2.3 Wood energy for Europe: Status and Outlook

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Outline

Current situation

The challenge

Wood energy has many aspects

Guiding principles

Questions
EU27 Gross Inland Energy Consumption (2007)

- 8.5% renewables
- 11.3% coal, peat & lignite
- 14.5% nuclear
- 26.1% natural gas
- 39.6% crude oil

Source: Eurostat 2009

- Solar: 0.9%
- Wind power: 6.4%
- Geothermal: 4.1%
- Hydraulic power: 18.9%
- Woody biomass: 49.5%
- Other solid biomass and wastes: 20.2%

Source: Eurostat 2009

35th Session of the European Forestry Commission – Lisbon, Portugal 27 – 30 April 2010
Wood energy's contribution to energy from renewable sources (NCV) [2003-2008 average]

Source: Eurostat 2009
Comprehensive and responsible decisions require detailed information on past, current and future ... 

... amounts of wood energy 

... sources of wood energy 

... user of wood energy
Energy use vs. material use

Wood removals 2005
from forest and woody biomass
outside forests

For energy use
71%
For material use
29%

Wood co-products, residues
& recovered wood

For energy use
62%
For material use
38%

Total supply

For energy use
58%
For material use
42%

Source: UNECE / Hamburg University (2007)
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Wood is already the major source of renewable energy in the region.

Increasingly, policy measures and decisions taken in sectors other than forestry have an impact on the forest sector.
Wood energy today and tomorrow

- EU 27 -

Year | Million m³ roundwood equivalent
--- | ---
2000* | 200
2005* | 250
2010** | 300
2015** | 400
2020** | 500

Sources: * Eurostat ** EU 27 Renewable energy action plan (own calculations)
The challenge

- Sustainable energy
- Energy security
- Climate change
- Technological development
- Environment
- Employment
- Rural development
- Biodiversity
- Air pollution
- Health

... inclusive, comprehensive policy decisions and measures
The challenge

Cross-sectoral communication and cooperation

- Learn about other sectors’ targets, drivers, concerns but also possible misperceptions.
- Provide guidance on characteristics and sustainability of the resource (potentials & limits).
- Maximize synergies & minimize conflicts between sectors (e.g. forest based industries vs. energy vs. biodiversity, vs. ...).

Help achieving the future RES targets
Current situation

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Questions
Wood energy has many aspects

global sources ≠ local sources

small scale ≠ big scale

traditional ≠ modern

dry material ≠ fresh material

contaminated ≠ uncontaminated

heat production ≠ electricity production

etc. …
Current situation

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Questions
Guiding principles for sustainable use of modern wood energy

- Wood fuel should be used locally, as much as possible, to limit carbon emissions from transport;
- Using wood for energy should aim to recover the highest proportion of the energy content that is technically feasible;
- Policies should encourage the efficient use, re-use and recycling of wood fibres before finally being directed to energy generation.
Guiding principles for sustainable use of modern wood energy

- Wood energy should be used to sustain rural economic development, creating a market for otherwise unmarketable wood (small size and/or low quality) e.g. early thinning to improve stand structure and quality;

- Strategies for the development of wood energy should take account of potential competition for raw materials and should favour wood energy in regions with few alternative market outlets for wood use;

- Wood energy developments should allow for community involvement, as far as possible, including profit-sharing for community benefit;
Current situation

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Questions
Questions:

- How can countries best use wood for energy to secure a balance of economic, environmental and social benefits;
- Does your country possess adequate and timely data/information about current and future wood energy sources, potential and uses and, if not, what measures are in place or planned to improve data;
- How can the highest levels of efficiency for both industrial and energy use be achieved;
- What steps are needed to improve cross-sectoral communication and cooperation between climate, energy and forestry sectors in your country;
- What specifically could the FAO and UNECE do to help EFC members to address the above issues.
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