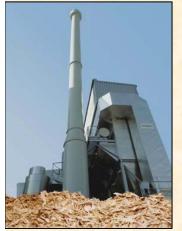




# Approaches and Challenges to Potential Wood Supply

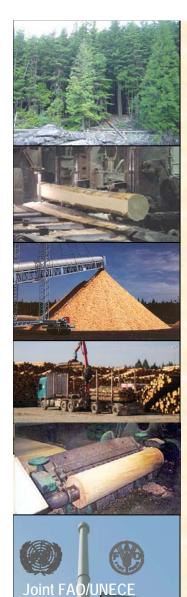






30th Session Joint FAO/UNECE Working Party on Forest Economics and Statistics,
2-3 April 2008





Working Party on Forest

#### Overview

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

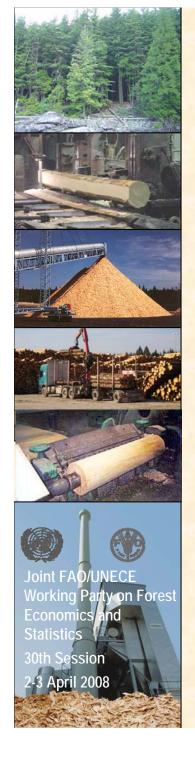


#### Background

'New' players in the forest sector:

 Growing demand for wood energy and wood-processing industry

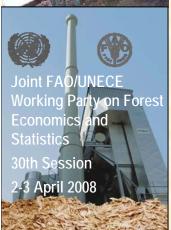
How much is available?
How much can be mobilized?
What are the factors influencing mobilization? (short/medium/long-term)
How can availability be increased?



## 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

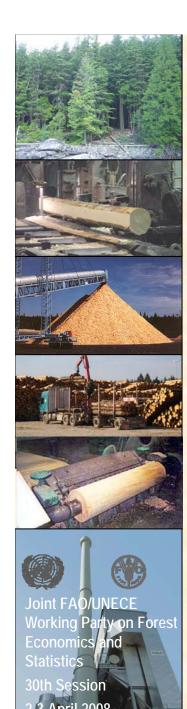
#### **Imports**

**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

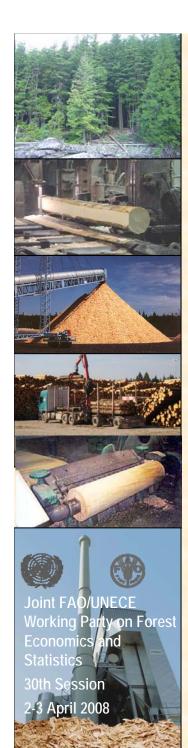
	Main limiting factor	Other influences	
Stemwood removals from FAWS	Net annual increment	Forest owners motivation, Age class structure, nature conservation practices	
Removal of tops and branches, stumps	Stemwood removals Environmental constraints, harvesting methods		
Short-rotation plantation	Land use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



#### Estimating potential wood supply

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

<sup>-&</sup>gt; possible scenarios, taking different levels of mobilization into account



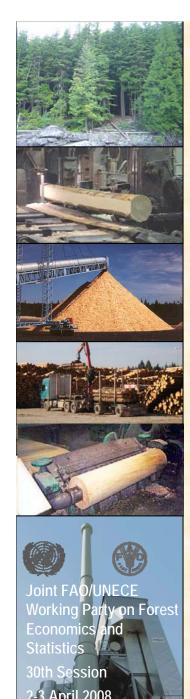
# Estimating potential wood supply for stemwood on FAWS

- 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
Metla	2004	EU 27	187 [million m³/year]	FRA 2005	25 % of unused NAI (101.6 million m³) + 85.1 million m³ from residues and stumps
EEA	2006	EU 25	43 Mtoe	EFISCEN	Maximum sustainable harvest level reduced by 10% + Environmental criteria
McKinsey & Pöyry	2007	16 EU Countries	Additional 70-80 [million m³/year]	?	Estimation 35% of sustainably available, but currently unutilized forest biomass (roundwood and residues)
Metla	2008	EU 25	140 [million m³/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