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Inter-actions of EU Renewable Energy policy with theforest-based Sector

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1. EU Forest-based sector: key facts & figures (Eurostat): forest resources and wood supply:

- EU-27 has 177 M ha. forests (5 % global FOWL)
- Ownership (FAWS): 18 % state; 12 % other public; 11 % industry; 59 % private individuals; (but 16 M+ private forest owners, mostly having small, private woodland lots)
- EU-25 forests grow 700 M m^3 wood each year (over-bark NAI – net annual increment)
- only 60% (425 M m^3) of NAI removed each year for EU forest-based industries' use (90 % of wood for EU processing from sustainably managed EU forests (SFM))
- so, the EU forest standing wood volume is constantly increasing & so is the area (+ 700 000 ha/yr = 0.4 % p.a.)
- logically, EU forest resources can be more intensively used e.g. removals at 85 % of NAI = **+ 170 Mm^3**
- A recent EEA study said the increase could be up to 200 Mm3 more (= 40 Mtoe) with no negative ecological impact

1. EU Forest-based sector: key facts and figures – Wood supply and demands

Supply: why not all grown and « available » wood is used:

- large national, regional and local variations in growth, supply & use
- not all wood of right species, age, dimension, quality, at a distance, price & time suitable for markets (wood ≠ wood)
- Statistics and forest & other infrastructures & logistics inadequate
- private forest ownerships very fragmented, not always known (e.g. UFOs – unknown forest owners); not always “market” actors
- Forest entrepreneurs lack: investment, organisation, skills, recognition

Demands:

- increasing & competing demands for wood for both wood-processing industries and as biomass component of renewable energy

Results:

- EU is importing about 10 % (+/- 30 M m^3) of the supply of wood for industries (in Finland +/- 25 %) wood raw material is imported, currently most from Russia)
- EU domestic prices rising in many regions, but
- many peripheral +/- small forest regions still without markets for wood

1. EU forest-based industries (F-BI):

woodworking, pulp & paper; printing:

WWI (2003/4) used 165 Mm³ (EU) roundwood (+ other materials) to make : sawnwood 85.6 Mm³; panels 45.6 Mm³; EWP 2.5 Mm³; parquet 81 Mm²

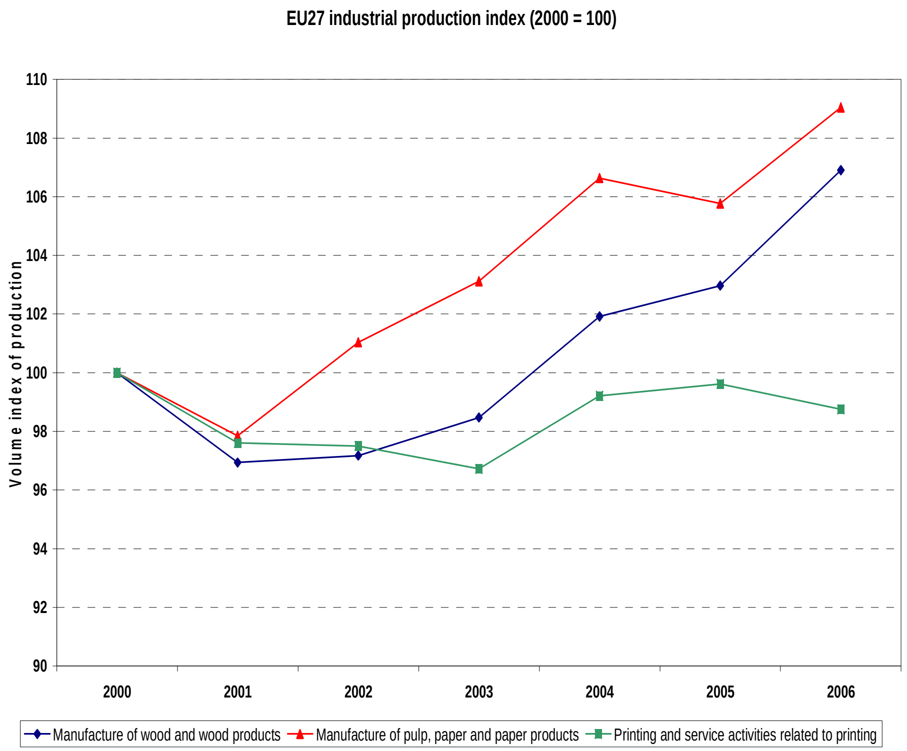
In 2003, **WWI** contributed 1.94 % of EU manufacturing (mfg.) output, 2.11 % of added value, 3.49% of jobs (1.9 M) in 131 000 enterprises, many SMEs;

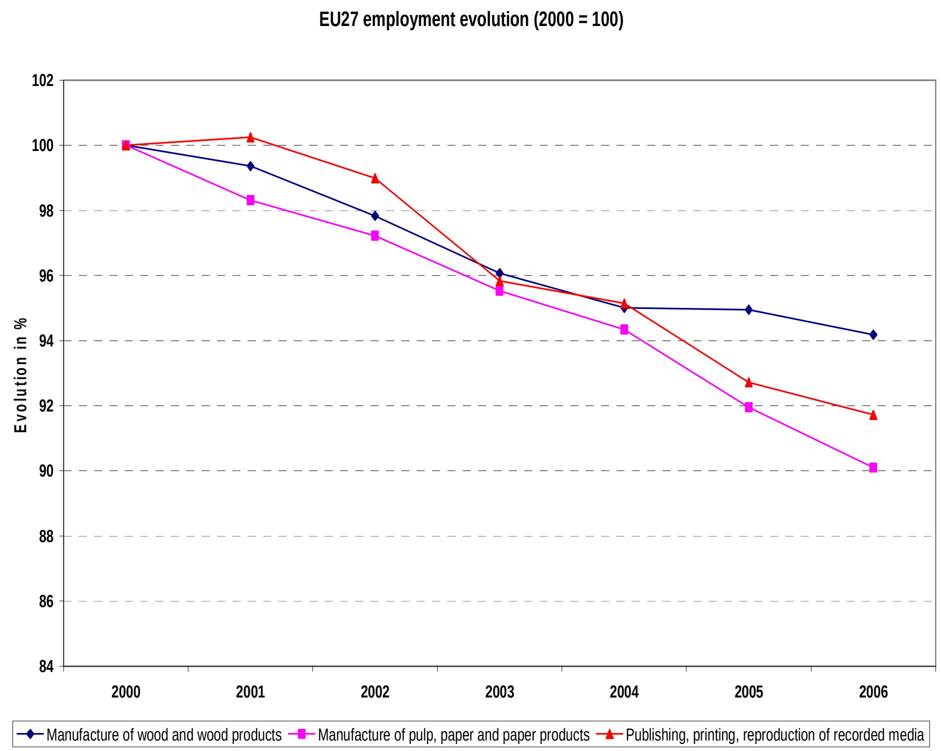
WWI had a turnover of 112.5 Bn € in 2006, production volume grew 15% between 1998 and 2002.

Most employed workers in the EU-15 WWI were low-skilled workers (49%) & medium-skilled workers (41%) industry. High-skilled workers were only 9%.

PPI uses 150 M m³ (+ 48 Mt recovered fibre, etc.) to make 100 M t paper (graphic 50 %; pkg. 39 %; hygiene & speciality 11 %) (= 28% world output) from 830 firms (some multi-nationals, many large firms, few SMEs); 270 000 jobs; 78 Bn € = 1.3 % of European manufacturing turnover.

1. EU F-BI: trends – production v. employment increasing labour productivity





1. EU forest-based industries (woodworking, pulp & paper; printing):

Total EU F-BI:

- 340 Bn € turnover p.a. (8% of EU manufacturing added value),
- 2. 5 M jobs (9 % of EU manufacturing jobs)
- 90 % of roundwood from sustainably managed EU forests (SFM)
- growing exports for structural timbers & paper (net exports!)

NB roles of forest-based industries as:

- raw material operator and "co-ordinator" **(i.e. « wood mobiliser »)**
- as a large energy user of electricity & heat
- as producer of electricity & heat for "export" to grids
- as innovator and developer of new product & process technologies

BUT many SMEs (WWI & printing); low investment in R&D & education; high costs (wood, energy, labour); limited scope to improve EU wood supply; largely tariff- & quota-free access to market means import competition; larger firms risk relocation outside EU

2. Main EU Institutions:

Council: Member States' governments & officials acting together to debate and modify policy & legislative proposals

Parliament: directly elected deputies (MEPs) debate and modify policy & legislative proposals; make own proposals

Economic & Social Committee & Committee of the Regions: appointed members give opinions on Commission proposals

Court of Justice: last stop in legislative disputes arising from enactment of EU legislation

Commission: "guardian of EU Treaties", proposing policies, including legislation, & implementing (with Member States)

2 . Main EU (European Community + Member States) policies affecting forest-based sector (in absence of EU Forest-based Sector Policy)

Forest-based sector activities	Sectorial policies	Horizontal policies
Sustainable Forest Management Wood procurement from forests and other wooded land Non-wood forest products, services and other functions (social, environmental, cultural)	National forest policies EU Forest Action Plan - FAP (CAP) Rural Development Policy (4)	Regional Environmental Research & Technological Development + Innovation Finance Competition Internal Market Development Co-operation; Trade (FLEGT) Ext. Relations
Wood utilisation:		
as raw material for processing into forest-based materials & products as building material as (in-)direct energy source	Industrial policy (5) MS building regulations & Constr. Products Directive Energy & Climate Policies (3)	

2. EC policies & services' (internal & external) co-ordination in absence of specific EU Forest-based Sector Policy

Directorates General and other services co-ordinate:

Internally: closely with all other relevant Commission Directorates eneral and other services (e.g. ESTAT, European Envirionment Agency) bilaterally on a day-to-day informal basis, frequently through formal inter-services' consultations and periodically in a collective way through the Inter-services' Group on Forestry

Externally: frequently with services of other EU institutions and key international organisations (FAO, IEA, ILO, ITTO, IWG, MCPFE, UNECE, WB et al.); daily with forest-based industry federations at EU, national and international levels; occasionally with companies

3. Climate & Energy Policies

3. EU Climate & Energy Policies -

motivations for Renewable Energy Sources (RES)

- climate change: cut greenhouse gases (GHG)

- security of energy supplies

  NB 2007: EU 50+ % energy imported

  EU 8 % of final energy use renewable

  2030 EU 70 % energy imported

- competitiveness (Lisbon Agenda….)

3.Policy proposals 2007-8 (led by DG TREN):

January 2007 “energy &climate package” proposed 2020 targets :

- **- 20% greenhouse gases (GHG)**
- **+ 20% energy efficiency**
- **20% renewable energy (10% bio-fuels)**

Broadly endorsed by Member States (March 2007 European Council) and European Parliament

Objectives confirmed in EC’s 23/01/2008 proposal for Climate and Energy Package “20-20-20 goal”

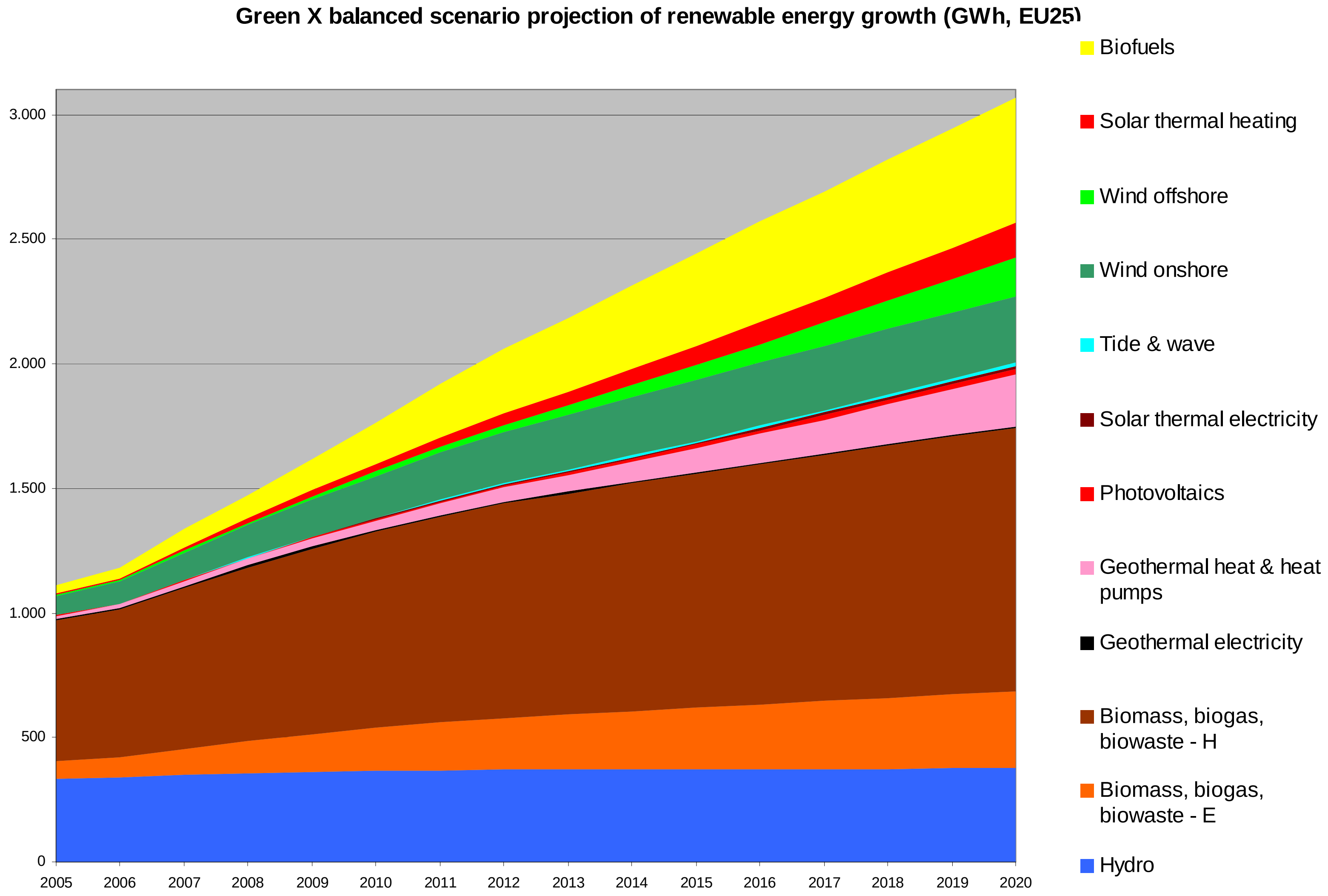
3. EU renewable energy targets

	2006	2010 target	2020 target
All renewables:	7%	12%	20%
Biofuels:	1%	5.75%	10%
Green electricity:	15%	21%	(no sectoral
Heating/ cooling:	9%	none	targets)
Biomass	(385) 70 Mtoe	150 Mtoe (825)	195 Mtoe (1075)
Green electricity:	18 Mtoe		62 Mtoe
Biofuels:	3 Mtoe		43 Mtoe
Heating:	50 Mtoe		90 Mtoe

NB green figures show targets in m3 if met 100% by wood (Mm3 roundwood equivalent @ 5.5 m3 = 1 toe)

3. How to get to 20% RES? By using many sources

NB 80% of biomass is wood; wood is 52 % RES



3. National energy action plans

- Sectoral targets (heating & cooling; electricity) set by Member States

- Member States set measures adequate to achieve the targets

- no national biomass targets required as such

National plans must assess biomass availability:

- including long-term planned **development of new resources and mobilisation of biomass resources**
- National (Biomass) Action Plans ((n)BAPs) are necessary for monitoring the implementation of the Directive and policy stability as basis for investment

3. ISSUES to be addressed in nBAPs

- The physical and economic availability of biomass of different kinds, including:

  - wood and forest & wood residues,

  - agricultural crops & residues, incl. by-products

  - municipal wastes
- Bio-energy targets at national, regional, local levels
- Differences in use of statistics and data
- Resource and energy efficiency
- Support measures to be put in place
- Impacts (e.g. on existing forest-based industries)

NB co-operation with UNECE/FAO Task Force, JWEE

3. EU supporting measures

- Implementation of overall EU Biomass Action Plan
- Review of buildings directive to incentivise use of RES
- Study on household biomass boilers' performance of and possibly set eco-design requirements
- CEN standards on quality of biomass fuels
- Development and trade policies
- Stronger research efforts for second-generation bio-fuels

3. A prime concern: the sustainability of bio-fuels?

Work in the Council's Energy Working Group has been supplemented by an ad hoc Bio-fuels WG (Council + Commission), aided by a Commission inter-services' group, which looks into the details of the sustainability criteria.

Now Council suggestion for **sustainability criteria directive** for all energy uses (i.e. bio-fuels + heat + electricity) of biomass.

Key issue: bio-fuels separately or with other uses?

Technical work assisted by a public consultation over summer 2008, using a questionnaire.

Next nBAPs Working Group meeting to discuss results

4. EU Forest Action Plan & Rural Development Policy

EU Forest Action Plan (2007-11) has four main objectives:

- Improving the long-term competitiveness of the forestry sector
- Improving and protecting the environment
- Contributing to the quality of life in
- Fostering co-ordination and communication

It is implemented by the Member States and the Commission through 18 key actions

4. DG AGRI: EU Forest Action Plan - Key Action 4

« Promote forest biomass use for energy generation » - through:

- Assessment of the availability and possibilities for increased mobilisation of small/low-value timber and harvesting residues for energy; disseminate good practices
- Assessment of the feasibility of using forest residues and tree biomass for energy in the context of sustainable forest management; examination of environmental limits
- Examination of possibilities for co-operation between forest owners in energy projects
- Support for R&D for heating and cooling, green electricity and fuels from forest resources
- **18 mth Working group set up (22/05/2007; 16/10/2007) to examine mobilisation of wood resources for energy use - inputs sought**

  outputs: report on mobilisation; opinion on SFM for biomass

4. Working Group on Mobilisation and Efficient Use of Wood & Residues for Energy (2007-8)

Set up under Standing Forestry Committee (= MS + EC)

Objectives and scope of work

“This working group will contribute to implementation of Key Action 4 of the EU Forest Action Plan 2007-13 (promote the use of forest biomass for energy generation), activity 4.1 of the work programme 2007-2011 of the FAP – to improve the mobilisation and efficient use of wood and wood residues, including low-value timber”

4. Working Group: Terms of Reference

- **Exchange information and experiences on availability of forest biomass and the economic feasibility of its use for energy generation (building on on-going work)**

- **Analyse the application of SFM principles to mobilisation of forest biomass and discuss the need for further recommendations in this area**

- **Exchange and enhance information on the consideration of forest biomass in national Biomass Action Plans or similar national planning instruments**

4. Expected outputs:

- **Report on the potential for increasing the availability and use of forest biomass, taking into account accessibility and economic feasibility**

- **Draft opinion to be discussed in the SFC on the application of SFM principles to the mobilisation of forest biomass (to be finalised December 17-18th)**

Other relevant DG Agriculture policy areas:

Common Agriculture Policy (CAP) reform:

Non-food (energy) crops on set-aside areas

4. EU Rural Development Policy

Three core objectives, leading to 4 axes:

- Improving the competitiveness of the farm and forestry sector through support for restructuring, development and innovation
- Improving the environment and the countryside through support for land management
- Improving the quality of life in rural areas and encouraging diversification of economic activity
- LEADER

NB Single fund (Rural Development) and single set of rules

5. EU Industrial Policy and the Forest-based Industries

The Lisbon Agenda - matching sustainability with competitiveness

Since 2002 the Lisbon Agenda (relaunched 2005) has sought to promote competitiveness in all sectors by promoting growth & jobs in a knowledge-based economy & society. Recalling the three components of sustainability (environmental, social, economic), as well as competitiveness, it seeks:

« To preserve the EU sustainable development model for the future, the Union's competitiveness must be strengthened; its economy dynamised »:

Under the Lisbon Agenda, EU Industrial Policy inter-acts with other EU policies: Internal Mkt., Industry, Employment, R&D (EC + MS), etc.

- EU +attractive for investment & work (Single Mkt., less & better regulation)
- 2010: R&D 3% GDP - knowledge & innovation for sustainable growth
- 2010 create 6 M new and better jobs

Essentially: growth & jobs - whilst:

promoting environmental sustainability & combating climate change

5. Role of DG ENTR unit « Textiles, Fashion & Forest-based Industries

(NB since 01/01/2007 the merged unit also covers furniture)

The **competitiveness** of the EU forest-based industries must be maintained and enhanced for: products > jobs > wealth > growth

So, as indicated in the 1999 communication « "The State of the Competitiveness of the EU Forest-based and Related Industries" (COM (1999) 457 Final), the **role of the unit for the F-BI is to:**

"help ensure the global & sustainable competitiveness of the EU F-BI"

For the EU F-BI, this means inter-action with many policy areas →

5. DG ENTR inter-acts with main policy areas for forest-based sector:

Policy	**DG ENTR activities**
Industrial Policy:	up-dating contribution to IP exercises
Competition Policy:	state aids, mergers and cartels, EIB & EBRD
Trade Policy:	contribution to negotiation and implementation of
(& Customs)	multi/pluri/bilateral trade agreements
	(e.g. WTO, FLEGT*)
Environment Policy)	quantifying environmental impacts and benefits
Energy & Climate)	weighed against competitiveness (profits & jobs)
Agriculture & RDP:	quantification of forest and wood resources,
	tracking wood flows to processing and energy uses
	tracking production & flows of wood-based products

(*Forest Law Enforcement, Governance and Trade)

6. Issues arising:

Higher demands for wood biomass offers both opportunities:

- forest owners can have more markets for using more wood, incl. residues. (More revenue available for forest management?);
- sawmills benefit from increased demand for their by-products like wood chips and sawdust, especially for e.g. pellets;
- pulp industry can use e.g. black liquors not only for CHP, but as "bio-refineries", using current & new technologies, also new opportunities (bio-fuels: (m)ethanol from black liquors or directly from cellulose)
- wood is an energy-efficient building material in manufacture and use

and risks:

- unfocused demand for wood, unmatched by supply, can create bottlenecks and high prices to the detriment of both the energy & forest-based industries
- energy efficiency may not be optimised and/or
- optimal use/full added value may not be derived from wood
- wood-based products may be priced out of market by less sustainable ones, resulting in lower F-BI sales, profitability or even mill closures
- end-use subsidies, e.g. the use of high feed-in tariffs for the production of "green electricity", may not pull previously unused biomass from the forests or gather post-consumer residues, but compete with F-BI

6. Issues arising - continued:

- The EU has great potential for increased production of biomass
- The minimum targets should be achieved without unmanageable tensions between biomass demand for energy and for food, feed and industrial uses (diversified feed-stocks)
- In the EU, CAP cross compliance gives a guarantee for environmental protection
- Production pathways and land use for biofuels with undesirable consequences will be discouraged
- Nationally, should forests be used as carbon sinks for Kyoto credits and maintaining/increasing bio-diversity, or should wood be used for products and/or energy?
- Added value of forest-wood chain is substantially higher than that of energy sector and wood products can be recycled. But what about F-BI profitability, capital intensity and returns on investments? Is CO2 potential more important, e.g. CO2-saving by 2nd-generation bio-fuels?
- How much (more) wood could/should be used; how can that best be managed? i.e. at national, regional & local (+ company) levels. How can EU & MS policies & actions help?
- Which points in the forest/wood flow system should be addressed?
- Logistics and harvesting costs are crucial. How can e.g. subsidies be used without unduly distorting markets?
- Which specific (new) measures (e.g. R&D) are needed?
- How to get better statistical and other information?

6. Wood for products or energy or both? – And how?

1. EU-level figures hide: **complex market structures; national & regional variations** in: extent, intensity & location of forest resources, population density, financial & fiscal régimes giving rise to several identifiable regions within Europe (NB cross-border effects in central Europe)
2. lack of good quantitative information on wood supply/demand
3. **Scale and costs** need to be assessed, especially in context of **national planning**
4. **NB roles of forest-based industries as:**
   - raw material operator and "co-ordinator" **(i.e. « wood mobiliser »)**
   - as a large energy user of electricity & heat
   - as producer of electricity & heat for "export"to grids
   - as innovator and developer of new product and process technologies
5. Need to safeguard ("urban") forest **resources and access** to them at competitive prices for both industry and energy production, whilst respecting ecological and social amenity functions of forests

4. policy changes require (better and more) wood mobilisation, but existing market, institutional and fiscal frameworks may inhibit it
5. So, a package is needed to help mobilise more wood & other biomass (e.g. agri-energy crops,incl. SRF; municipal waste; etc.) :
   - carefully targeted, proportional and temporary incentives (finance/fiscal),
   - tailor-made national and regional policies (e.g. nBAPs)
   - institutional measures (e.g. forest owners' organisations)
   - technological & logistical measures (e.g. total biomass harvesters)

6. Summary conclusions and perspectives:

1. EU has broad set of horizontal & sectoral policies
2. Many of these affect the forest-based sector, esp. Energy & Climate Change Policies; EU Forest Action Plan & Rural Development Regulation; Industrial Policy and its communication document on innovative & sustainable forest-based industries
3. Most direct actions from these policies occur within EU. However, they serve as...
4. ...a base model for non-EU countries to develop
5. Market and other issues arising mean that national policies should be developed taking both national and global circumstances into account.

7. Communication on innovative & sustainable forest-based industries in the EU (27/02/2008):

- **A.** Challenges
- **B.** Integrated approach and overall aims
- **C.** Actions

A. Challenges for the EU Forest-based Industries

- Access to raw materials
- Impact of climate change policies
- Innovation, Research and Development
- Trade and co-operation with third countries
- Communication and information

B. Integrated approach and overall aims

➔Harnessing the competences in related sectors, and continuing to support a high level of **innovation** and **RTD**.

➔• Contributing to **sustainable energy supply** and promoting **sustainable forest management**.

➔• Promoting **sustainable raw material supply** while ensuring fair competition.

➔• Further improving **resource efficiency in the use of raw material.**

➔• Facilitating **forest-based industries' participation in** markets for **RES** and, supplying heat, electricity and wood-based bio-fuels.

C. Actions: Access to raw materials (8 actions)

1. Member States, industry and forest owners to facilitate and promote **afforestation, reforestation and active SFM**

2. In co-ordination with the SFC ad-hoc WG on mobilisation, the Advisory Committee on Forestry and Forest-based Industries to explore **additional solutions besides mobilisation to the gap between supply and demand of wood**

3. The Advisory Committee on Forestry and Forest-based Industries to follow developments of **recovered paper**

4. Study to identify solutions to increase the **recovery level of wood products**

C. Actions: Access to raw materials (8 actions)

5. Round Table to be set up in the the Advisory Committee on Forestry and Forest-based Industries to **develop further private sector measures** to exclude the trade and use of illegally harvested timber, **in line with FLEGT**

6. Industries and forest owners encouraged to undertake **initiatives to prevent illegal logging and SFM.**

7. Commission and MS to clarify the application of **public procurement for wood and paper products**

8. MS and Commission to pay attention to the **different uses of biomass** when developing the national action plans and in the context of general monitoring and reporting on RES

C. Actions: Climate change and ENV policy (4 act.)

9. The advantages and challenges of proposing to include carbon storage in **harvested wood products**

10. Role of **sectoral agreements** that should lead to global emissions reductions.

11. The Commission will prepare the measures set out in its climate action and renewable energy package of 23rd January 2008 on energy-intensive industries, in particular the determination of sectors or sub-sectors concerned by **carbon leakage**. The Commission will assess whether **forest-based industries** qualify for such treatment.

12. Industry invited to contribute to the information exchange in the **review of the pulp and paper BREF**. Attention to identify flexible technical solutions and facilitate consistent implementation by Member States.

C. Actions: Innovation and R&D (4 actions)

13. Member States and industry to consider the **Strategic Research Agenda of the forest-based TP** in their RTD programmes and make adequate provision for education and training in the forest-based sector.

14. The **forest-based industries** will have opportunities within the **EU 7FP**

15. Member States and regions encouraged to adopt and develop the "**cluster" concept** to enhance existing and create new competitive synergies in the forest value chain, especially for **SMEs**. CIP Programme can support this.

16. **Cohesion Policy** support during 2007-2013 will assist the improvement of sector competitiveness and sustainability, particularly in the most disadvantaged EU regions.

C. Actions: Trade and cooperation with third countries (2 actions)

17. The Commission will continue its efforts to establish and implement a market access strategy coherent with its growth and jobs and sustainable development objectives, ensuring **access to raw materials internationally and supporting the elimination of tariff and non-tariff barriers**.

18. The Commission will launch a **dialogue** with interested third countries to address **technical, regulatory and related issues.**

C. Communication and Information (1 action):

19. Member States, regional authorities, academic and educational institutions will be invited to cooperate within **multinational networks** in order to examine and ensure the follow-up of **long-term changes in the forest-based industries.**

C. Actions: implementation

➔Collaboration with stakeholders and Member States on the implementation of the actions channelled through the **Advisory Committee on Forestry and Forest-based Industries**

➔Co-ordination with the **Standing Forestry Committee** on forest-related issues.

Hvala! Thank you! Merci! Danke!