

Adapting the GFPM to local requirements (on the example of Germany)

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UNECE/FAO-ToS-Outlook-Workshop
*Streamlining the next round of
Forest Sector Outlook Studies in the UNECE region*

Pushkino, Moscow Region
12-13 Dec 2016

The Global Forest Products Model (GFPM)

Basic structure

Partial dynamic equilibrium model

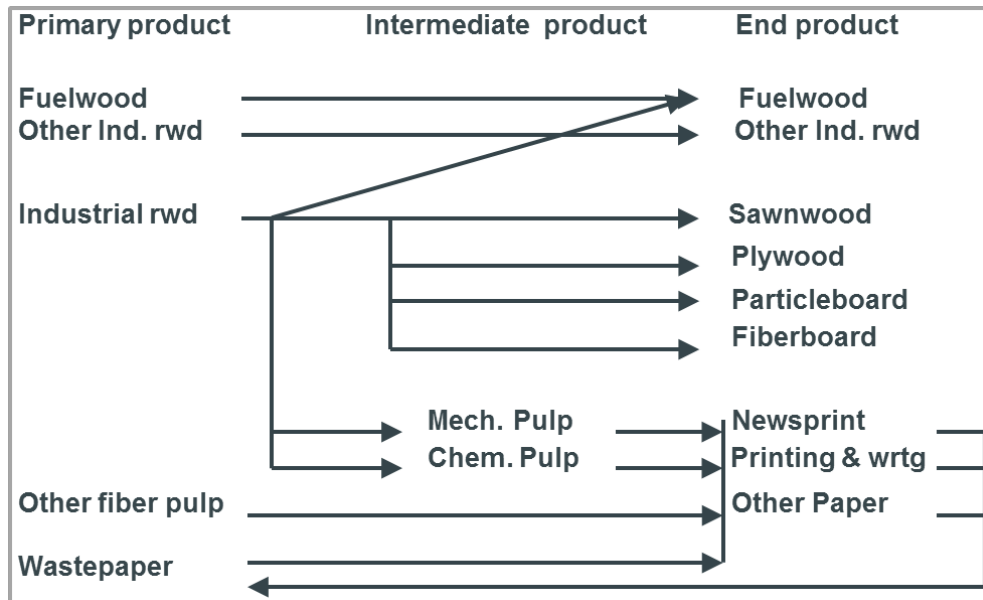


Fig.: Product structure in GFPM (Buongiorno et al. 2003)

- Basic version: 180 countries, 14 products
- Input data:
 - FAOstat/FRA: Production, trade, prices, forest area, growing stock
 - Worldbank: GDP, Population
- Output:
 - Production, trade, app. consumption, prices
- Changes in forest area & growing stock
- Objective function: Maximising the total welfare in the forest sector

Analyses of scenarios and long-term trends! No annual Changes! No prediction!

Project WEHAM-Scenarios



www.weham-szenarien.de

- **Background**

- Differing and diverging requirements of society regards forests & forest management
- There is a demand for decision support for future options or activities
- National forest inventory (BWI3), WEHAM-Scenarios and scenarios on the use of wood are important information for e.g. stakeholder, decision-maker, policy
(WEHAM: Projection modelling of forest development & timber harvesting potential)

- **General objectives of the project**

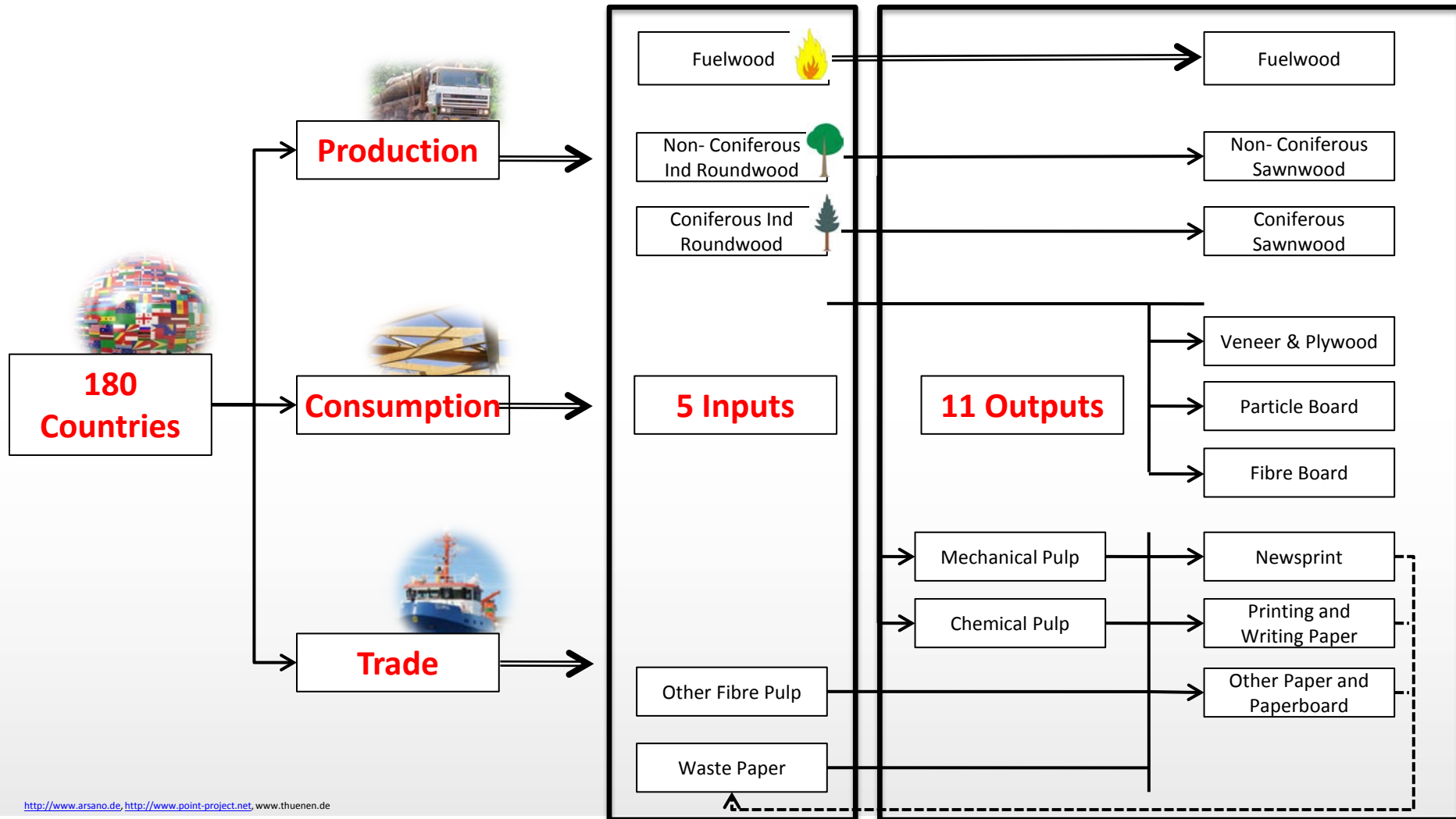
- Development of scenarios of forest development and use of wood (stakeholder evaluation)
- Undertake comparative evaluation of sustainability of scenario outcomes, with specific regard to climate change and biodiversity
- Scenarios (= „what if?“), but no prognosis (= prediction of development)
(3 scenarios: base-scenario, scenario on wood preference, scenario on nature/forest conservation)

- **Objectives of the market modelling with GFPM**

- Longterm trends and interactions of changing domestic supply and demand, e.g. how will the German forest sector react on decreasing potential timber supply

The Global Forest Products Model (GFPM)

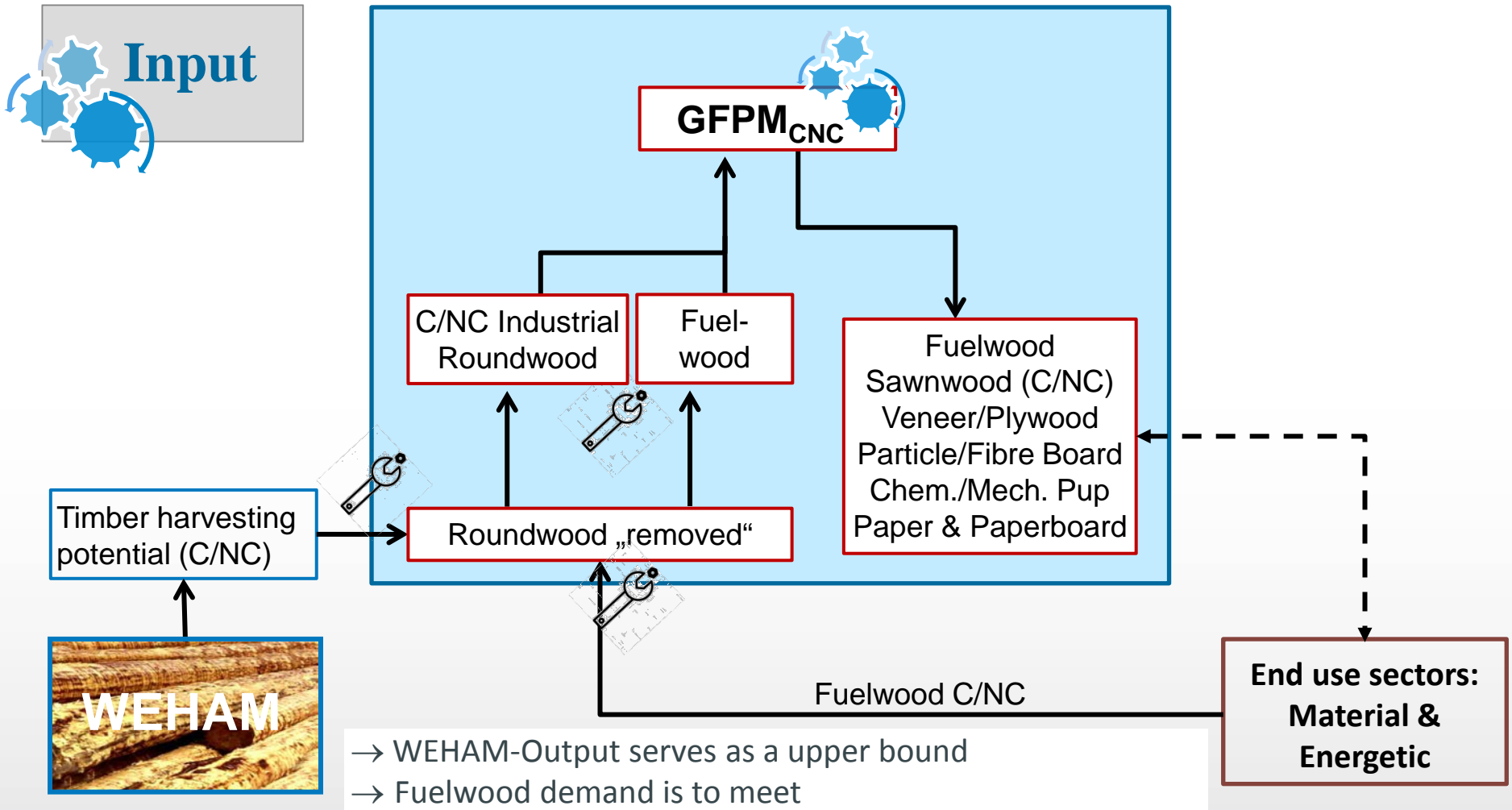
Modified structure: GFPM_{cnc}



<http://www.arsano.de>, <http://www.point-project.net>, www.thuenen.de

GFPM

Application in the national project WEHAM-scenarios



GFPM: Application in a national project

First preliminary results

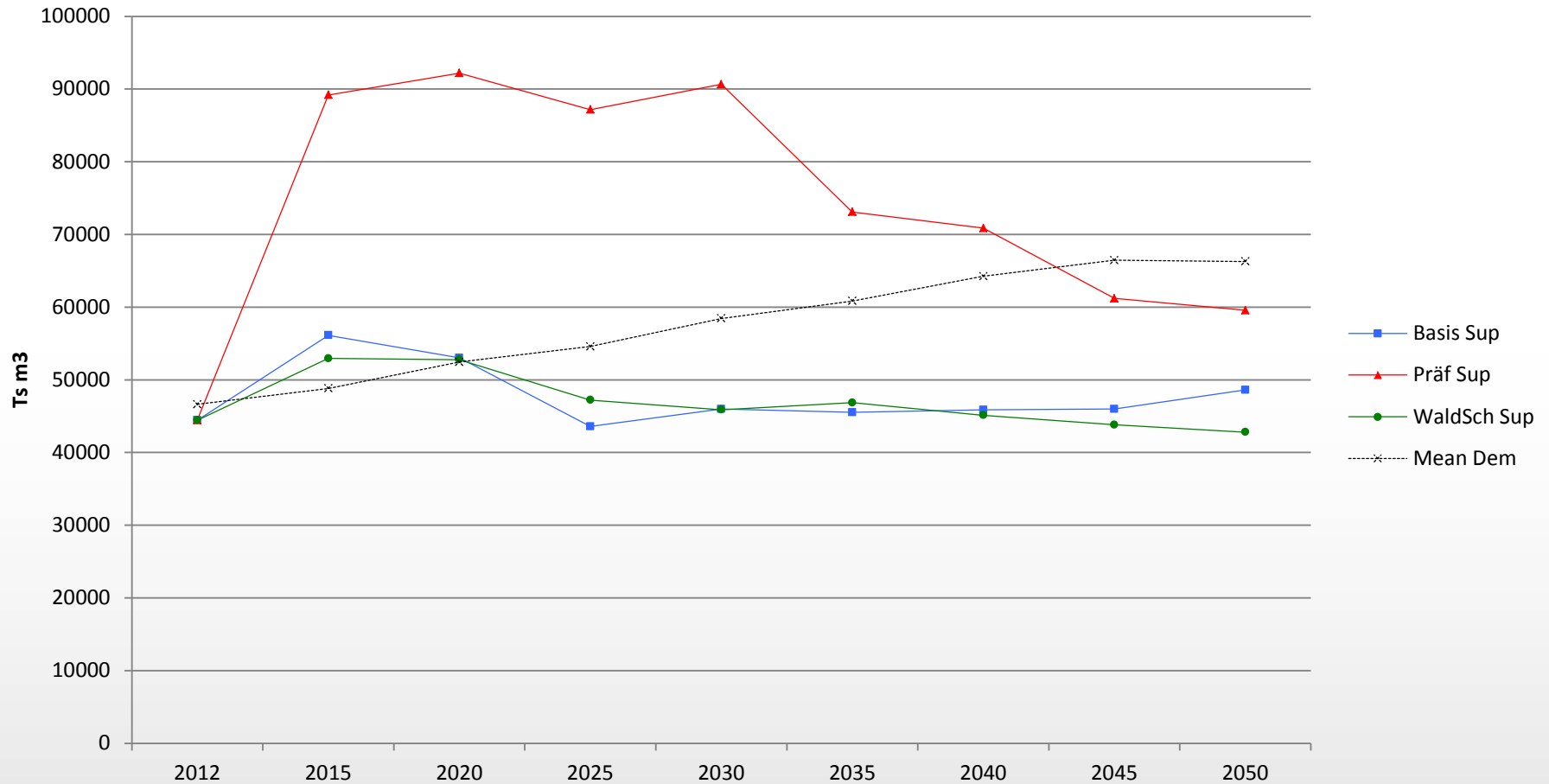
Scenario analysis of market modelling in WEHAM-scenarios project

1. Potential roundwood supply
2. Domestic production of roundwood and wood products
3. Trade of roundwood and wood products

GFPM: Application in a national project

First preliminary results

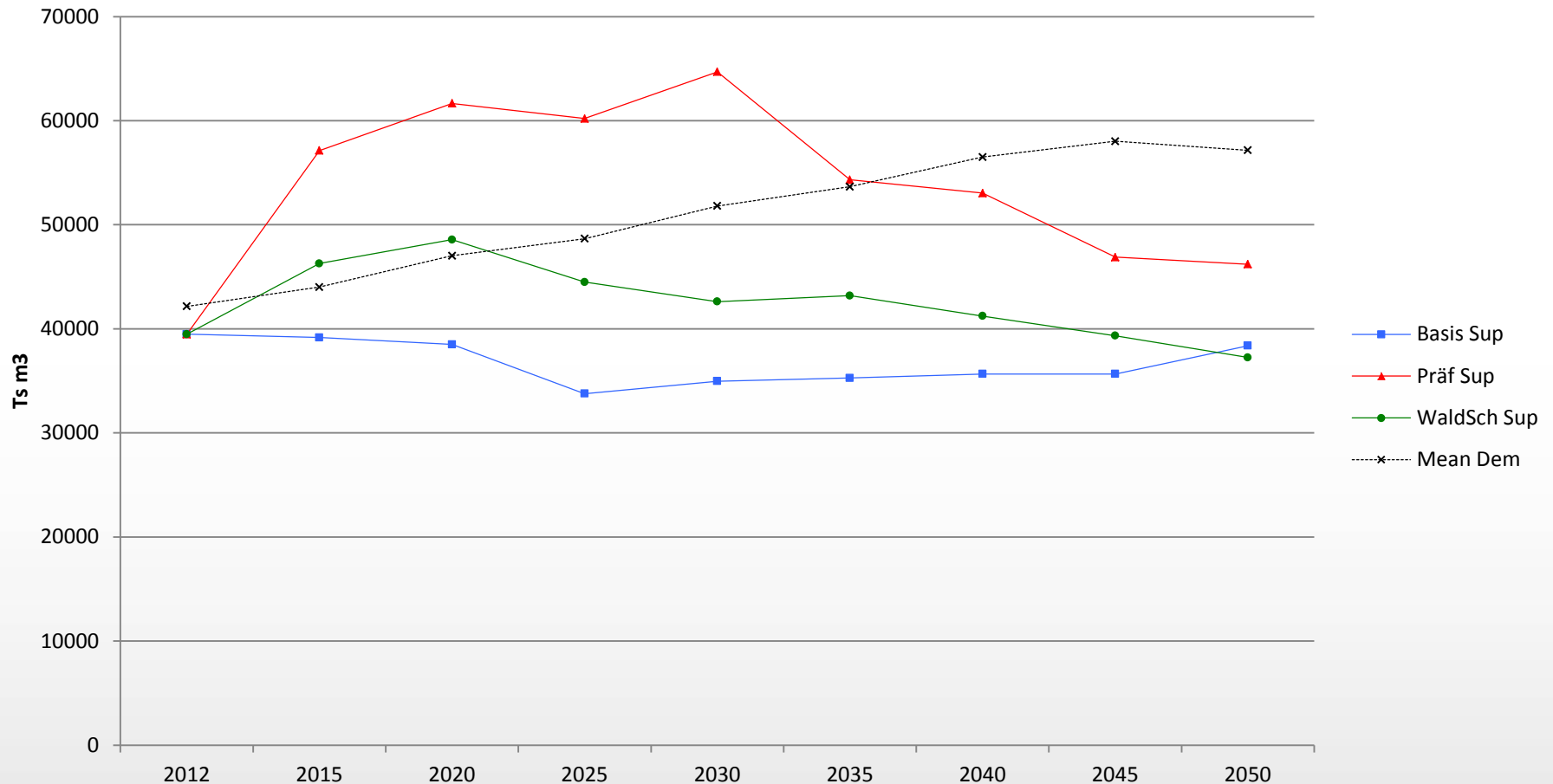
Industrial roundwood potential (for material use)



GFPM: Application in a national project

First preliminary results

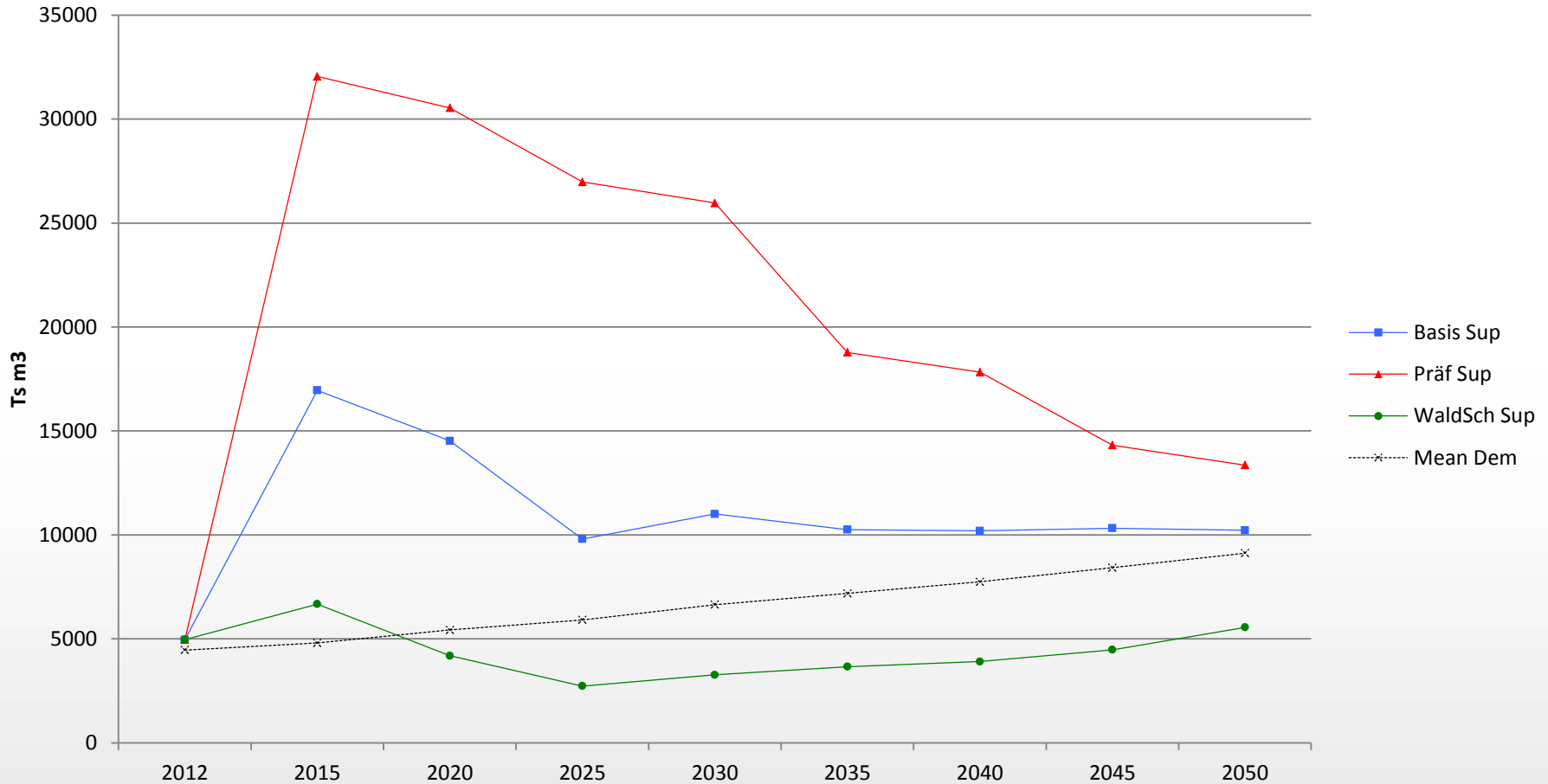
Industrial coniferous roundwood potential (for material use)



GFPM: Application in a national project

First preliminary results

Industrial non-coniferous roundwood potential (for material use)



GFPM: Application in a national project

First preliminary results

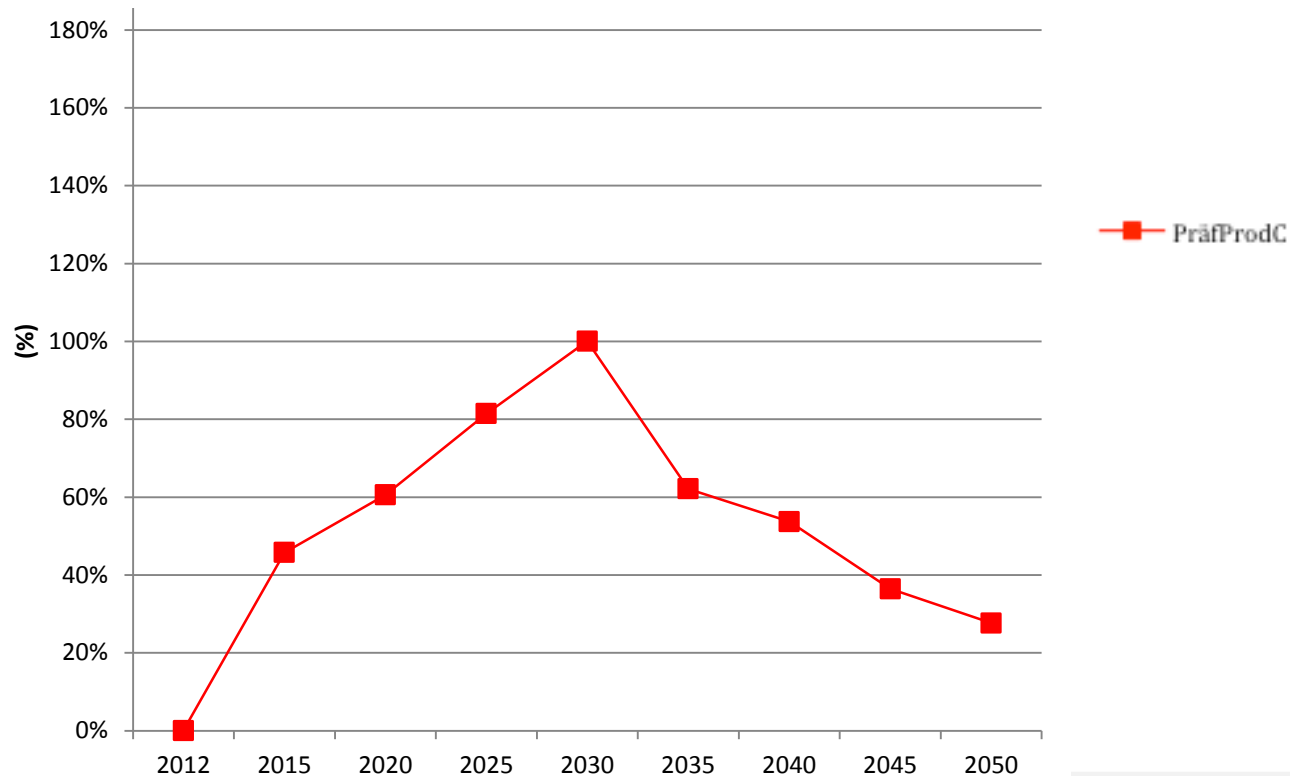
Scenario analysis of market modelling in WEHAM-scenarios project

1. Potential roundwood supply
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First preliminary results

**Domestic production of roundwood and wood products:
WEHAM WoodPrefSc related to BaseSc**

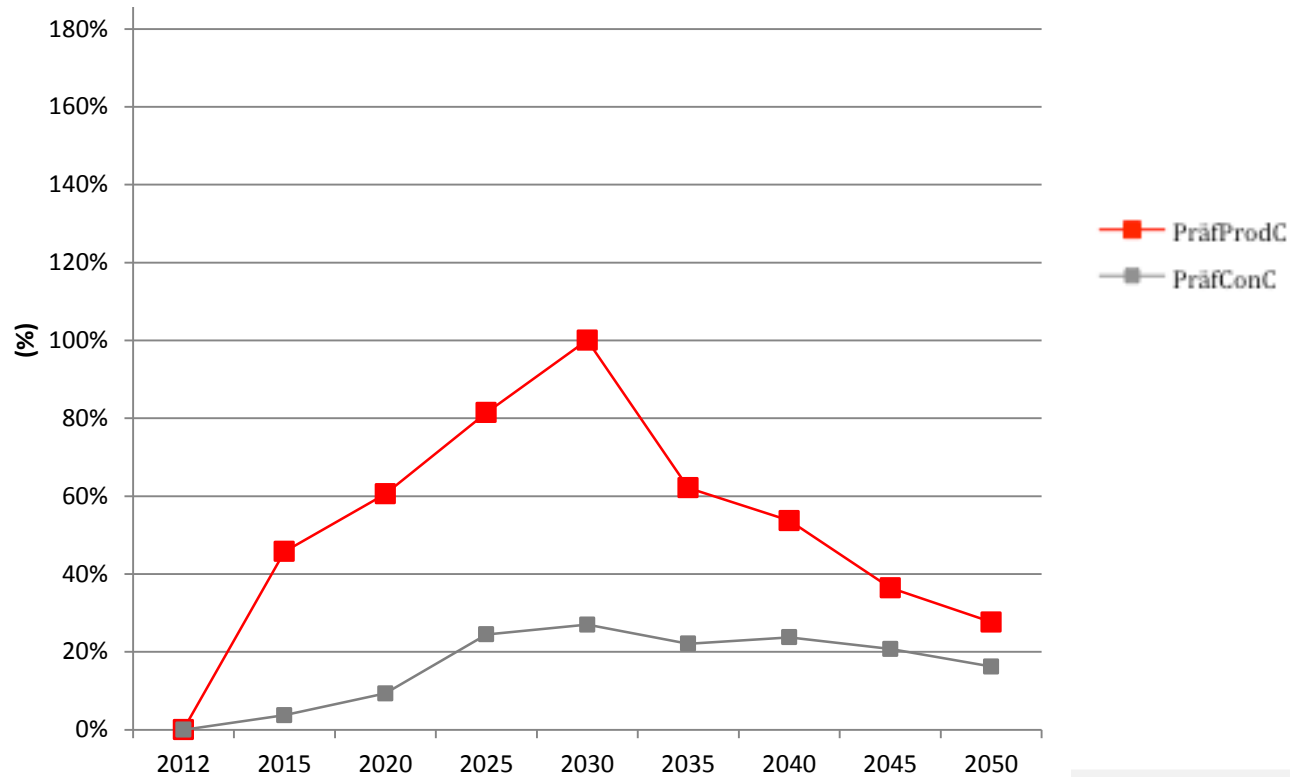


→ Higher potential of coniferous roundwood in WoodPrefSc allows (in the simulation) a higher domestic production of coniferous roundwood in relation to WEHAM-BaseSc

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First preliminary results

Domestic production of roundwood and wood products: WEHAM WoodPrefSc related to BaseSc

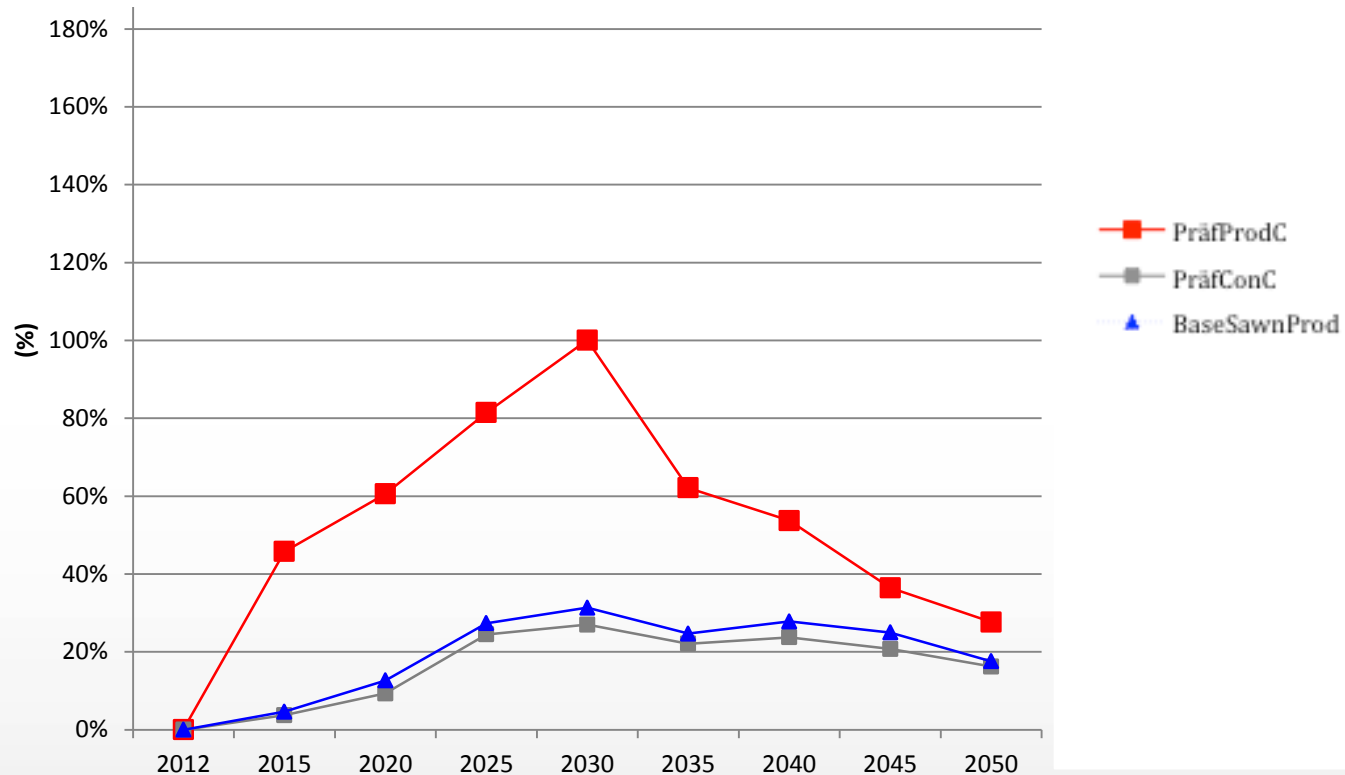


→ Domestic consumption of coniferous roundwood increases in WoodPrefSc

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First preliminary results

Domestic production of roundwood and wood products: WEHAM WoodPrefSc related to BaseSc

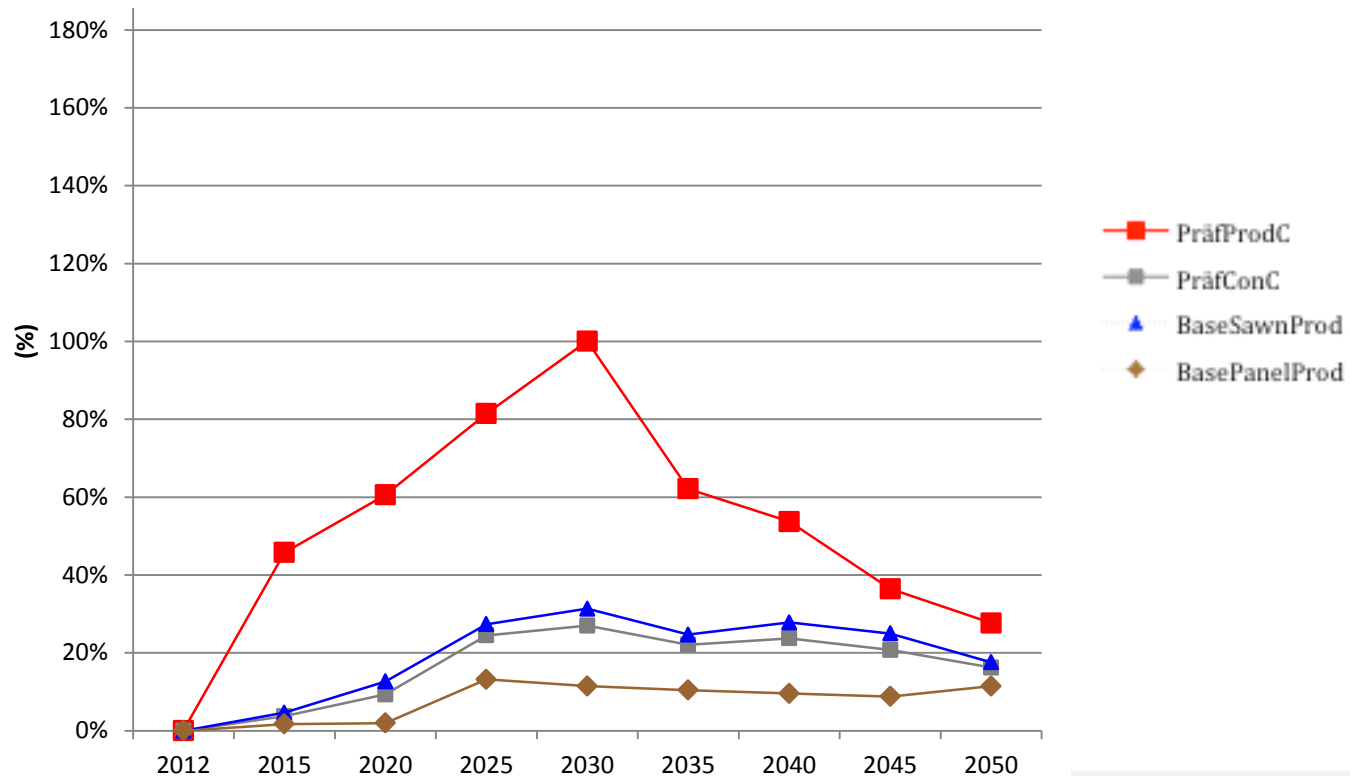


→ Domestic production of coniferous sawnwood increases in WoodPrefSc

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First preliminary results

Domestic production of roundwood and wood products: WEHAM WoodPrefSc related to BaseSc



→ Domestic production of panels increases in WoodPrefSc

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First preliminary results

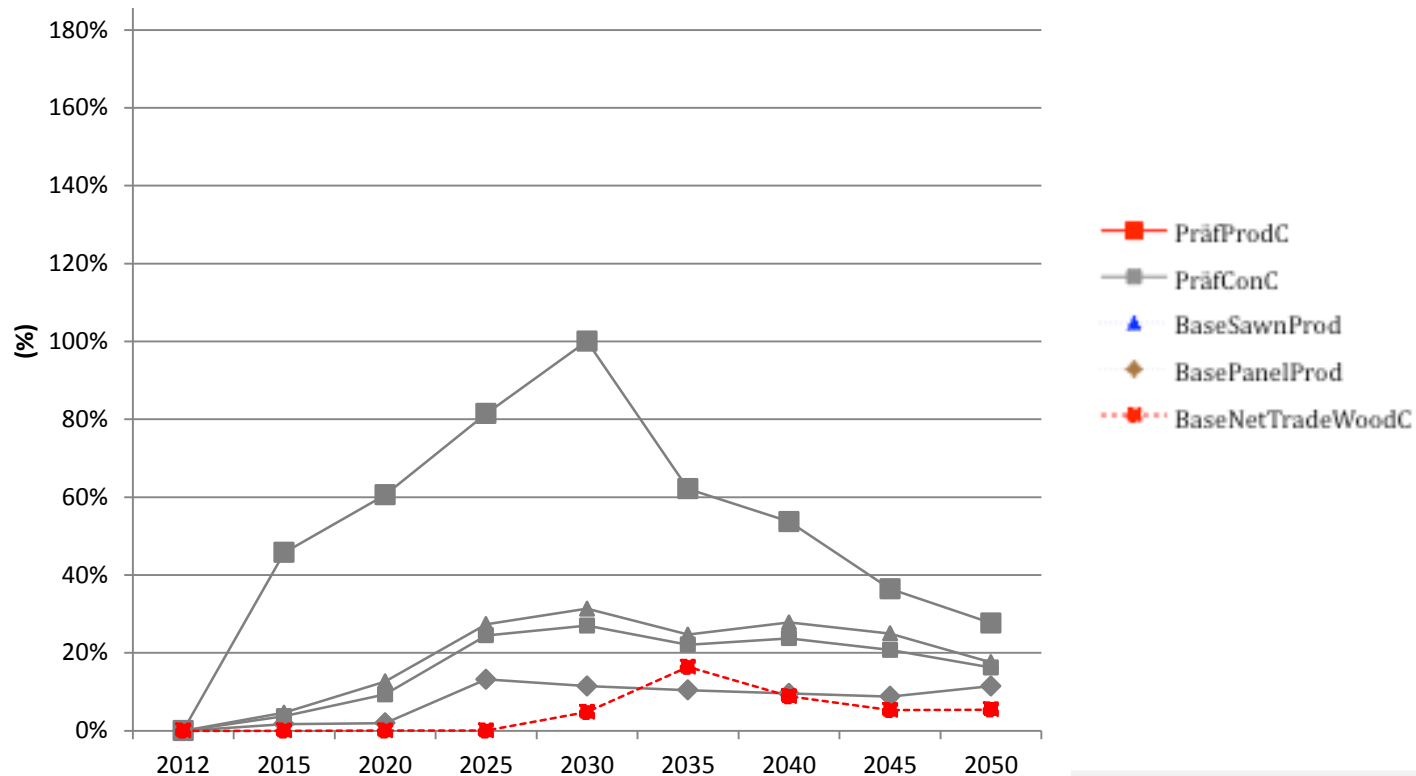
Scenario analysis of market modelling in WEHAM-scenarios project

1. Potential roundwood supply
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First preliminary results

Net trade of roundwood and wood products: WEHAM WoodPrefSc related to BaseSc

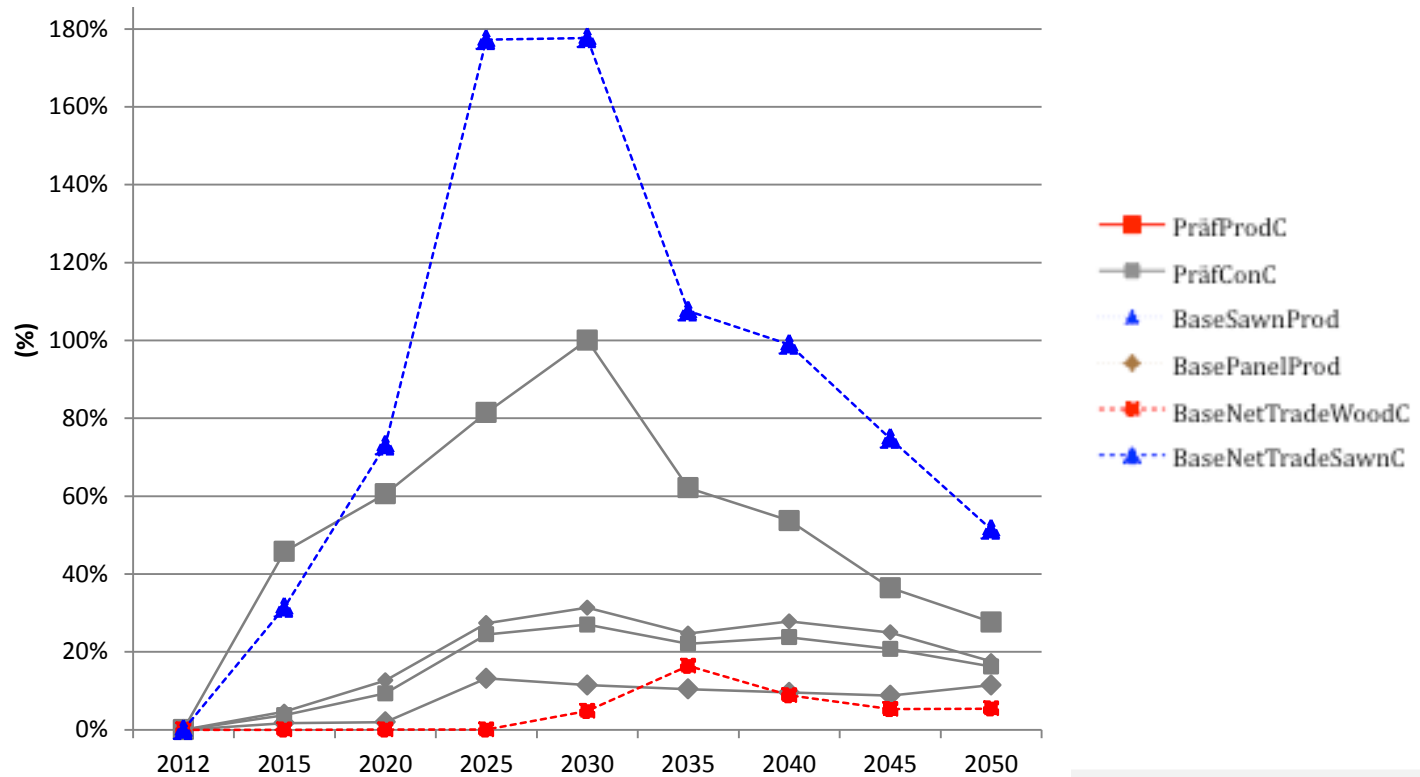


→ Positive development of net trade of coniferous roundwood:
The import quota will decrease in WoodPrefSc

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First preliminary results

Net trade of roundwood and wood products: WEHAM WoodPrefSc related to BaseSc

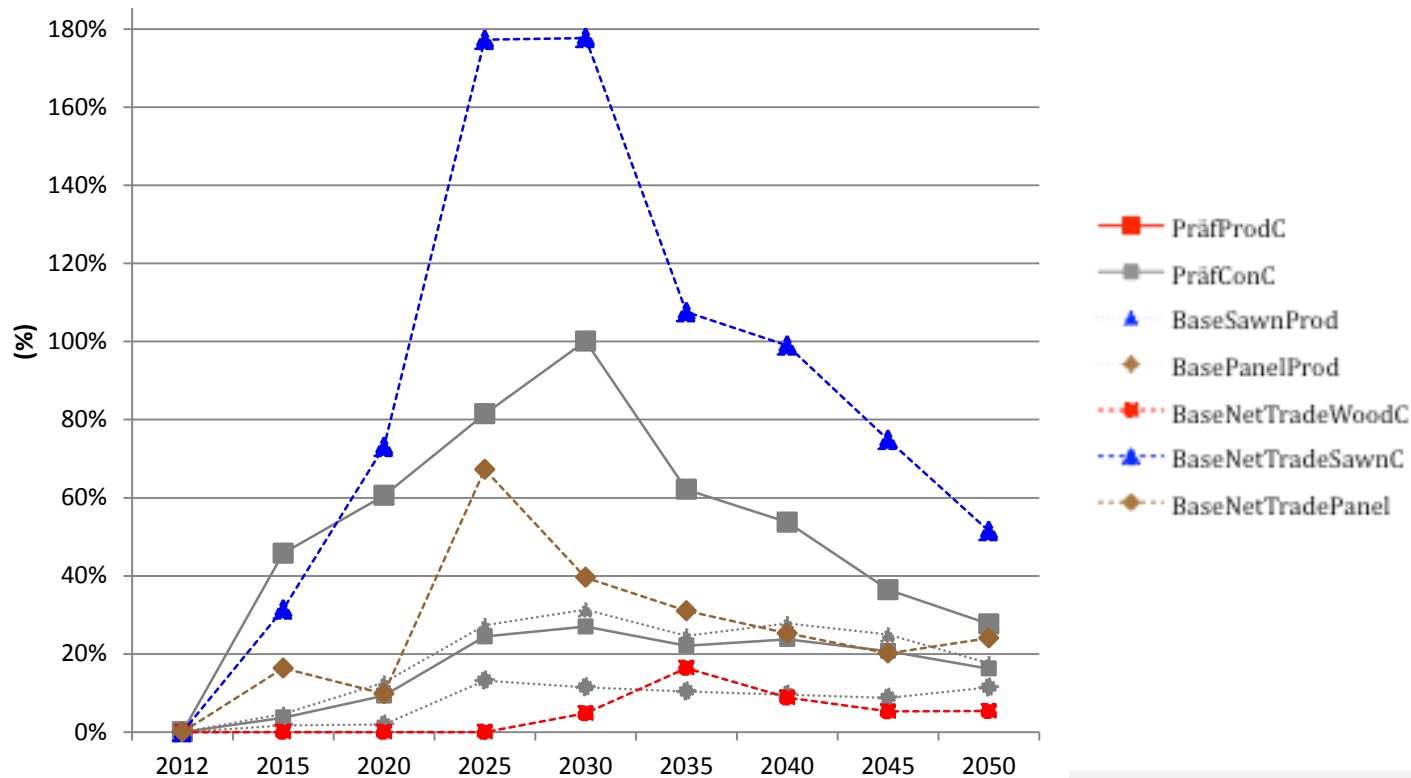


→ Exports of coniferous sawnwood will increase

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First preliminary results

Net trade of roundwood and wood products: WEHAM WoodPrefSc related to BaseSc



→ Exports of panels will increase

Conclusions and further objectives in the near future?

- The GFPM provides useful insights on the development of the forest sector with regard to changing potential supply
- The modification of GFPM regards C/NC separation is successfully implemented
- Further issues in the project:
 - Finalize calculations & analysis of other (differing) scenarios
- Further issues with GFPM:
 - Work on technical issues and think of further applications in other projects

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