



# Approaches and Challenges to Potential Wood Supply



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# Overview

1. Background
2. Elements of wood supply
3. Constraints to wood supply
4. Estimating potential wood supply
5. Next steps
6. Conclusions



# Background

- ‘New’ players in the forest sector:
- Growing demand for wood energy and wood-processing industry

How much is available?

How much can be mobilized?

What are the factors influencing mobilization? (short/medium/long-term)

How can availability be increased?





# Background

- Limits of sustainability
- Balance wood supply vs. Non-wood goods and services
- Land use:
  - Forestry/wood production
  - Energy crops
  - Protected areas
  - Food production



# Elements of wood supply



## Domestic

- Forest:
- Stemwood
  - Stumps
  - other woody biomass
  - harvesting 'residues'

(Short-rotation plantations)

- Non-forest
- woody biomass outside the forest
  - industry co-products/residues
  - post consumer recovered wood

## Imports

SUSTAINABILITY

# Constraints to wood supply

1. Economic and market factors
  - Demand
  - Costs
2. Technical factors





# Constraints to wood supply

3. Environmental factors

4. Social factors

- Forest owners
- Forest workforce
- Policies on waste disposal





# Constraints to wood supply

	Main limiting factor	Other influences
<b>Stemwood removals from FAWS</b>	Net annual increment	Forest owners motivation, Age class structure, nature conservation practices
<b>Removal of tops and branches, stumps</b>	Stemwood removals	Environmental constraints, harvesting methods
<b>Short-rotation plantation</b>	Land use	Policies, costs
<b>Woody biomass outside the forest</b>	??	Logistics, market information
<b>Industry co-products</b>	Production levels notably for sawnwood	Logistics, effective market mechanisms
<b>Recovered wood</b>	Consumption of recoverable products	Waste disposal systems and policies
<b>Imports</b>	Prices	Supply/demand balance in other regions, policies





# Estimating potential wood supply

	International sources
<b>Net annual increment (stem wood from FAWS)</b>	Net Annual increment Warsaw Report (MCPFE/UNECE/FAO)
<b>Removal of tops and branches, stumps</b>	Biomass expansion factors
<b>Short-rotation plantation</b>	?
<b>Woody biomass outside the forest</b>	?
<b>Industry co-products</b>	Production of sawnwood
<b>Recovered wood</b>	Consumption of recoverable products / per capita figures

-> possible scenarios, taking different levels of mobilization into account

# Estimating potential wood supply for stemwood on FAWS

- NAI on forest area available for wood supply
- Bark
- “Harvest losses”
- Consider unrecorded harvests
- Scenario for mobilization needed





# Estimating potential wood supply

Author	Year	Countries	Potential supply	Data Source	Method
<b>Metla</b>	2004	EU 27	187 [million m <sup>3</sup> /year]	FRA 2005	25 % of unused NAI (101.6 million m <sup>3</sup> ) + 85.1 million m <sup>3</sup> from residues and stumps
<b>EEA</b>	2006	EU 25	43 Mtoe	EFISCEN	Maximum sustainable harvest level reduced by 10% + Environmental criteria
<b>McKinsey &amp; Pöyry</b>	2007	16 EU Countries	Additional 70-80 [million m <sup>3</sup> /year]	?	Estimation 35% of sustainably available, but currently unutilized forest biomass (roundwood and residues)
<b>Metla</b>	2008	EU 25	140 [million m <sup>3</sup> /year]	FRA 2005	25% of unused NAI



# Next steps

- Collect information and studies from national levels
- Encourage empirical research
- Develop simple robust approaches to estimate each part of supply on the basis of international datasets
  - > present interim estimates (European Forest Week?)
- Co-operate with other international efforts
- Full outlook study assessing potential supply in the region



# Conclusions I

- Potential wood supply is of increasing importance
- Different sources of wood contribute to overall supply and will influence their potential
- A variety of factors are influencing the availability - have to be considered when estimating potential



# Conclusions II

- Imports are an option, but compound problems in other parts of the world
- First (superficial) assessments can be done with international available data (based on NAI and other parameters)
- In-depth national studies needed to determine future potential wood supply

