Good practice guidance on sustainable mobilisation of wood in Europe
Why is wood mobilisation important? Ambitious targets for renewable energies at national and European level have been set in response to the challenges of climate change mitigation and energy supply security. Woody biomass is a major source of renewable energy in Europe, and the political objectives are expected to lead to a long-term increase in European wood demand. The sound mobilisation of unused or under-used wood resources will be crucial for fulfilling the requirements of sustainable development and for meeting the needs of both the wood processing industry and bio-energy sector.

A considerable amount of woody biomass is unused in Europe
A study by UNECE/FAO revealed that, according to the assumptions made, an additional 233 Mio. m$^3$ of round wood equivalent could be supplied from various sources in Europe (EU 27). The largest potential lies in the forests, especially in stem wood (81 Mio. m$^3$) and other above-ground woody biomass (62 Mio. m$^3$). Additionally, post-consumer wood is a considerable source of unused biomass (39 Mio. m$^3$).

Mobilisation of wood has been addressed in several political processes
In 2007, the FOREST EUROPE signatory countries and the EU committed themselves to increase sustainable wood production and mobilisation as a contribution to climate change mitigation and energy supply. Activities by the European Commission comprise the EU Forest Action Plan which, inter alia, promotes the increased use of forest biomass for energy generation. They also comprise the work conducted by the EU Standing Forestry
Committee ad hoc Working Group on mobilisation and efficient use of wood for energy generation. Furthermore, several workshops, including those organised by UNECE/FAO, have addressed potential sustainable wood supply and wood mobilisation.

Main objectives of the guidance
The good practice guidance for sustainable mobilisation of wood in Europe identifies four key themes for action:

1. Identify concrete mobilisation measures and explain their applicability in different conditions.
2. Present ‘good practice examples’ of wood mobilisation linked to each measure.
3. Help decision-makers from administrations and industry, as well as forestry practitioners, make sound choices and implement appropriate actions whilst ensuring sustainable forest management.
4. Provide a practical contribution at country level to the preparation of national energy plans and strategies, including the National Renewable Energy Action Plans (NREAPs) of the EU, as well as to help countries to achieve their climate change and energy commitments.

The guidance is directed towards policy makers, practitioners and researchers
The guidance is directed towards policy-makers, researchers and practitioners alike by giving comprehensive support in all phases (e.g. preparation, planning, operation), at different levels (e.g. national, sub-national) and for different purposes (high-quality logs, fuel wood) of wood mobilisation.

Mobilisation efforts need to follow principles of sustainability
The following principles should apply:

1. The sustainability of forests and other wood resources, and the operations, must be assured, and the principles, criteria and indicators for sustainable forest management used.
2. Loss of biodiversity and ecosystem services should be avoided.
3. All approaches should be in line with high standards for energy and resource efficiency, cost-effectiveness and environmental performance.
4. Mobilisation measures should reduce the vulnerability of forests to hazards such as forest fires, storms, etc.

How is the guidance structured?
The guidance presents eight areas with promising mobilisation potentials. A set of concrete measures is proposed for
each area. For each measure, successful case studies are presented which policy makers and practitioners can take into account when developing wood mobilisation strategies and practices for their region. To facilitate their judgement on the applicability of such good practices, the reader may wish to refer to information presented on specific circumstances, drivers, constraints, results and lessons learned, as well as the contact details of experts who may be consulted. The case studies cover a wide range of regions and topics.

**Major levers for increased woodmobilisation**

**Improve land tenure, management, co-ordination and planning**
About half of the European forest (EU 27) is owned privately and, according to national inventories, a large share of unused biomass can be found in small-scale private forests. Less fragmented forest holding structures can make forest management more profitable. Measures proposed: enhance co-operation between forest management units and with other groups, improve the organisation of forest owners and others, and consolidate land management.

**Strengthen infrastructure and logistics**
Sufficient forest infrastructure is a crucial precondition for increased wood mobilisation. An efficient forest road network facilitates a well-functioning wood supply chain, and can reduce costs and environmental impacts. Measures proposed: raise axle weight limits, improve accessibility to the forest, optimise transport distances and improve the technology and transport systems for new energy wood assortments.
Support markets and marketing through improved organisation and transparency
The development of market-driven processes should be the preferred solution to stimulate wood mobilisation. Insufficient co-operation between market partners and the lack of suitable market structures or transparency can hinder wood supply. Measures proposed: establish public-private partnerships to jointly develop markets, improve market transparency, establish long-term contracts between market partners, facilitate access to basic information on forest ownership whilst respecting privacy rights, establish sustainable wood energy supply chains, and improve the information about sustainable forestry and its benefits.

Better utilise post-consumer wood
Despite a considerable rise in the utilisation rate, post-consumer wood is a resource which is still under-utilised in many European countries. An increase in the collection and usage rate is key, and, as a first step, more information is necessary about the quantities of recovered wood as well as to the extent these sources can be sustainably re-utilised. Measures proposed: carry out inventories and utilise sources of post-consumer wood, and standardise classification of post-consumer wood and contamination limits.

Enhance education and training
The lack of an adequate workforce is a barrier to additional wood mobilisation. Capacity building, education and training of contractors, entrepreneurs and private owners are essential. Measures proposed: provide relevant information and training, provide adequate conditions and remuneration, and communicate the benefits of sustainable wood mobilisation between market partners.

Utilise sources of and mechanisms for financing
Although market-driven mechanisms are preferred solutions, adapted sources of and mechanisms for financing can benefit increased wood mobilisation. Measures proposed: raise finance, e.g. capital or loans and apply suitable financial mechanisms.

Apply sound legal and fiscal measures
Governments and state forest services need to provide the legal framework necessary to enable increased mobilisation by removing legal constraints and by implementing regulations and policies conducive to wood mobilisation. Measures proposed: stimulate wood mobilisation through fiscal measures, and prevent further fragmentation of forest holdings.
Improve silvicultural measures
There are still mobilisation reserves in intensified forest management in Europe, even in well run state or private forests. Wood harvest and mechanisation of harvesting can be intensified in many forests, i.e. in deciduous stands, via early thinnings, shorter rotation cycles and utilisation of forest residues. In the long run, silvicultural management can be intensified through the utilisation of high-growth species, forest breeding and plant material refining. Measures proposed: enhance silvicultural management and improve existing afforestation programmes.

Enhance research and development
Research and technological development are crucial for sustainable and viable wood mobilisation. A maximum exchange of existing knowledge between actors and countries should therefore be encouraged. Measures proposed: commission research into the wood supply chain and promote research, technology and methodology development for energy use.

Evaluation along various dimensions
The case studies are evaluated according to time needed for implementation, financial mechanism and input required, ease of implementation and potential scale of mobilisation. Acknowledged experts were consulted for this evaluation. The cases are plotted on a two-axis-graph giving an indication of implementation and efficiency that can help prioritise measures and identify most suitable approaches for specific circumstances.
Receiving more detailed information
Further information is available from the full guidance document, which presents good practice examples of wood mobilisation in detail.

The guidance is available on the following websites:
www.foresteurope.org
www.ec.europa.eu/agriculture
www.unece.org/timber
www.cepi.org
www.cepf-eu.org
www.eustafor.eu
www.copa-cogeca.be
www.enfe.net
www.efi.int

A hard copy of the good practice guidance on the sustainable mobilisation of wood in Europe (March 2010) can be obtained by writing to one of these organisations.
Good practice guidance on sustainable mobilisation of wood in Europe
Brochure jointly developed by FOREST EUROPE Liaison Unit Oslo, European Commission DG Agriculture and Rural Development, UNECE/FAO Timber Section.