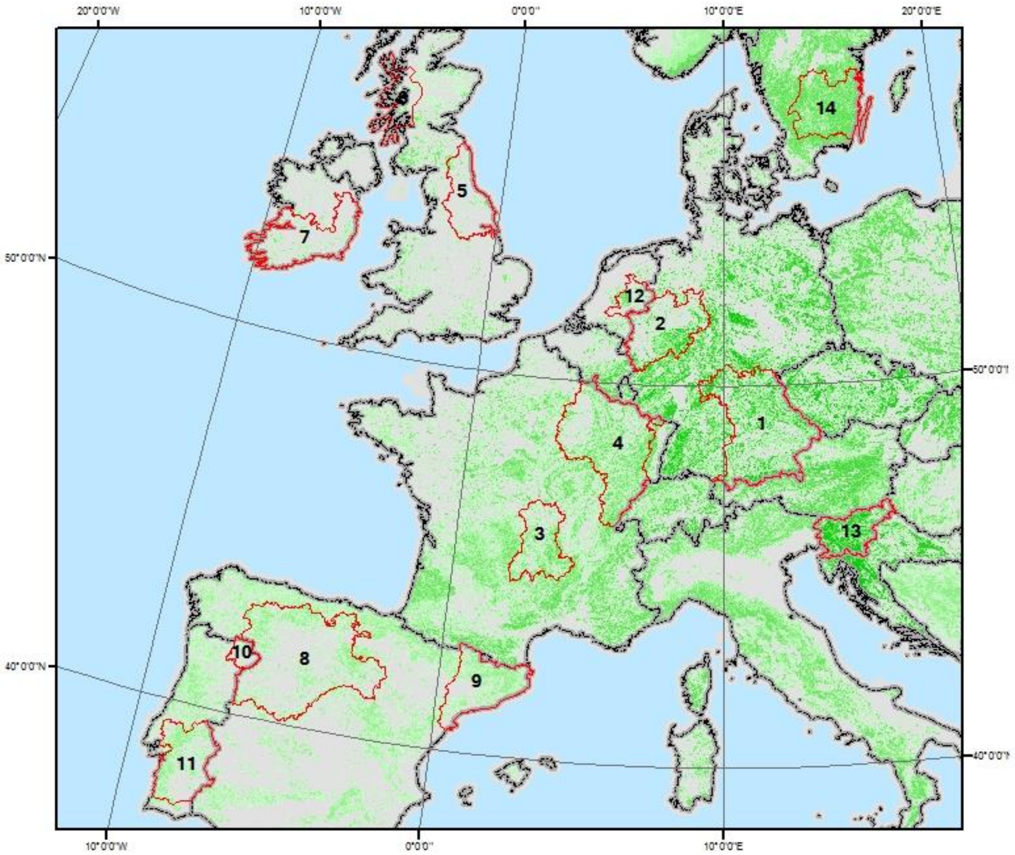
Currently: 9 - 96%





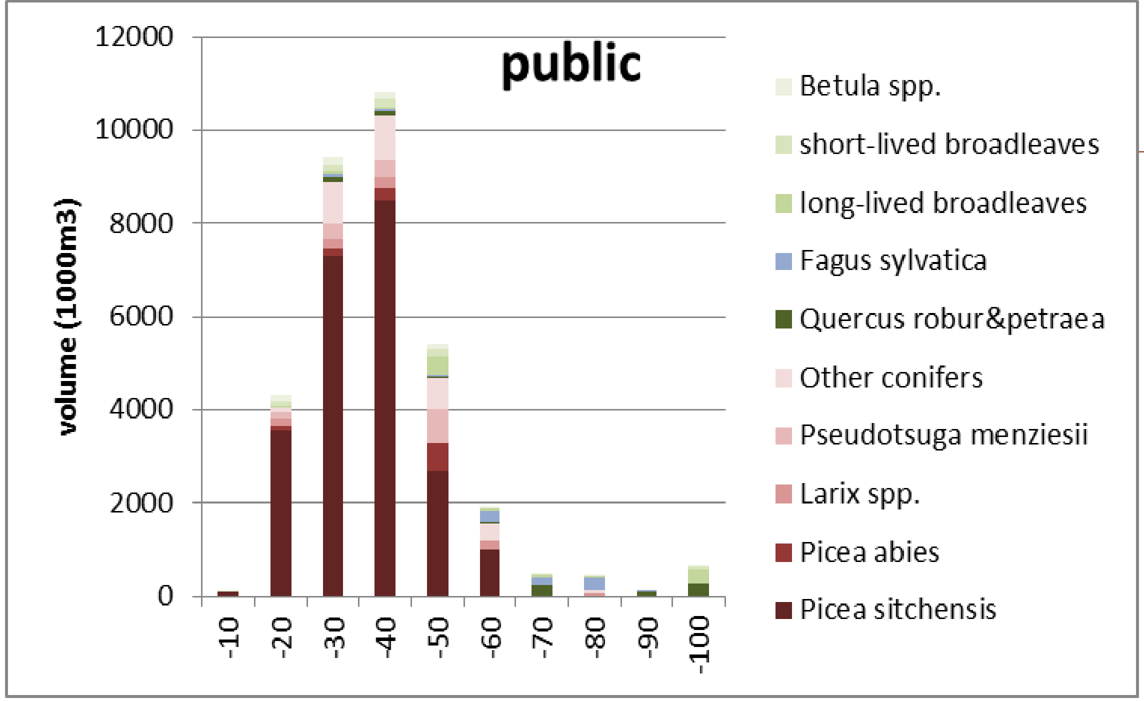
Model regions

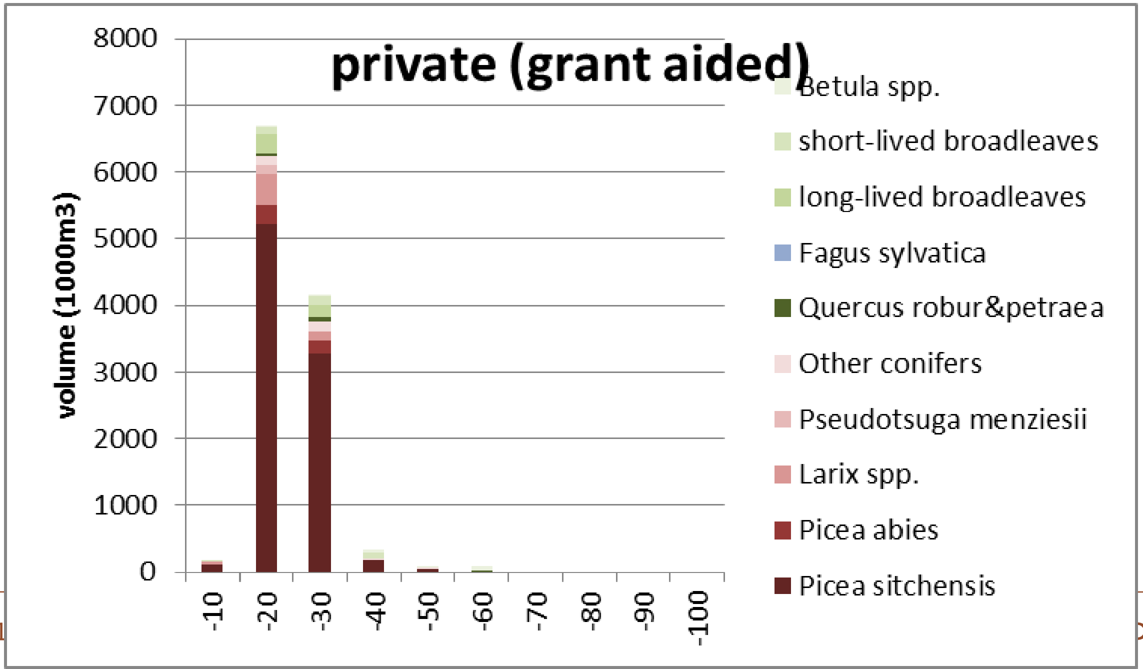
1 - Bavaria
2 - North Rhine-Westphalia
3 - Auvergne
4 - Grand Est
5 - Yorkshire and Northeast England
6 - Lochaber
7 - South-Eastern Ireland
8 - Castile and León
9 - Catalonia
10 - Nordeste
11 - Alentejo
12 - Overijssel & Gelderland
13 - Slovenia
14 - Smaland

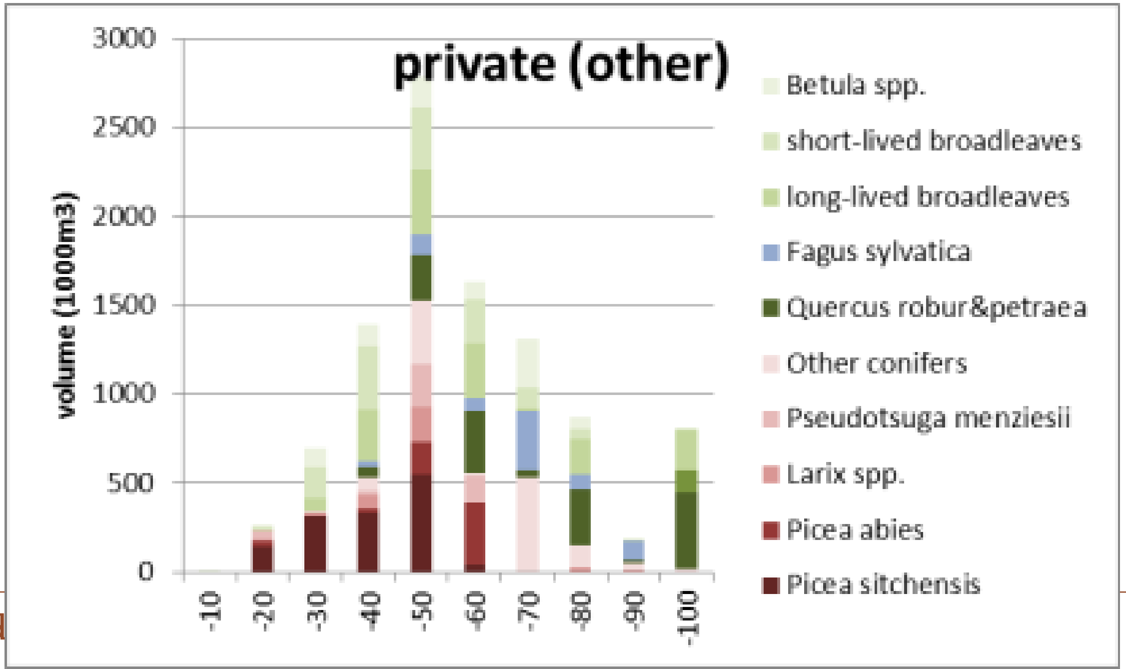
Modelling approach in the regions

1. Consultation of regional experts:
   - Identification of factors influencing wood mobilisation in the region
2. Analysis of (repeated) NFI data:
   - What kind of forests do the different owners have?
   - What is their harvest behaviour?
3. Modelling:
   - Baseline
   - Mobilisation scenario(s) by transferring harvest regimes between groups

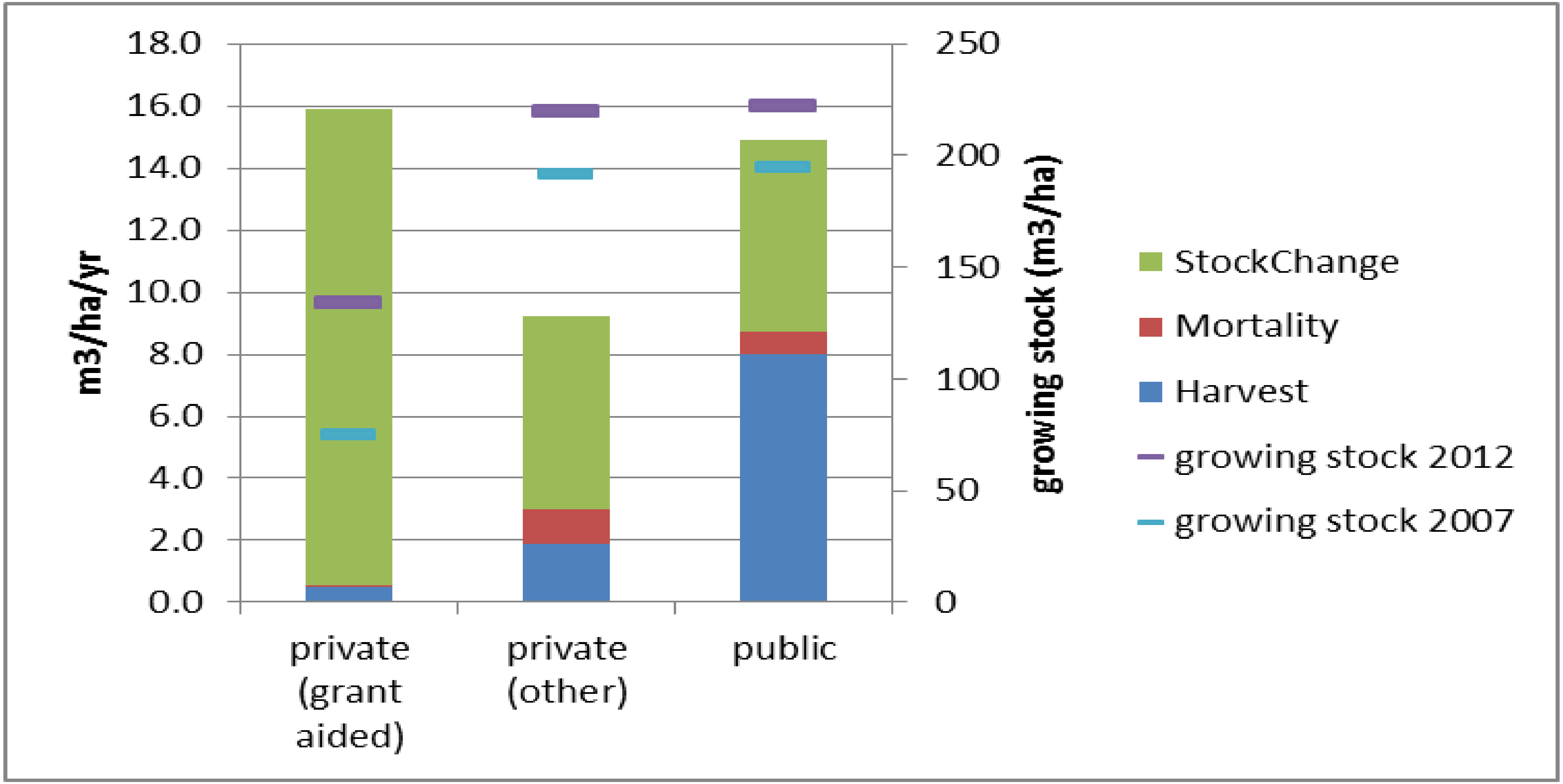
Southeast Ireland



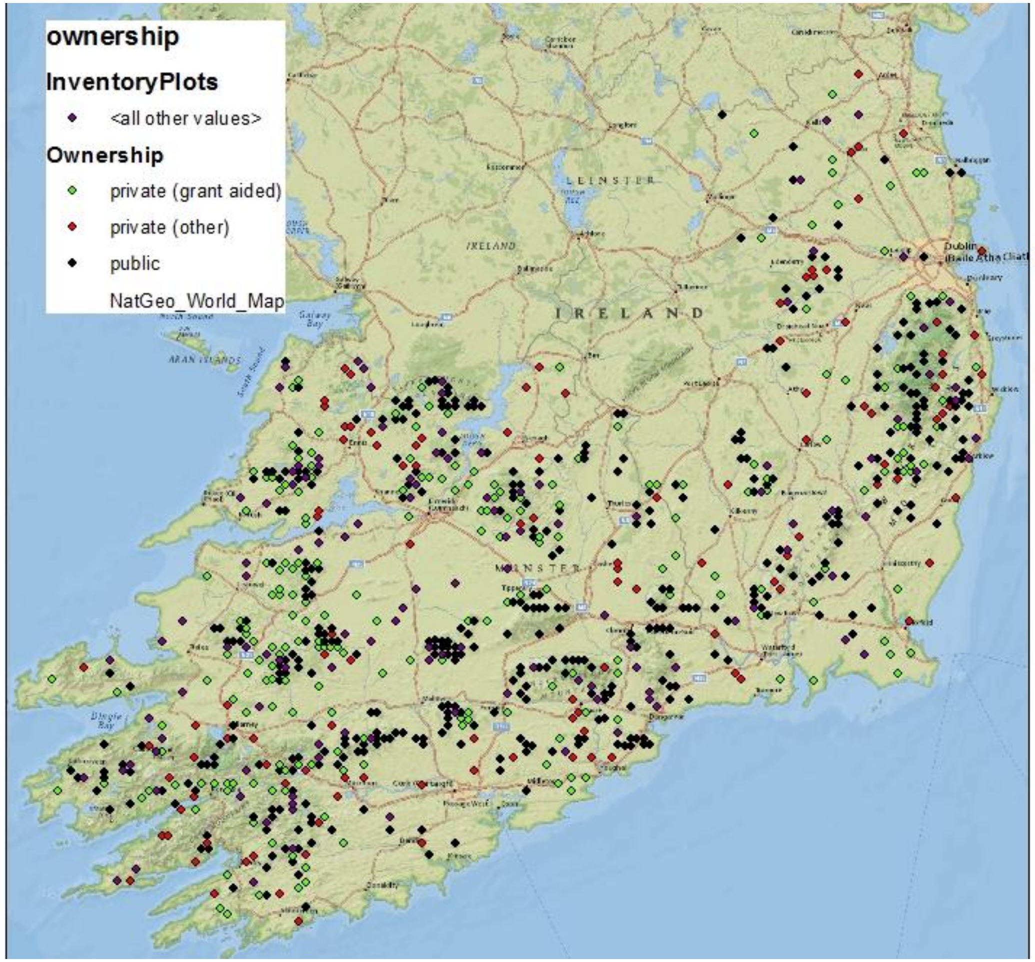


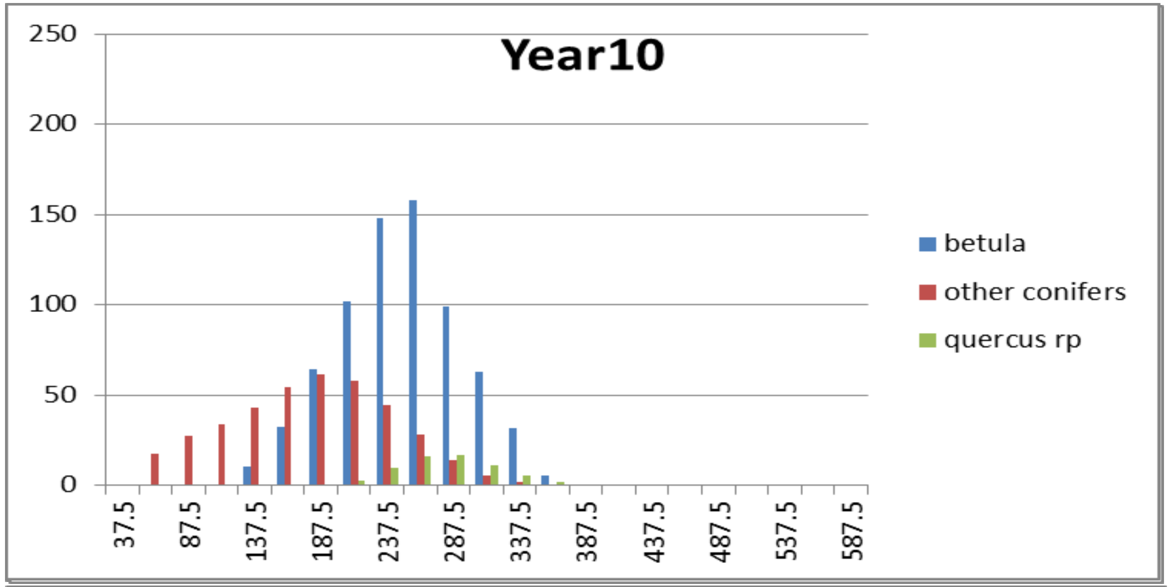


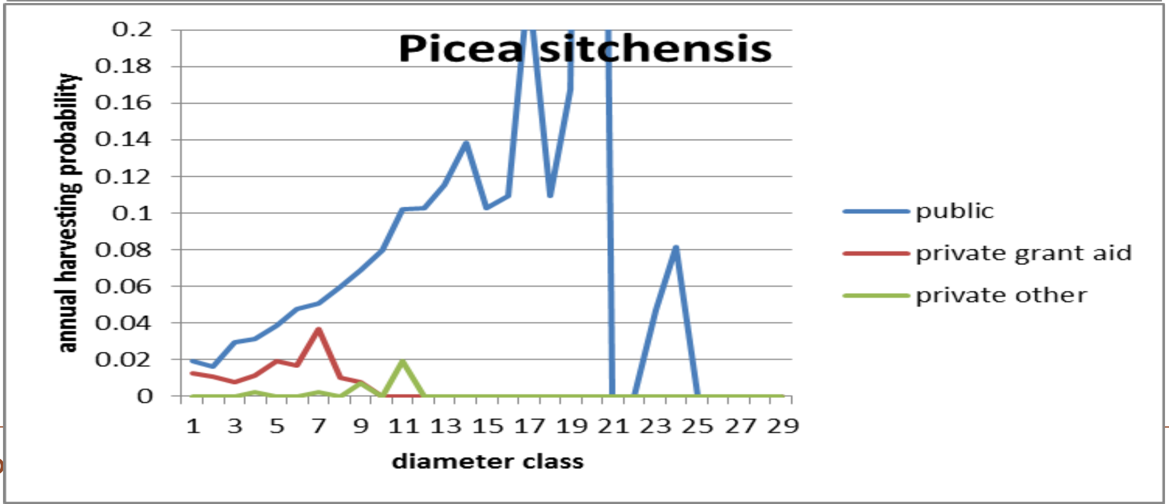
Southeast Ireland - Wood balance



EFISCEN Space model on plot level





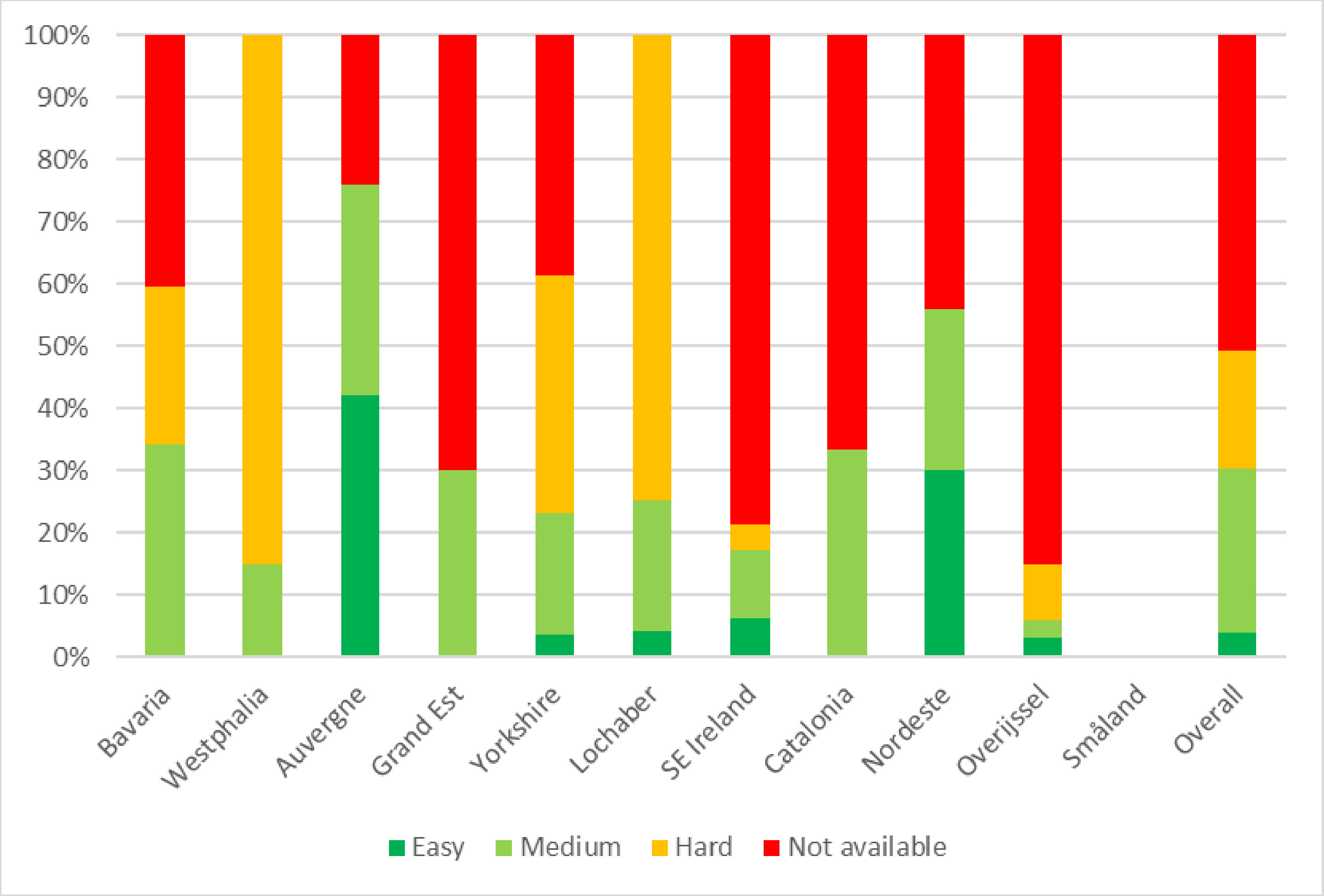


Southeast Ireland - outcomes

(1000 m3)	<150m	150-500m	>500m	not available
Private grant-aided	164	350	137	890
Private other	17		15	299
State	0			1208

Easy	181	6%
Medium	365	12%
Hard	137	4%
Not available	2397	78%

Outcomes - all cases



How easily can the additional potential be mobilised

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Reasons for low mobilisation:

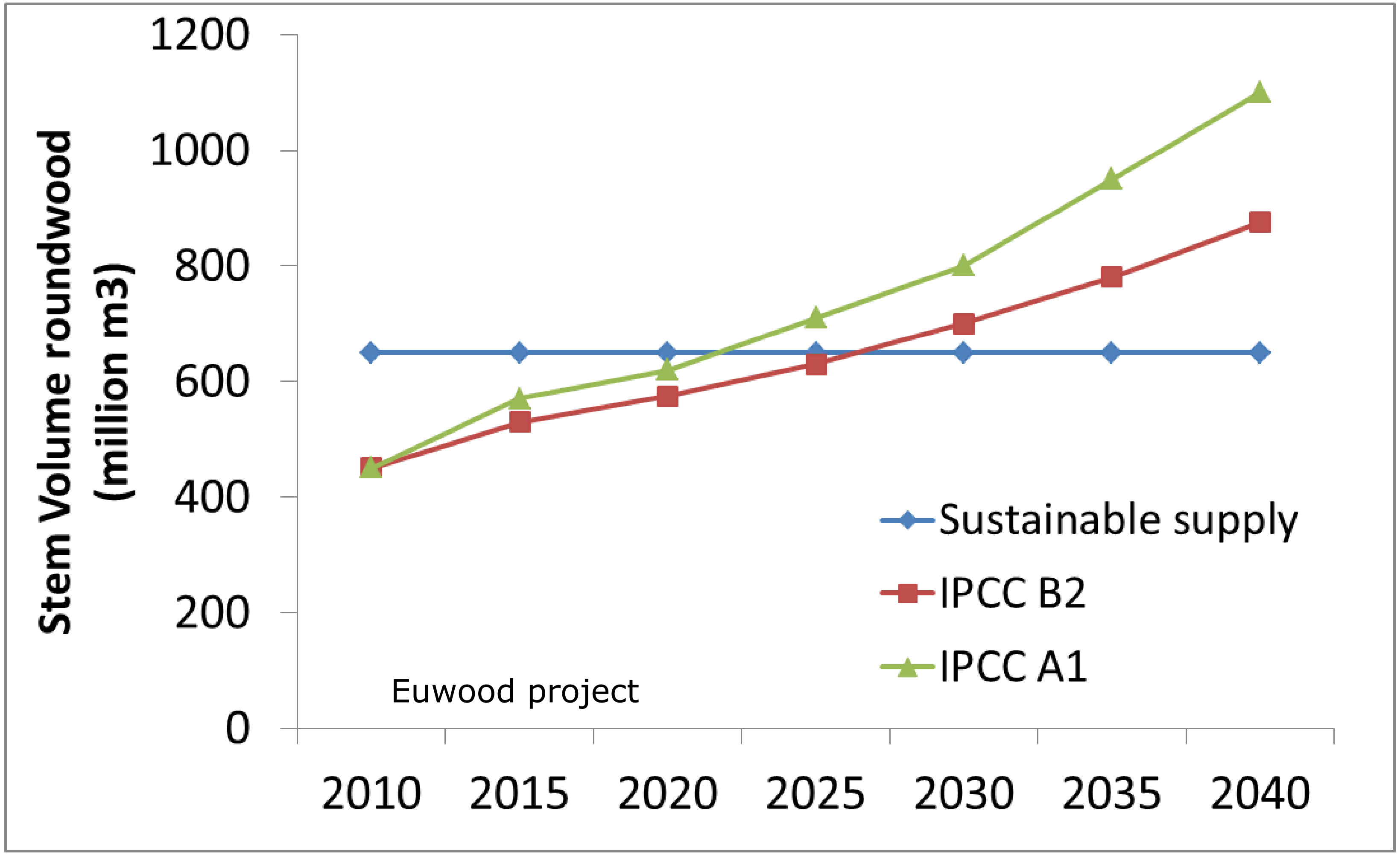
- Small private owners: all regions (Bavaria, Nordrhein-Westfalen, Yorkshire, Catalonia, Netherlands)
- Too young: Ireland
- Distance to road: Ireland, Yorkshire, Lochaber
- Nature protection: NL
- Deciduous: NRW, Ireland, Yorkshire, Lochaber, Vosges

Conclusions

- If we scale up, out of ~200 million m3 that seems available, only ~60 million m3/y can be mobilised with little or medium effort

- We used only currently applied management regimes in the regions
- Management should innovate, not just tell owners to harvest
- A large share of the potential is in broadleaves that are currently not much in demand
- Never a ‘one size fits all’ solution, each case is different!

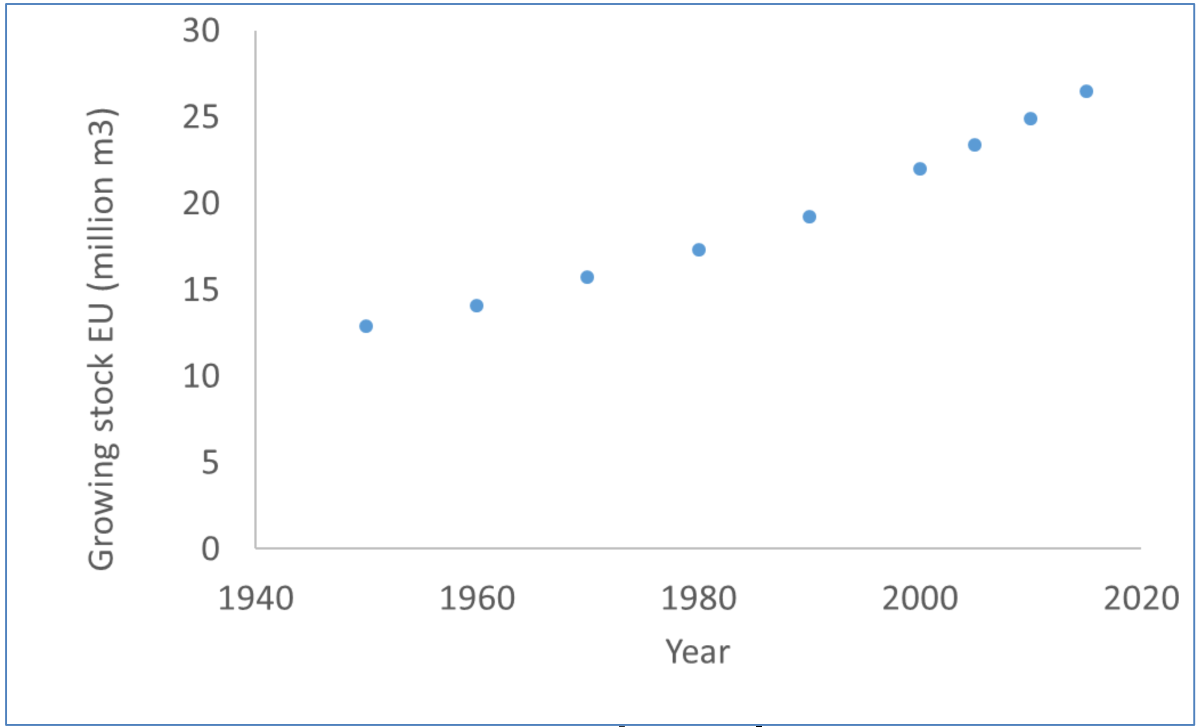
Implications; can the supply line be shifted ?



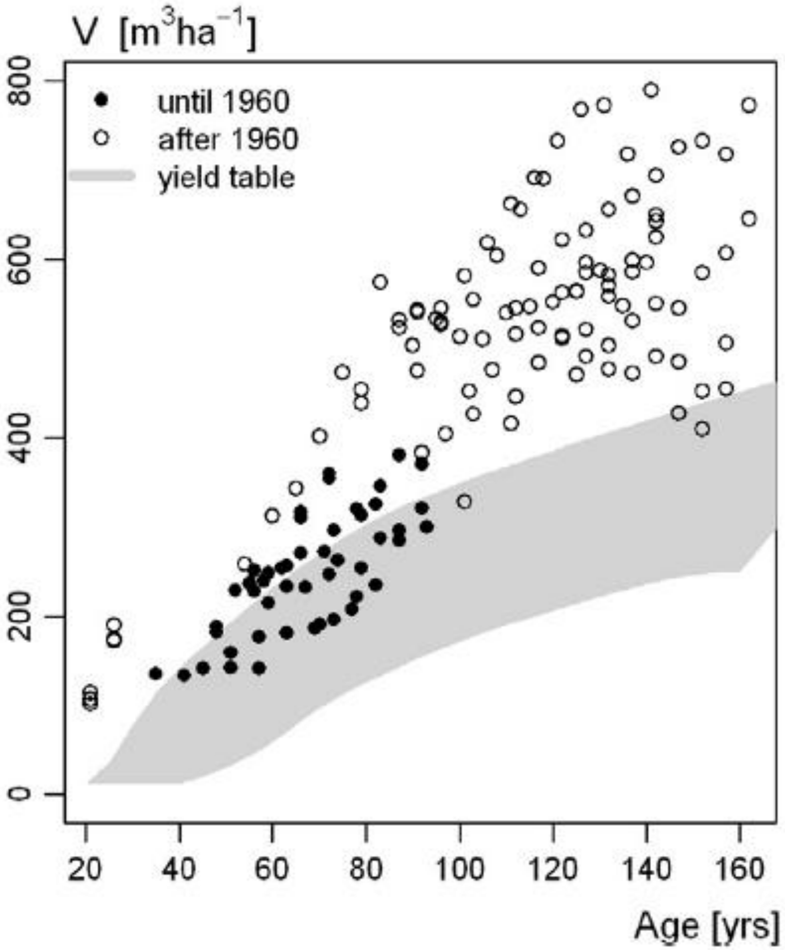
- 60 million m3 can be mobilised relatively easily
- But if only all new housing would be done in wood, it requires 200 million m3/y

How far up should the supply line be shifted

The resources are ready



EU Growing stock volume
(GFRA & Forest Europe)



Oak: stand volume
Pretzsch et al. 2014

More resources than ever before !
..but limited insight in assortments

Socio-economically we are not ready

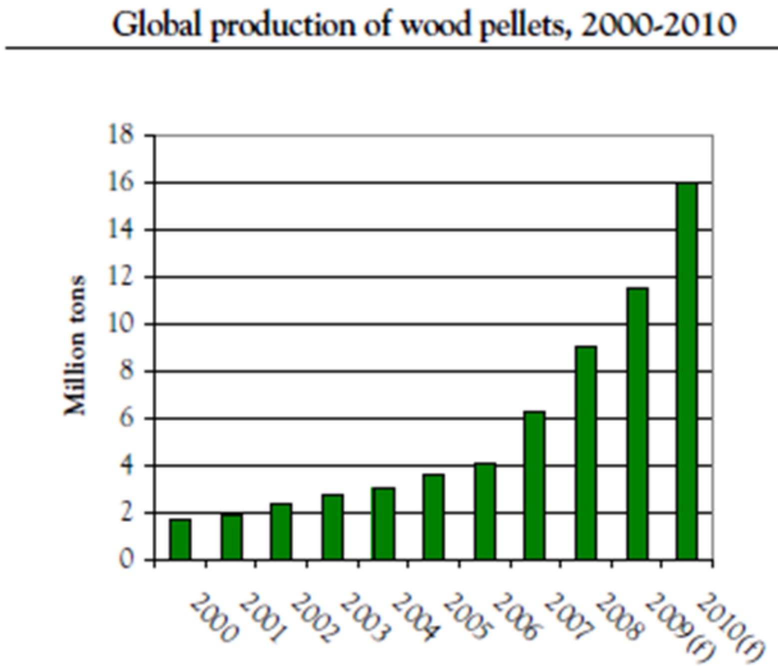
Large part of the sector functions the same as in Medieval times !

129 million m3 goes straight into household stoves burning at low efficiency

Mantau. Biomass & bioenergy 2015.

Fragmented owners

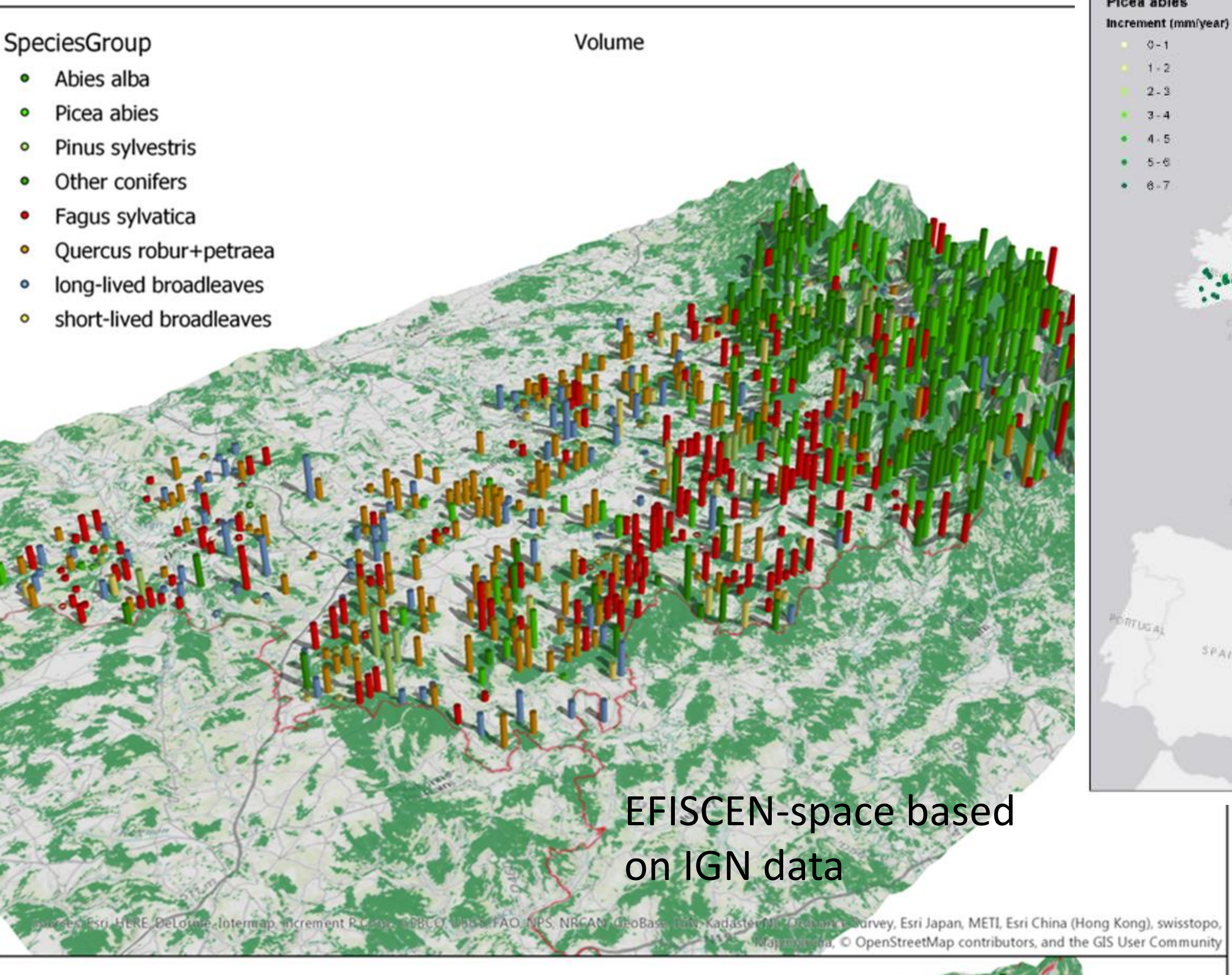
1. 16 million private owners
2. Average size of holding = 2.7 ha !
3. No income from forest, little knowledge



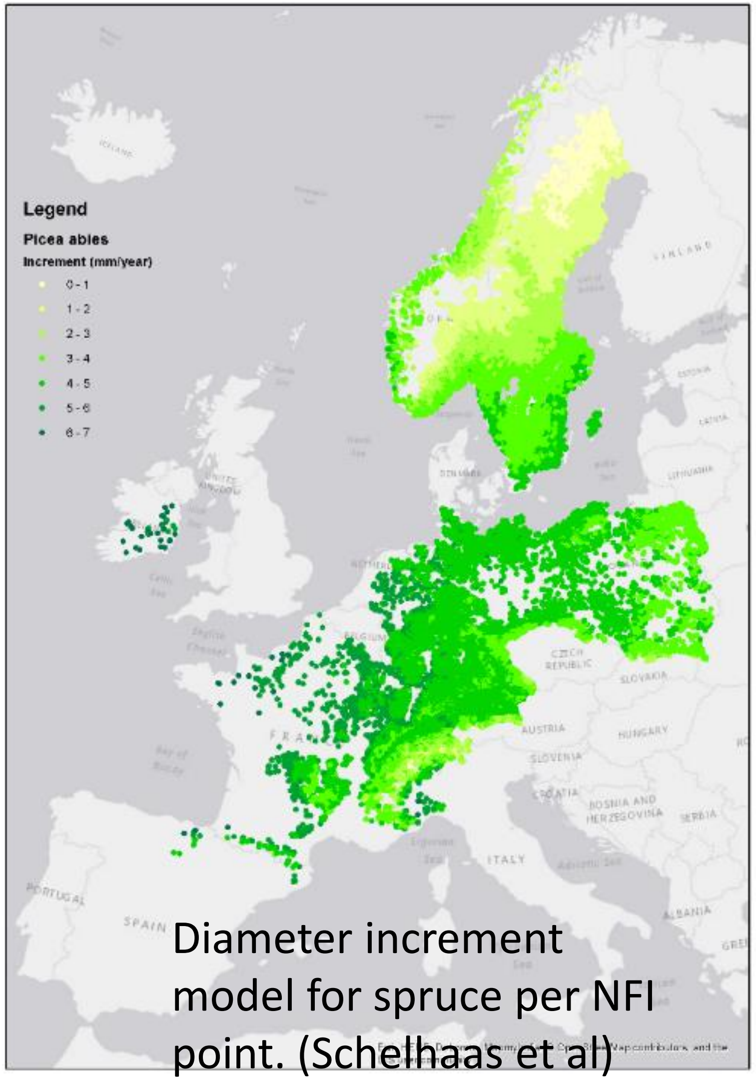
In contrast: Pellet production in SE USA picked up very rapidly ;

relatively small owners and few institutions.

Much better information can be derived



EFISCEN-space based on IGN data



Diameter increment model for spruce per NFI point. (Schelhaas et al)

EU countries spend some 50M€ / y on NFIs and forest information systems.

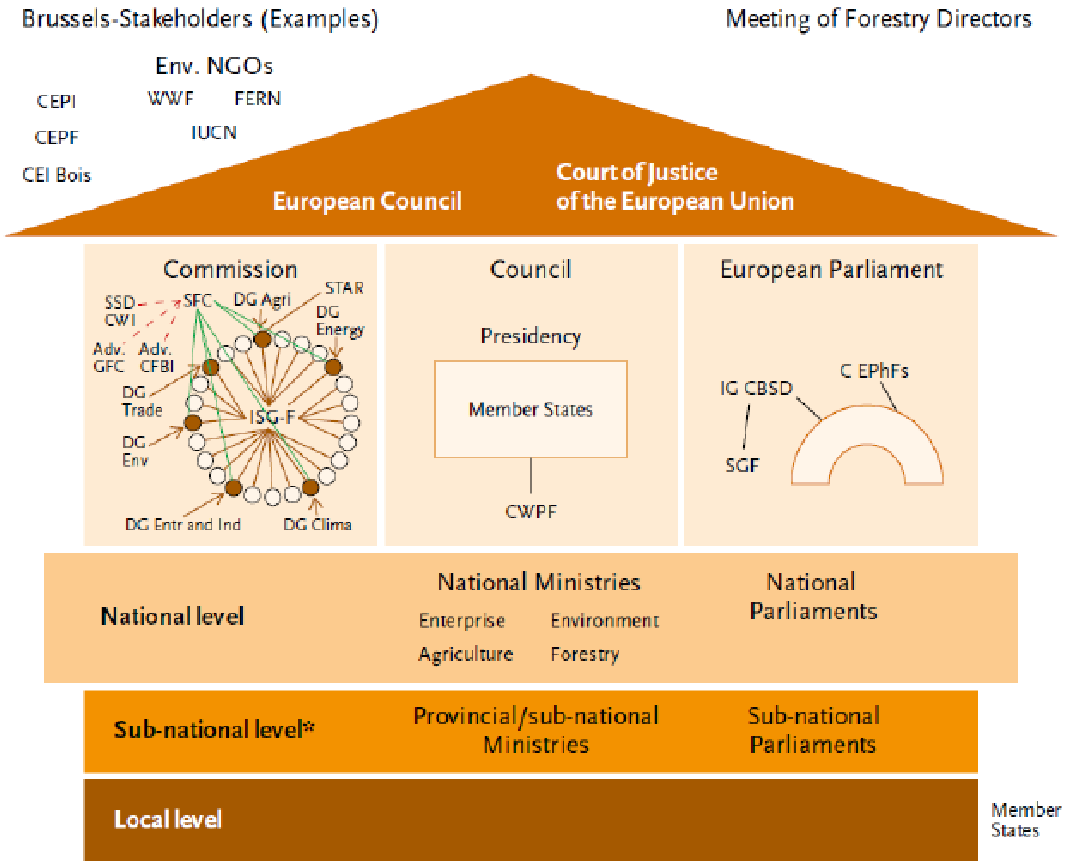
Still very difficult to provide locally detailed and good information on e.g. assortments

Governance structures do not help either

Policies: multiple policies => impact not straightforward

They pull in different directions : LULUCF vs Bio-economy

Institutions: both vertical + horizontal integration is missing

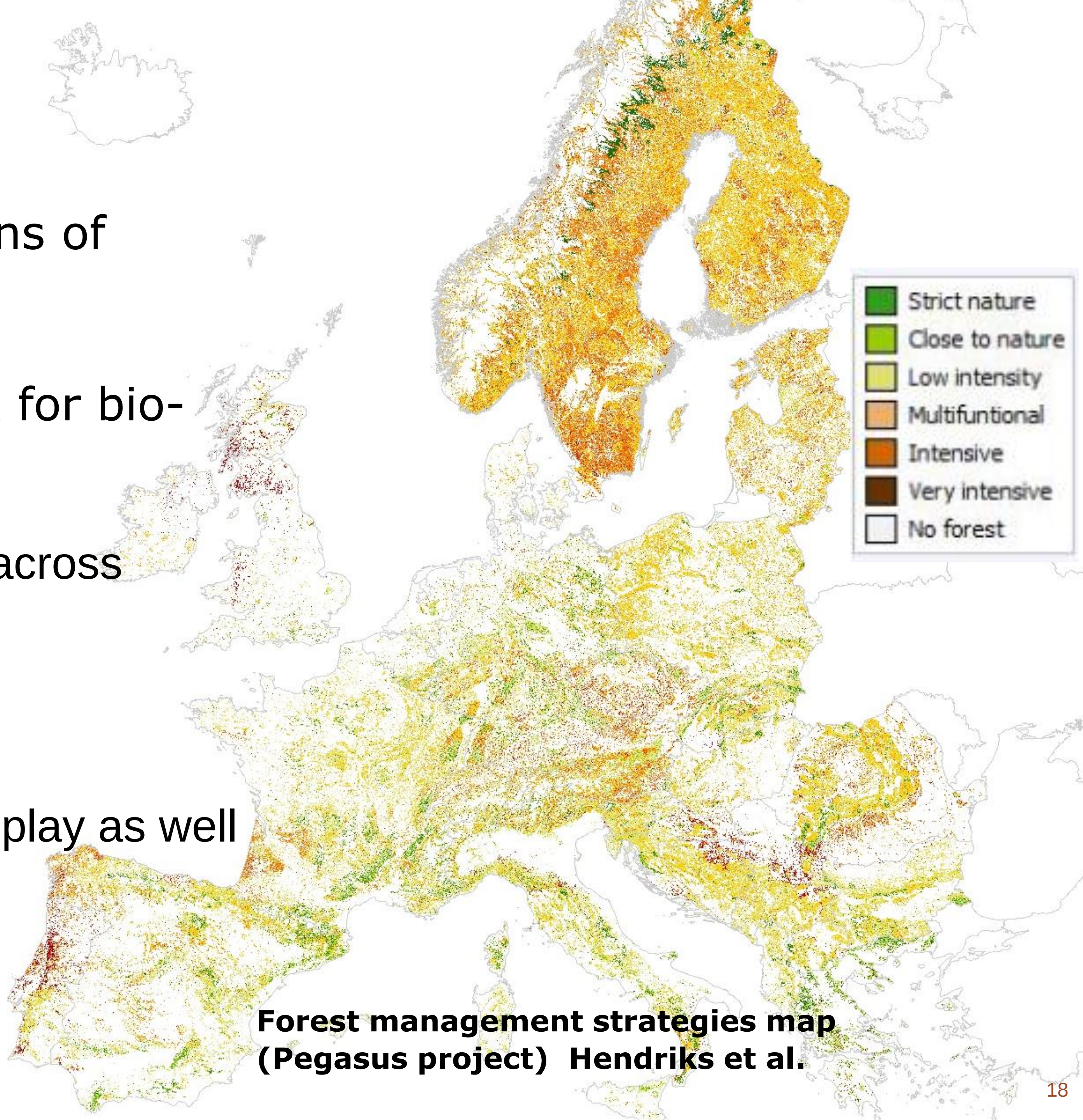


Pulzl et al. 2013

Implications

Over these 2 days we have seen dozens of challenges: and as many solutions

- Supply will stay a critical bottleneck for bio-economy
- Spatially stratify the management aims across Europe ?
- Less governance; but clear incentives
- The forest sector (industry) has a role to play as well



Forest management strategies map (Pegasus project) Hendriks et al.

Thank you!

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