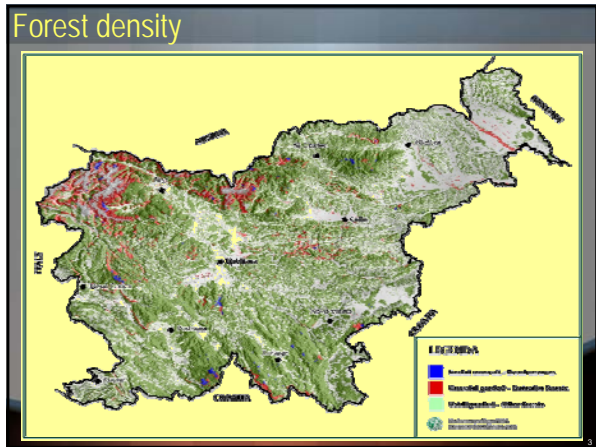


# Mobilizing Wood Resources in CEEC – Slovenian Example

Jurij Beguš  
Slovenia Forest Service

# Conditions in Slovenia

- ✘ area - 2 million ha
- ✘ 58% territory is covered by forest
- ✘ alpine and pre-alpine region
- ✘ more than 300.000 forest owners
- ✘ average property - 2,6 ha
- ✘ growing stock 257 m<sup>3</sup> /ha
- ✘ increment 6,5 m<sup>3</sup> /ha



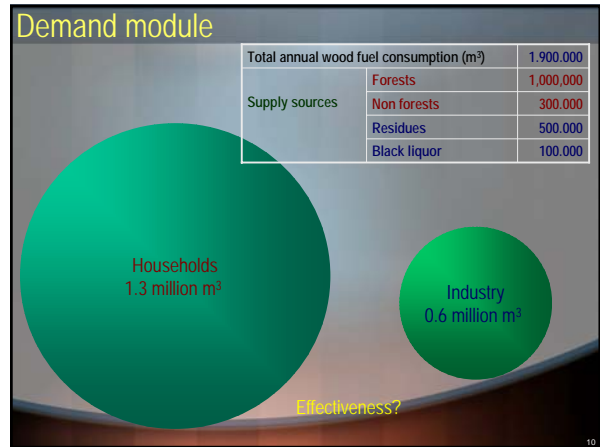
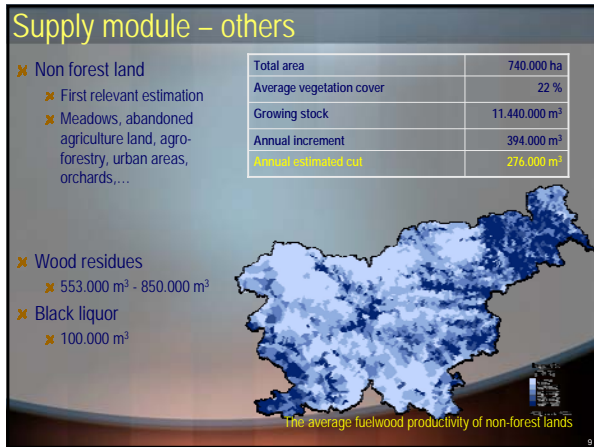
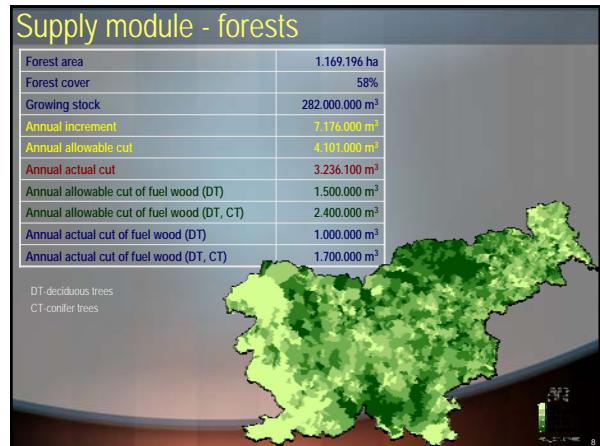
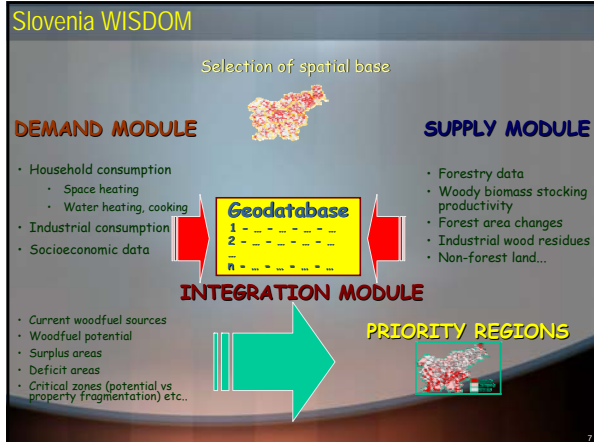
# Study/project

- ✘ Supply And Utilisation of Bioenergy to Promote Sustainable Forest Management (2003 – 2005)
- ✘ Modules
  - ✘ wood energy information
  - ✘ economics
  - ✘ institutional aspects
  - ✘ extension and training

The results from all four modules were used as basis for the formulation of the "Wood Energy Development Strategy for Slovenia Forest Service"

# Information system

- ✘ WISDOM (Woodfuel Integrated Supply/Demand Overview Mapping)
- ✘ SWEIS (The Slovenia Wood Energy Information System)



### Integration module

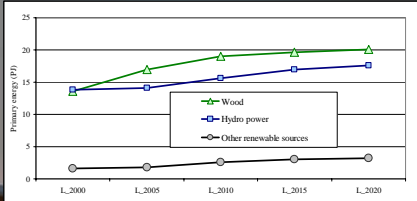
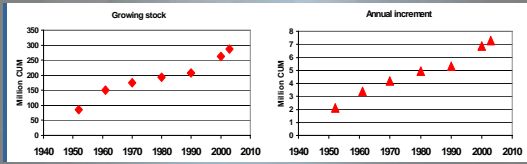
	Million m <sup>3</sup>	Forests	Non-forests	Household consumption
Total stock		280	12	
Increment		7.0	0.4	
Allowable				1.3
All assortments		4.0		
Timber		1.8		
Non-timber		2.2		
Non-timber commonly used as fuel		1.4		
Actual cuts			0.3	
All assortments	average			
Timber	1991-2001			
Non-timber	recent years			
Non-timber commonly used as fuel		1.3	1.5	0.5
		0.9	1.0	0.0

### SWEIS

Data from wide variety of sources harmonized and aggregated to produce a first coherent overview of wood fuels production, import, export and consumption in Slovenia constitute SWEIS.

(Values in '000 m <sup>3</sup> )	1995	1996	1997	1998	1999	2000	2001	2002
<b>Production</b>								(1.352)
Forests								1.012
Other landuses								276
Fuelwood								
Charcoal	1.2	1.2	1.3	1.4	1.4	1.6	1.5	1.3
Black Liquor	109	109	109	109	109	109	109	109
<b>Import</b>								(3)
Fuelwood								
Charcoal	12			10	17	2	1	1
Black Liquor	2.2	2.1	2.0	1.9	1.9	1.7	1.7	1.8
<b>Export</b>								(60)
Fuelwood								
Charcoal	75			89	75	62	55	60
Black Liquor								
<b>Consumption</b>								(1.898)
Household Sector								1282
Other Sectors								500
Fuelwood								
Charcoal								
Industrial, public, etc.)								
Black Liquor	109	109	109	109	109	109	109	109

## WB potentials



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## Simulation on expected growth

- ✘ of growing stock,
- ✘ increment and
- ✘ allowable cut

Year	Grow.stock (m3/ha)	Increment (%)	Cut/increment %	Allowable cut (m³/year)
2001	265	6,36	61	4.100.000
2010	281	6,74	65	4.580.000
2020	296	7,10	70	5.190.000
2030	308	7,39	75	5.790.000
2040	317	7,61	87	6.900.000

Productive forests

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## Professional frames

- ✘ Everything, what grows in the forest, is not a potential energy (sustainability).
- ✘ Everything, what could be cut (allowable cut), is not available in fact (owner's will).
- ✘ Everything, what is cut (actual cut), is not woodfuel (other assortments).



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## Possibilities

- ✘ Slovenia can increase its annual woodfuel consumption up to (at least) 3 million m³
- ✘ 1 million m³ more/year can be used in the short-term
- ✘ It can be raised up to 4 million m³ per year in the long-term
- ✘ Some conflicts are and could be expected in near future (timber processing industry)



## Wood Energy Development Strategy for the SFS

- ✘ set the framework for increased and sustainable utilisation of forest biomass for energy in Slovenia
- ✘ defined the areas of work where SFS should focus its future activities
- ✘ two main objectives
  - ✘ Promote the annual production of 3 million m³ of woodfuels derived from forests by the year 2020 and
  - ✘ SFS become the main partner of all stakeholders to ensure the implementation of sustainable production of such amounts of woodfuel

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## Mobilising the production of WB

- ✘ Legal framework (proper legislation and strategies)
- ✘ Role of forestry as a profession (visible and respected)
- ✘ Small scale forest owners
- ✘ Reliable market of WB



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## Legal framework (sustainability, energetic strategy)

- ✘ **Forest Act (1993)**
  - ✘ Close to nature forest management
  - ✘ Subsidising of first and second thinnings
  - ✘ Extension
- ✘ **The Development Programme of Forests in Slovenia (NFP) (1995)**
- ✘ **Energetic Act (1999)**
  - ✘ Basic act in the field of RES
  - ✘ To enlarge RES with education and informing, extension, support to local energetic concepts, standards and technical regulations, financial incentives
- ✘ **Resolution on the National Energy Programme (2004)**
  - ✘ To increase the production of electricity and heat from RES
  - ✘ With measures which follow regulations from Energetic act
    - ✘ Energy production on the basis of biomass shall be increased for 3,1 PJ
    - ✘ From 2004 to 2010 – 1500 boilers in households, 50 bigger boilers and 3 to 5 distance heating systems
- ✘ **Environment Protection Act**
  - ✘ The increasing of RES is the issue of environment protection

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## Subsidising in connection with BM production

- ✘ **State and EU incentives, projects**
  - ✘ Some tending measures where by-product is WB
    - ✘ First and second thinnings in pole wood forests
    - ✘ Crushing the trees attacked by bark beetles
  - ✘ Subsidising the purchasing of mechanisation for
    - ✘ Forestry production
    - ✘ Biomass production
  - ✘ Heating systems
    - ✘ Credits
    - ✘ Subsidising
    - ✘ Direct financial incentives



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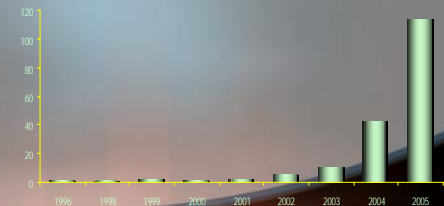
## Role of forestry

- ✘ Data, information
- ✘ Promotion and extension
- ✘ Professional service
- ✘ Intersectional cooperation
- ✘ Supply of raw material for wood biomass



## Extension activities

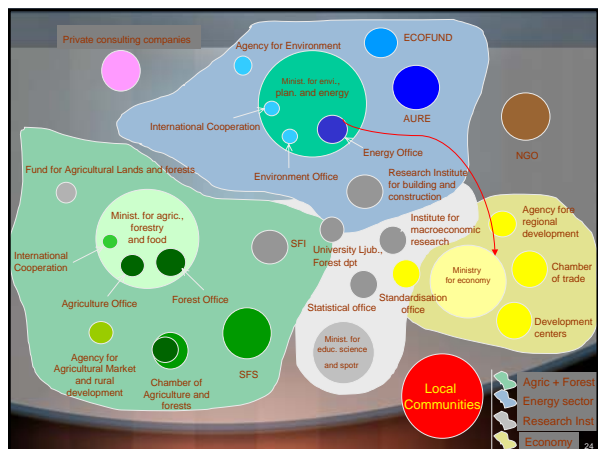
- ✘ Extension network
- ✘ Demonstrations of modern technologies
- ✘ Biomass roads, biomass points
- ✘ Education and training material
- ✘ Events
- ✘ Media



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## Extension network

- ✘ Training of specialists for effective use of WB
- ✘ Ensure knowledge transfer from different sectors (forestry, technology, energetic)
- ✘ Special permanent network (education and share of knowledge)
- ✘ SFS, Chamber, Energy Advisory Network



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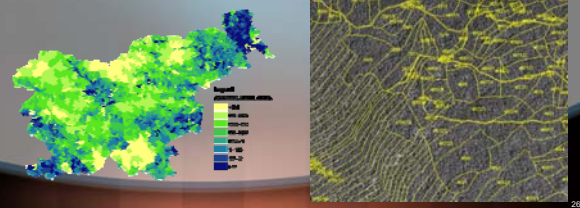
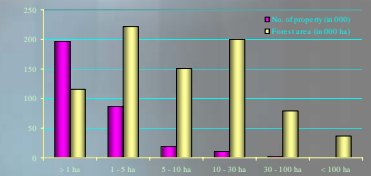
## Professional service

- ✘ Forest management plans
- ✘ Projects
  - ✘ Local communities
  - ✘ Cooperation with other stakeholders
- ✘ Sharing information ([www.zgs.gov.si](http://www.zgs.gov.si))



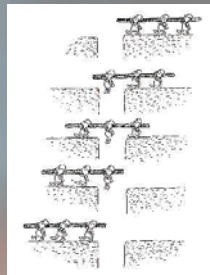
## Private forest property

- ✘ 314.000 forest owners
- ✘ 485.000 co-ownership
- ✘ Small scale property
- ✘ No interest to cut



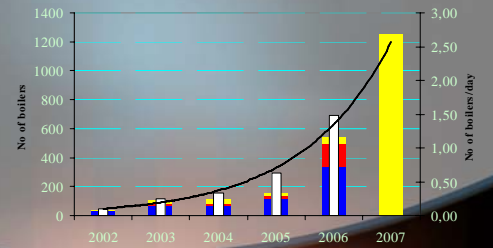
## Mobilising of FO

- ✘ Forest owners associations FOA
  - ✘ 12 FOA
  - ✘ Union of FOA
  - ✘ No. is rising
- ✘ Incentives
  - ✘ State
  - ✘ EU
  - ✘ Projects
- ✘ WB market
  - ✘ Prices
  - ✘ Critical No. of consumers



## Mobilising the consumption of WB

- ✘ Incentives (subsidies, credits, direct financial supports)
- ✘ Reliable market of WB
- ✘ Legal framework



## Sustainable Wood Biomass Management in CEEC

- ✘ COFO 2005
  - ✘ Presentation the results of TCP
- ✘ Bled, Slovenia, November 2005
  - ✘ Working session



## Some emphases - CEEC

- ✘ Lack of special strategy for the utilisation of wood resources for energy purposes as well as the general biomass-related policy (Estonia)
- ✘ Biomass market poorly developed, legal framework finished, lack of projects in this field, export potential (Croatia)
- ✘ Huge resource potential (Latvia).
- ✘ Need of better analyse of wood biomass potentials, information and extension for efficient using wood biomass potentials (Serbia)
- ✘ Investments for improvement of forest roads infrastructure and for technical equipment to secure the fuel supply chain are needed (Bulgaria)
- ✘ Support of state for development of energetic use of forest biomass is necessary, especially through legal measures and projects (Czech)



## The main problems can be summarized

- ✘ Lack of cooperation between government agencies and main local stakeholders,
- ✘ Limited market infrastructures,
- ✘ Inadequate regulations of new market opportunities,
- ✘ Inadequate taxes and incentives for the efficient energy use and sustainable production of wood fuels,
- ✘ Absence of national wood energy policies and strategies
- ✘ Lack of knowledge about wood fuel production, trade and consumption.

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## Expectations about the project

- ✘ **Sustainable wood energy development in CEE Countries**
- ✘ Generation knowledge and dissemination of information about the sustainable production, trade and consumption of wood fuel,
- ✘ Sharing information and experiences among main public and private stakeholders within the region,
- ✘ Sharing information between main wood energy stakeholders within the countries.

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## What is important

- ✘ Regulations and policy
- ✘ More active role of forest services/agencies and their proper role among different stakeholders
- ✘ Extension
- ✘ Good information about potentials
- ✘ Projects
- ✘ Money, incentives



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