

FinFEP-modelling: Future challenges and needs

Jani Laturi, Jussi Lintunen and Jussi Uusivuori

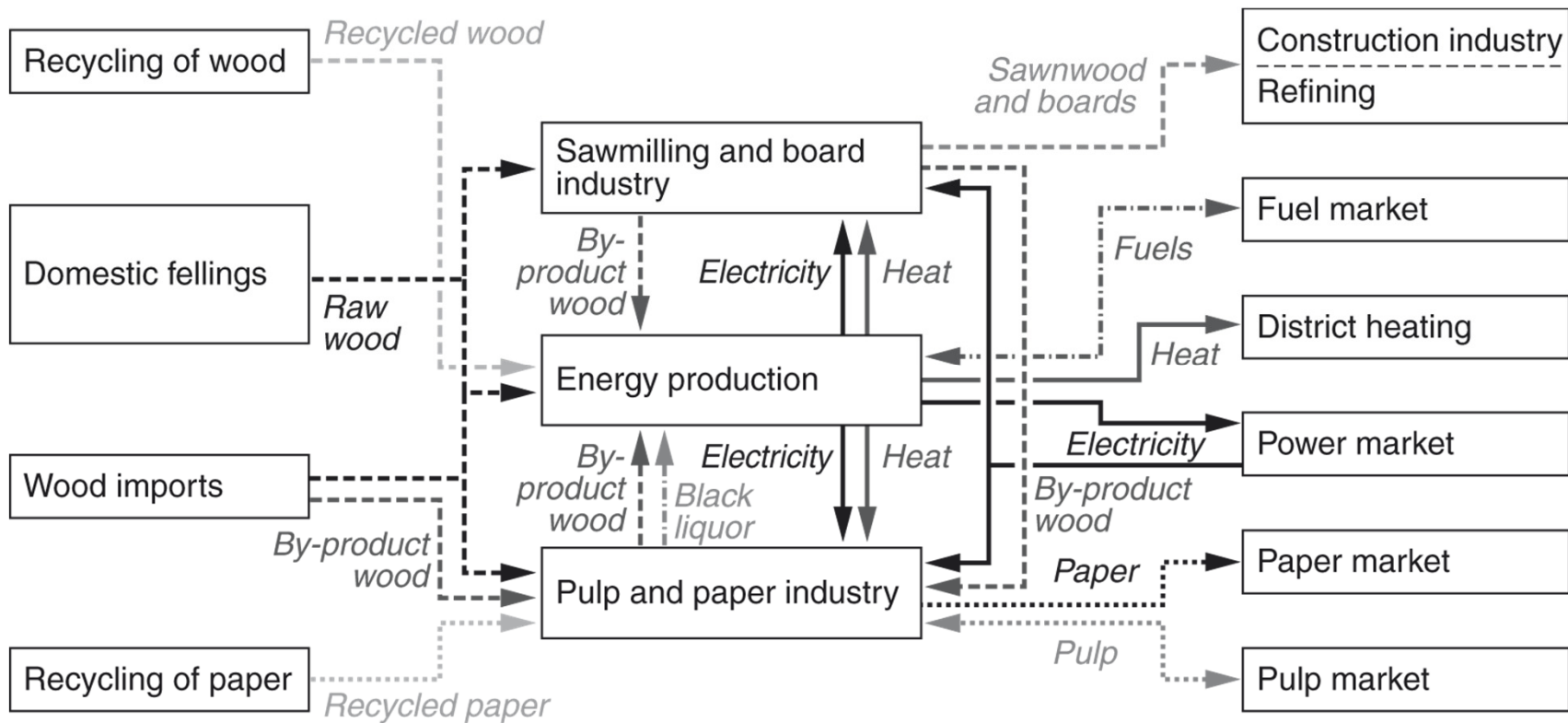
2016-10-27

SNS-NKJ project Biosect: Workshop in Copenhagen

Finnish Forest and Energy Policy model (FinFEP)

- FinFEP is a partial equilibrium model of the Finnish forest and energy sectors.
- Motivation
 1. Linking forest and energy sectors
 2. Linking forest industry and accurate nonindustrial private forest owners' behavioral descriptions
 3. Enable improved integration of policy tools in the model to see their impacts.

Finnish Forest and Energy Policy model (FinFEP)



(Finnish Forest and Energy Policy Model (FinFEP) : A Model Description. Natural resources and bioeconomy studies 59/2015)

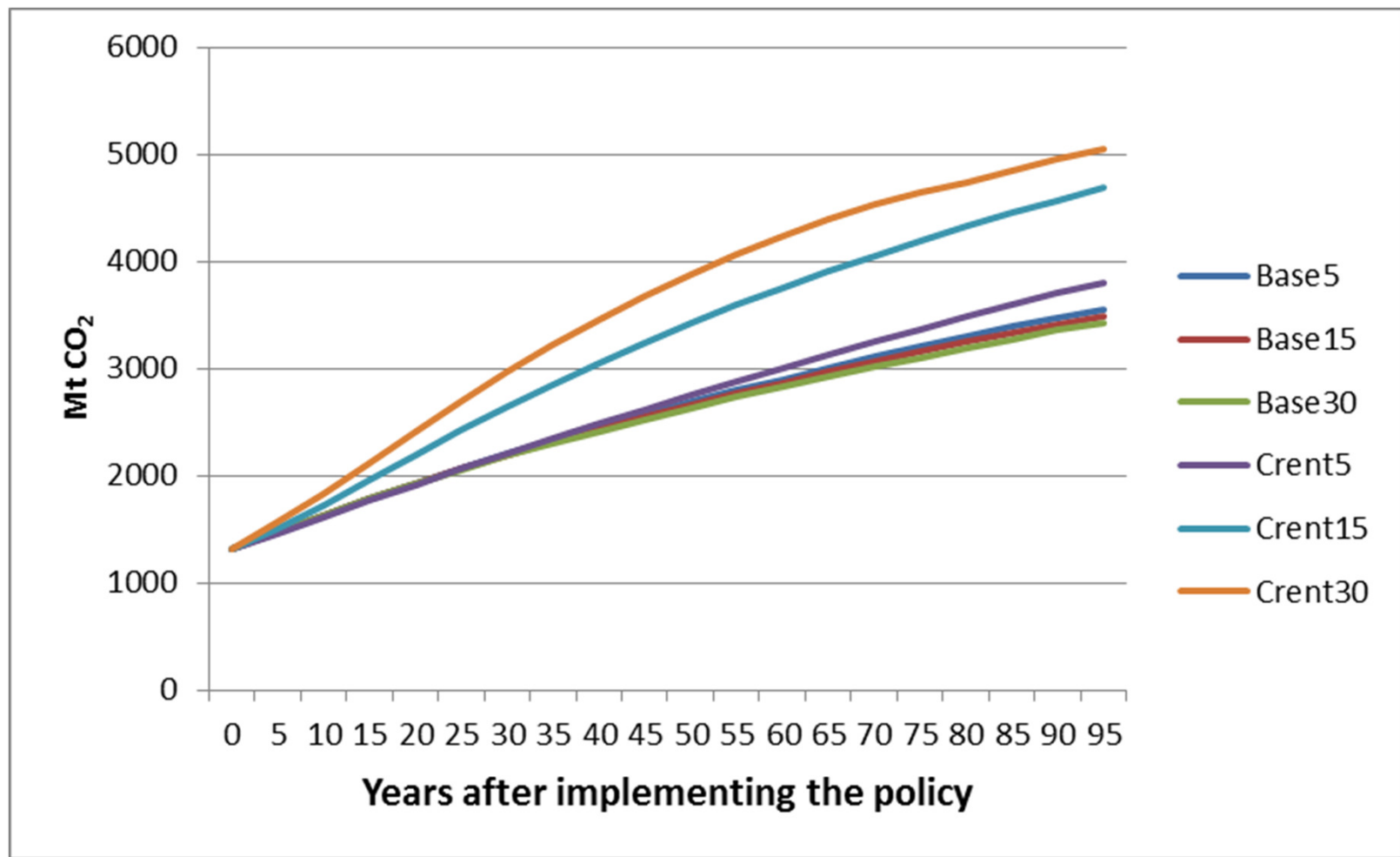
Finnish Forest and Energy Policy model (FinFEP)

- Detailed description of forest resources on forestry land available for wood production in Finland
 - Regions, site-classes and species
- Three different forest owner types:
 - Differing relative weights between monetary profits and amenity values (Hartman 1976)

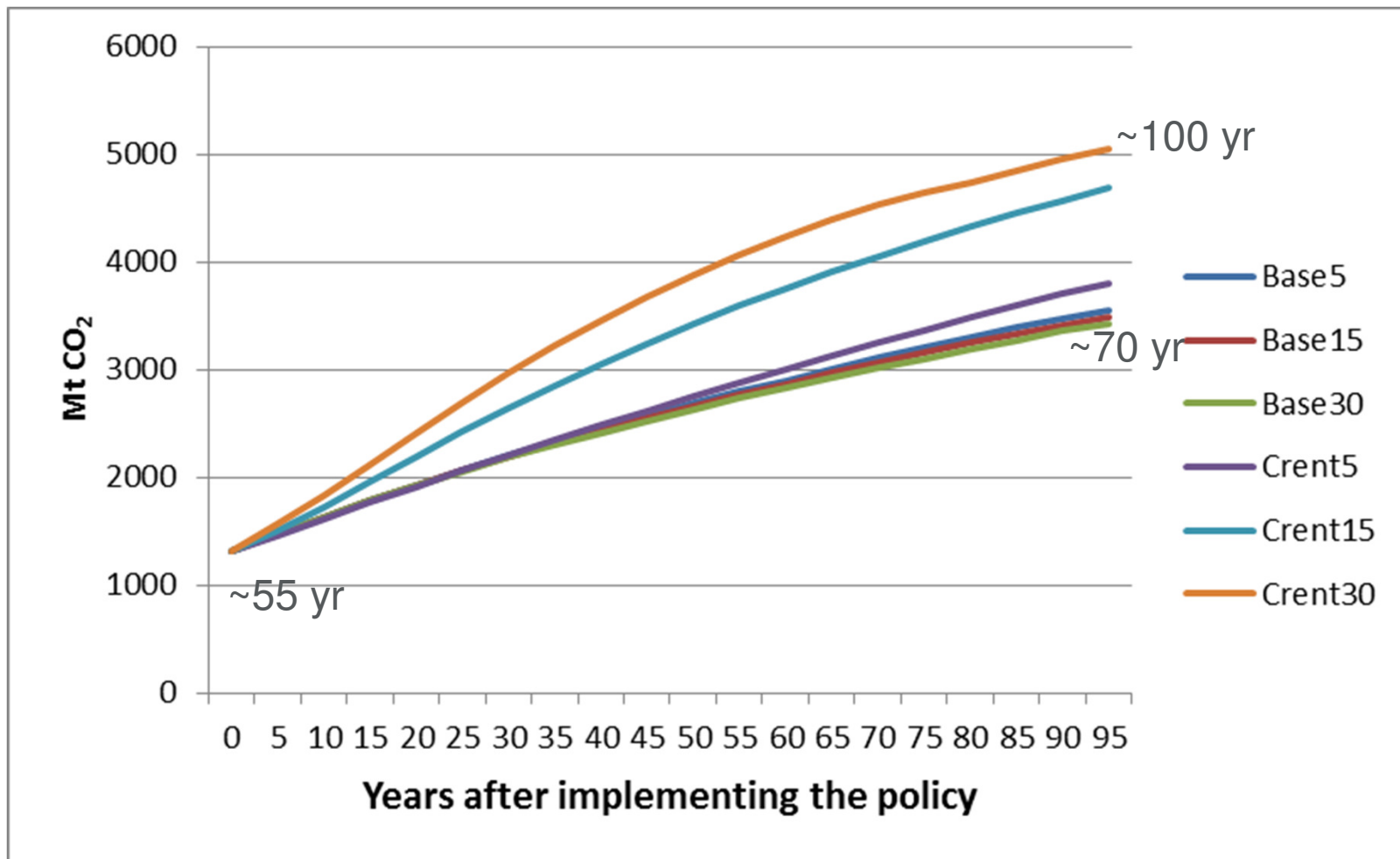
Ongoing research project: Carbon rent

- Analyze carbon rentals to forest carbon stock with FinFEP
- Using carbon price scenarios 5, 15 and 30 €/tCO₂

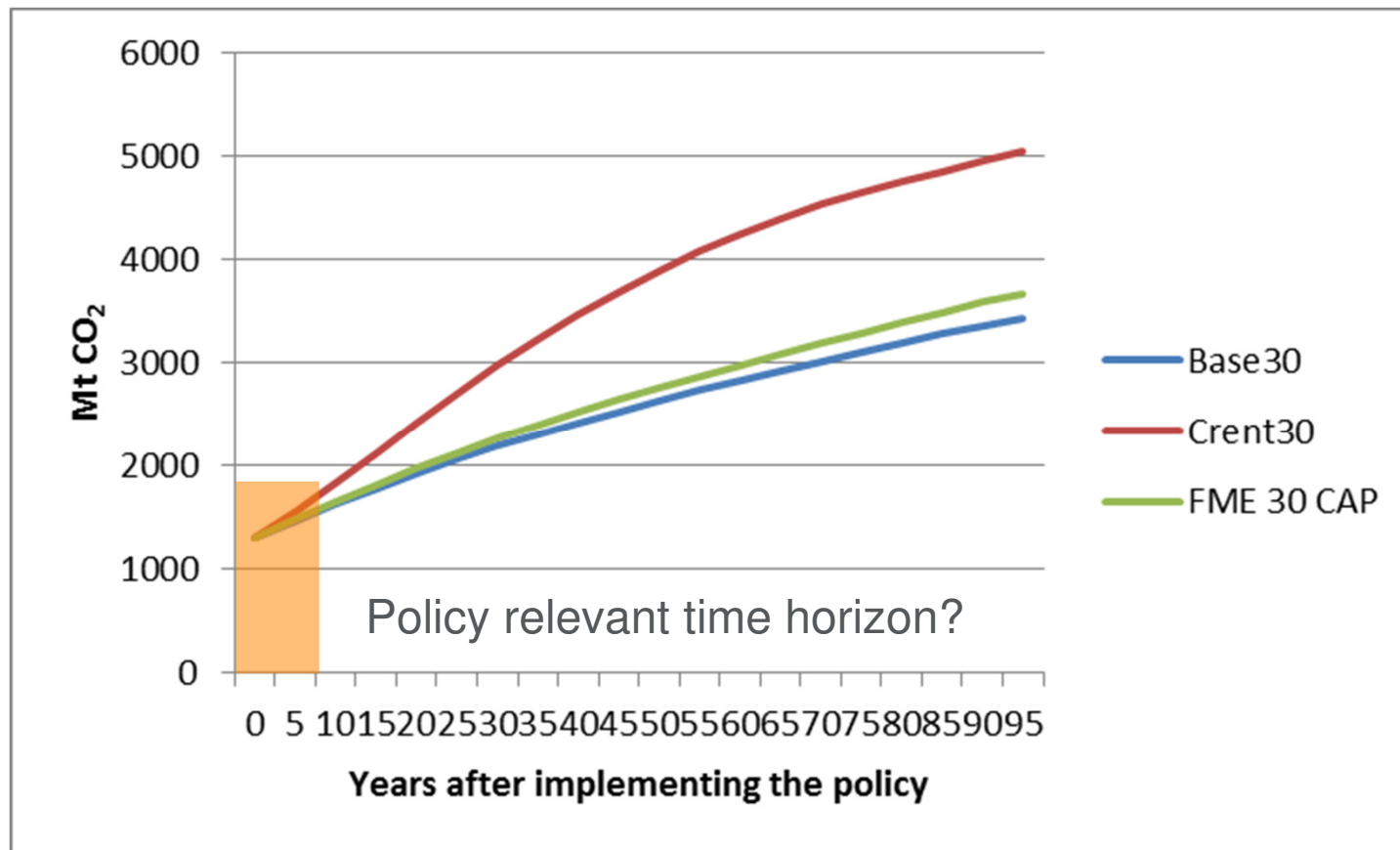
Carbon rent: Carbon stock with carbon rent



Carbon rent: Average age



Carbon rent: Hypothetical FME policy for 100 years with cap 3.5%



Carbon rent: challenges and needs

Carbon rent/subsidy is an effective policy to mitigate climate change but:

- The policy relevant time horizon is too short to introduce this kind of policy?
- Current climate policy does not encourage countries to set policies that improve carbon sequestration

Need: to influence climate negotiations

Challenge: to show the importance of the long time horizon of forest management

- The average age of forests increases

Need: for the growth and mortality functions for old and dense forests

Need: to analyze risks related to these forests

Thank you!



NATURAL RESOURCES
INSTITUTE FINLAND