



## *Danube Region Biomass Action Plan*

*Workshop on  
Improving sustainable bioenergy use  
with multinational co-operation in the Danube Region (DANUBIOM)*

*Budapest, 13 November 2014*

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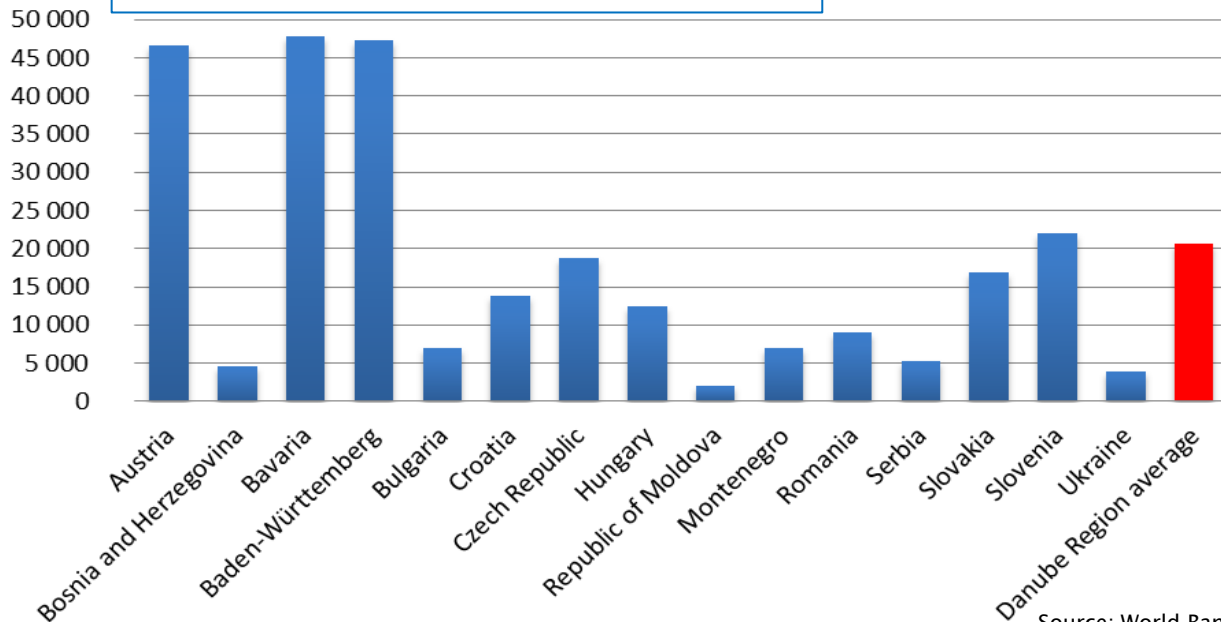
# Danube Region – A heterogeneous macroregion

## Key features:

- ▶ 9 EU + 5 non-EU countries;
- ▶ More than 100 million inhabitants;
- ▶ One-fifth of EU total area;
- ▶ Significant regional disparities;



GDP per capita in the Danube Region (USD)



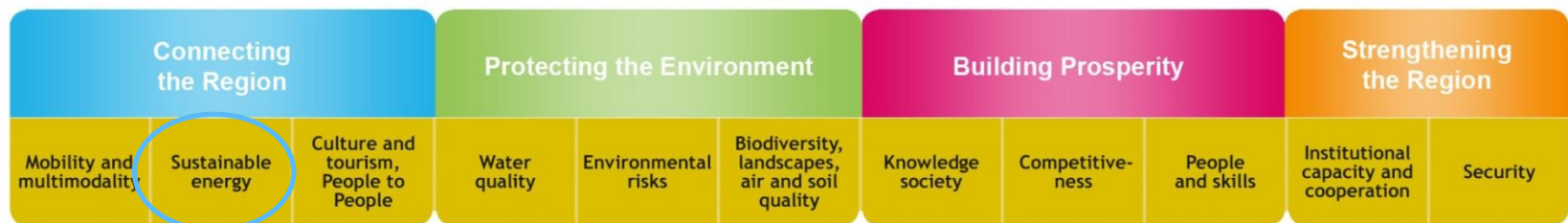
Source: World Bank



# The energy priority area is coordinated by CZ and HU

- ▶ The EU Strategy for the Danube Region (EUSDR) is a macro-regional strategy of the European Union, endorsed by the European Council in June 2011.
- ▶ Driving force ⇒ the one-size-fits-all approach is not working in an EU of 27 Member States and 271 regions.
- ▶ The Strategy was jointly developed by the European Commission, the Danube Region countries and stakeholders in order to jointly address common challenges.
- ▶ The Strategy seeks to create synergies and coordination between existing policies and initiatives taking place across the Danube Region.
- ▶ The strategy tackles these various topics in a structured way through 4 pillars and 11 priority areas.
- ▶ **Priority Area 2 – Sustainable Energy (PA2)** is jointly coordinated by Hungary (Ministry of Foreign Affairs) and the Czech Republic (Office of the Government).

## THE FOUR PILLARS



11 priority areas, each coordinated by two priority area coordinators

# All countries are actively involved in the Strategy

Priority Area	Countries in charge of coordination
P1   Mobility and intermodality	Inland waterways: Austria, Romania Rail, road and air: Slovenia, Serbia
P2   More sustainable energy	Hungary, Czech Republic
P3   Culture and tourism, people to people	Bulgaria, Romania
P4   Water Quality	Hungary, Slovakia
P5   Environmental risks	Hungary, Romania
P6   Biodiversity, landscapes, quality of air and soils	Germany (Bavaria), Croatia
P7   Knowledge society (research, education and ICT)	Slovakia, Serbia
P8   Competitiveness of enterprises	Germany (Baden-Württemberg), Croatia
P9   People and skills	Austria, Moldova
P10   Institutional capacity and cooperation	Austria (Vienna), Slovenia
P11   Security and organized crime	Germany, Bulgaria

# Promoting cooperation through common goals

## Threefold approach of PA2:

### I. Coordinating regional energy policies

- ▶ DR Gas Market Model – Oct 2012;
- ▶ DR Gas Storage Market Analysis – March 2013;
- ▶ Renewable Electricity Market Monitoring in the Countries of the DR – Nov 2013;
- ▶ The Potential Use of the Flexibility Mechanisms of the RES Directive in the DR – Feb 2014;
- ▶ DR Biomass Action Plan (DRBAP) –Feb 2014;
- ▶ DR Geothermal Report – June 2014;

### II. Enhancing the energy market integration of non-EU countries

- ▶ Training Program of the PA2 in the Republic of Moldova – February–July 2013;
- ▶ ERRA Case Study – Supply quality regulation in the energy industry – Hungarian case study with European outlook (ENG+RUS) – Feb 2014.


### III. Facilitating cutting edge technology developments

- ▶ DR Smart Grid Concept – Jan 2014.



# The DRBAP was building on the 4biomass project

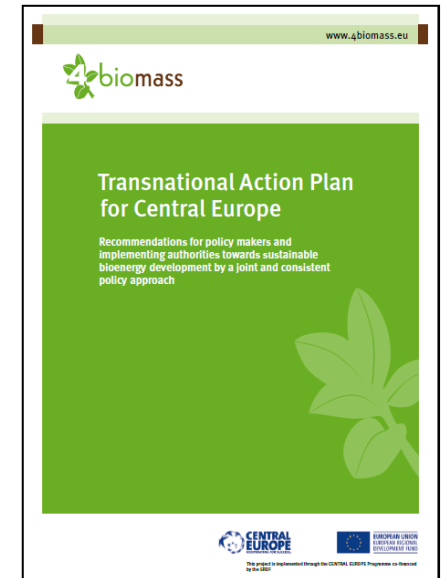
1. Approval by the PA 2 Steering Group, composed of the representatives from the responsible ministries of the DRS countries, in December 2012

- ▶ Preparation of a Biomass Action Plan, building on the results of the  4biomass project, covering the entire Danube Region

2. Information collection & study compilation

- a) ÉMI Non-Profit LLC. (having experience with the 4biomass project) was chosen as advisor
- b) Consultation on the recommendations of the 4biomass project
- c) Desk research & direct information collection (data sheets)
- d) Finalisation of the Danube Region Biomass Action Plan

3. Development of a best-practice project inventory



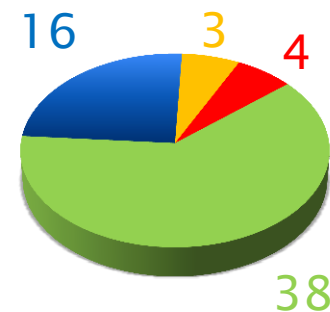
# Regional consensus in most recommendations

- ▶ All DRS countries have given feedback
- ▶ A total of 61 recommendations
- ▶ Joint Declaration on biomass sustainability in June 2013



## Results of the comments

- Full consensus on 38 recommendations ~ 62%
- Almost full consensus on 16 recommendations (1 or 2 countries disagreed) ~ 26%
- Partial consensus on 3 recommendations (more than 10 countries agreed) ~ 5%
- Disagreements only on 4 recommendations (less than 10 countries agreed) ~ 7%



## Joint Declaration:

„...New EU-wide obligatory sustainability criteria would unavoidably create additional administration and costs especially for the EU producers, without any additional benefit for the environment, thus creating market distortion and disadvantage in competition for the producers of the Member States...”

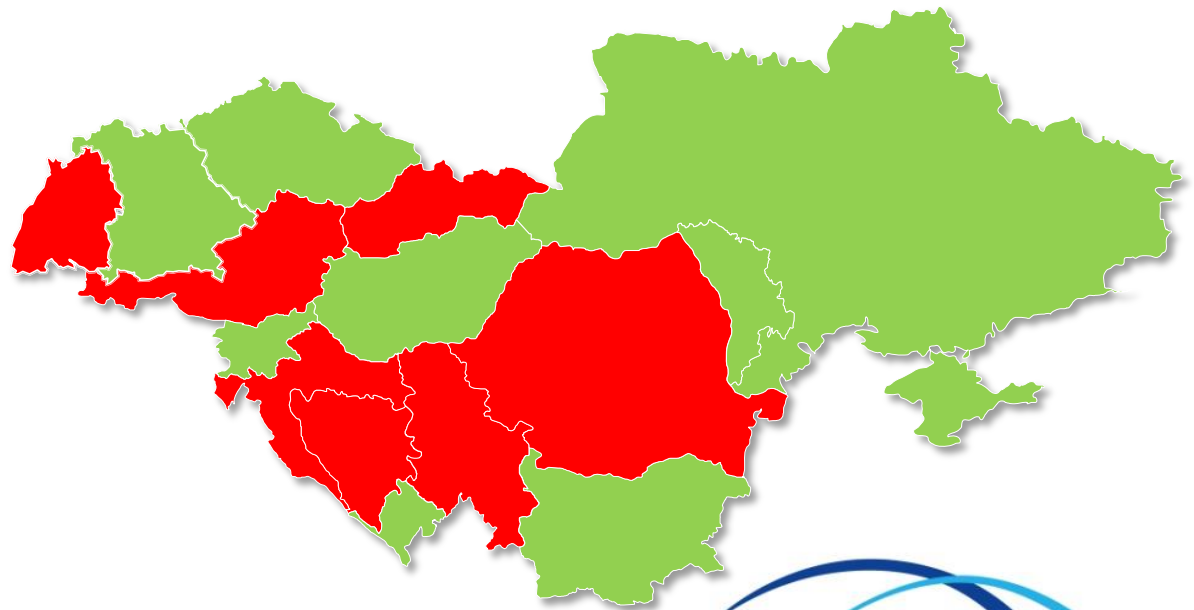
# Challenges faced with data collection

## ▶ Information sources

- 4biomass – Transnational Action Plan
- EU policies (EU climate and energy package, RES Directive etc.)
- Collected documents and data: National Renewable Energy Action Plans and other national policy documents, Eurostat, EurObserv'ER, JRC, Energy Community, etc.
- Data request sheets

## ▶ Data request sheets

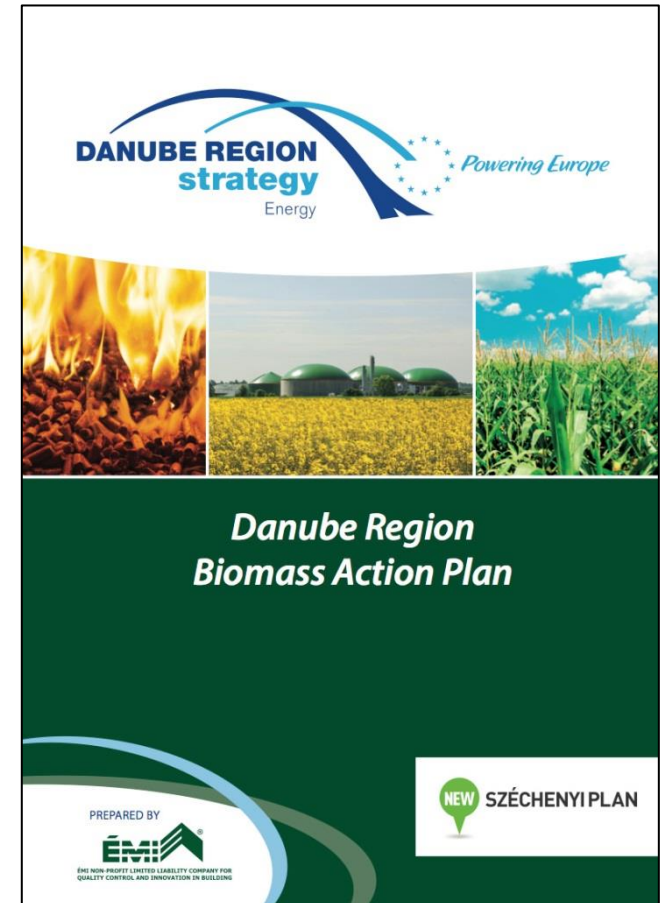
- Received from: BG, CZ, BAV-DE, HU, MD, MNE, SLO, UA → 8/15 ~ 53%
- Lessons learned
  - access to reliable data is difficult
  - existing data are heterogeneous
  - internet sources had to be used more extensively than planned





# The structure of the study finalised in February 2014

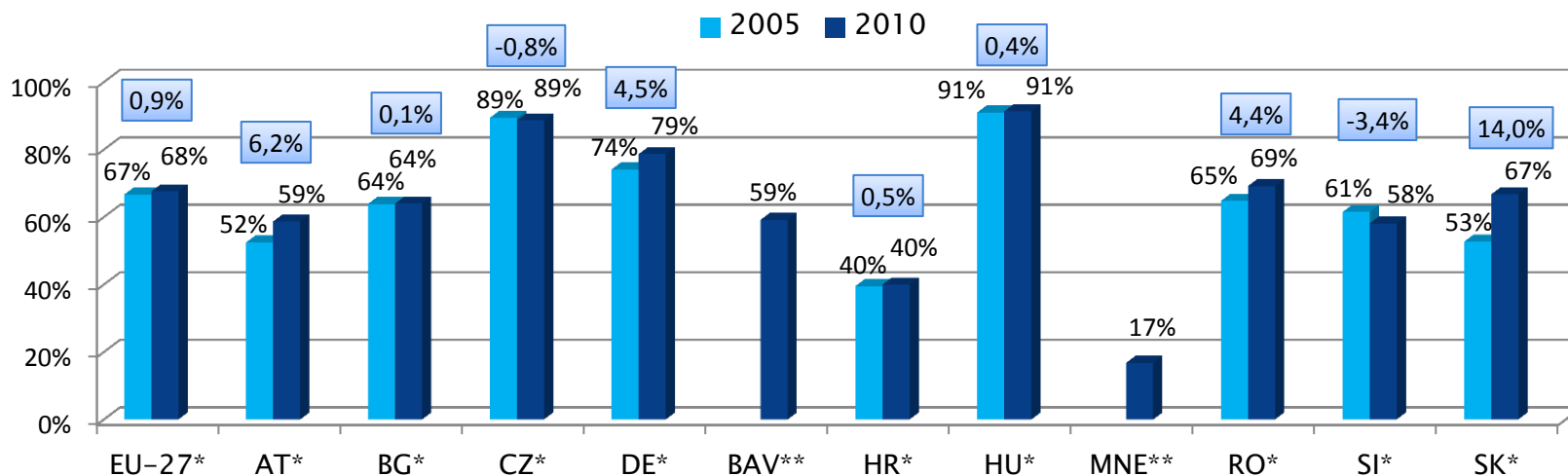
- ▶ Executive summary
- ▶ Introduction
- ▶ Biomass policy framework
  - EU policy framework
  - Joint declaration on biomass sustainability
- ▶ Assessment of the countries of the EUSDR
  - General profiles
  - Policy assessment
- ▶ Regional analysis
  - Renewable energy profiles
  - Biomass in detail
- ▶ Conclusions & main findings
- ▶ Recommendations
  - 4biomass
  - Countries of the EUSDR
  - Authors



# Conclusions and main findings

## ➤ General

- There is lack of available biomass related data in the Danube Region
  - lack of specific and unique biomass related data
- Biomass has the greatest significance among renewable energy sources in the Danube Region



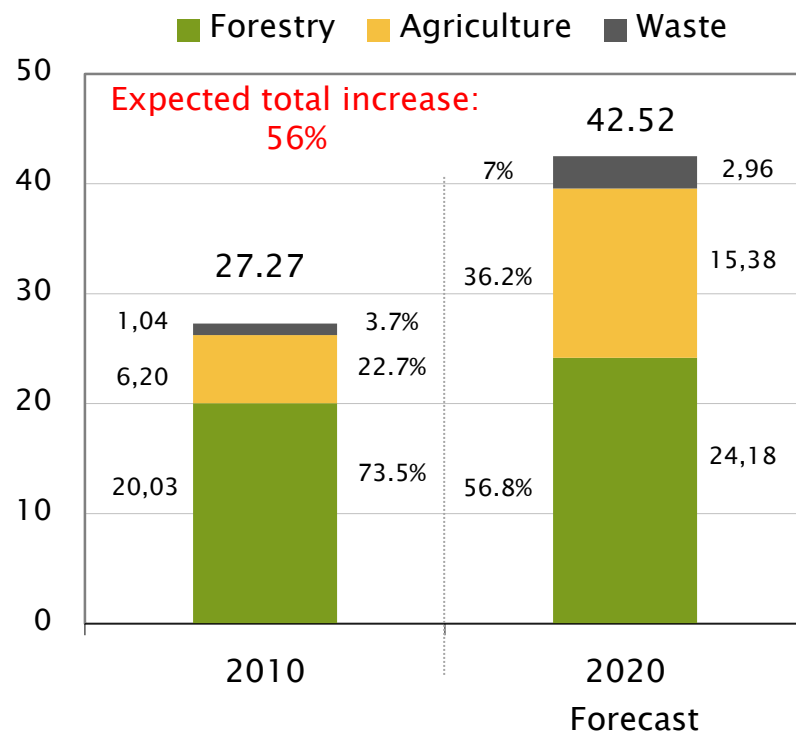
Primary energy production of biomass & renewable wastes in % of primary production of renewable energy

Sources: \*Eurostat – Codes: ten00081, ten00082, \*\*Country data sheets.  
Data not available at all for BIH, B-W, MD, SRB, UA and data not available for BAV and MNE regarding year 2005

# Conclusions and main findings

## ➤ Source of biomass

- ▶ Forestry sector is the main biomass supplier and is going to keep its dominance to 2020
- ▶ Significance of the agriculture and waste sector will increase rapidly to 2020
- ▶ Biomass supply is continuously increasing



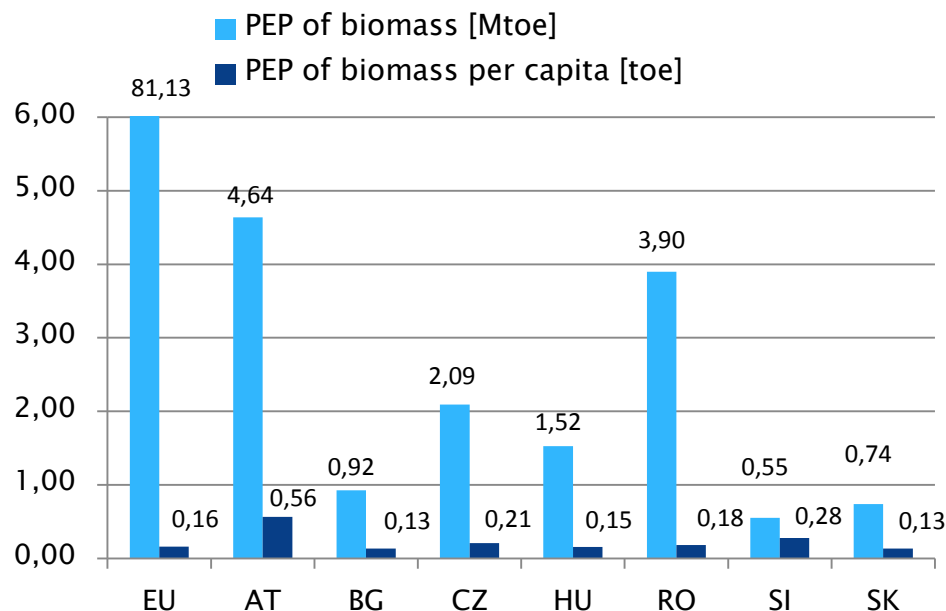
Biomass supply by source [Mtoe]

In terms of biomass supply in 2010 and in 2020, data are only available for 10 participant states of the EUSDR: AT, BG, HR, CZ, DE, HU, RO, SRB, SI and SK.

# Conclusions and main findings

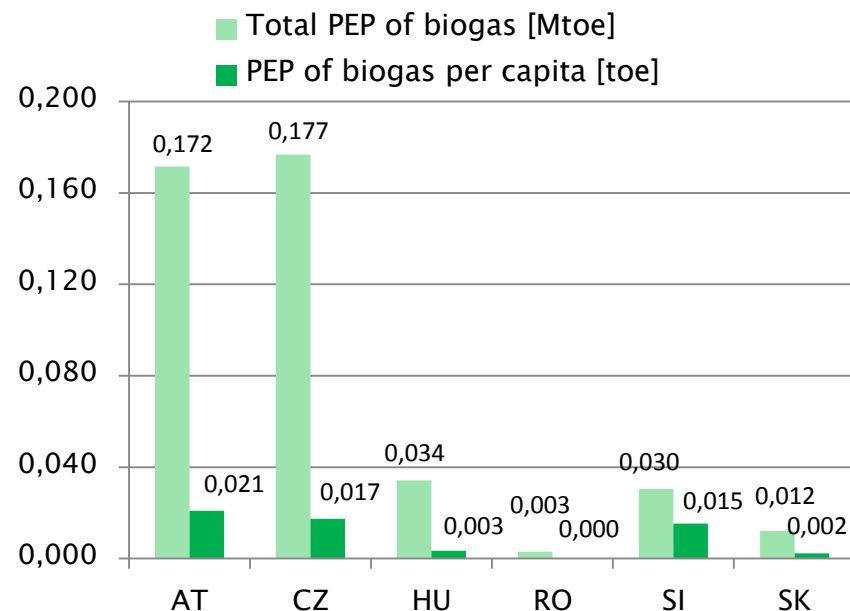
## ➤ Energy production from biomass

- ▶ Bioenergy production is dominated by solid biomass
- ▶ The Danube Region has remarkable producers in all bioenergy areas



DE: PEP of biomass: 12.23 Mtoe; 0,15 toe per capita

Source: EurObserv'ER, 2012. Solid Biomass Biometer, 2012; Central Intelligence Agency. The World Factbook.  
 No available data for BAV, BIH, B-W, HR, MD, MNE, SRB and UA.



DE: Total PEP of biogas: 6.67 Mtoe; 0.082 toe/km<sup>2</sup>

EU: Total PEP of biogas: 10.895 Mtoe; 0.022 toe/km<sup>2</sup>

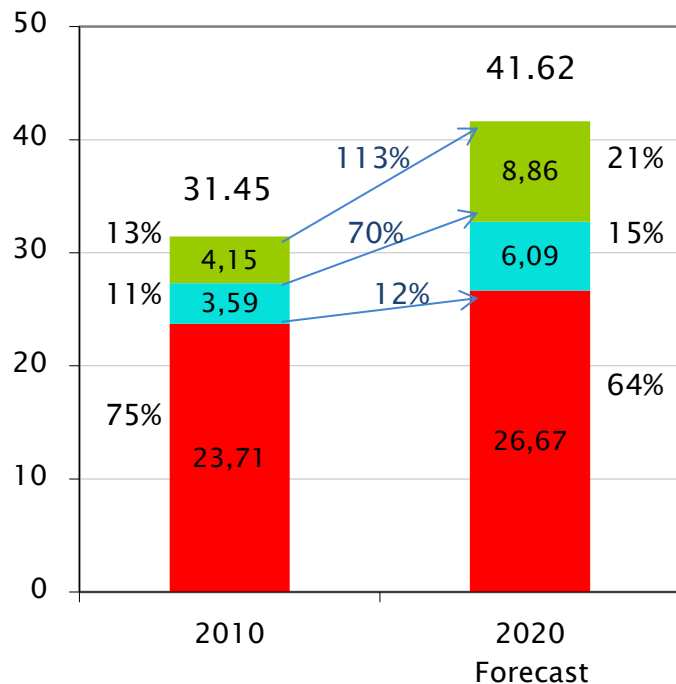
Source: EurObserv'ER, 2012. 12th EurObserv'ER Report – The state of renewable energies in Europe.  
 No data available for BAV, BIH, B-W, BG, HR, MD, MNE, SRB and UA.

# Conclusions and main findings

## ➤ Energy consumption from biomass

Bioenergy consumption [Mtoe]

■ Bioheat ■ Bioelectricity ■ Biofuels

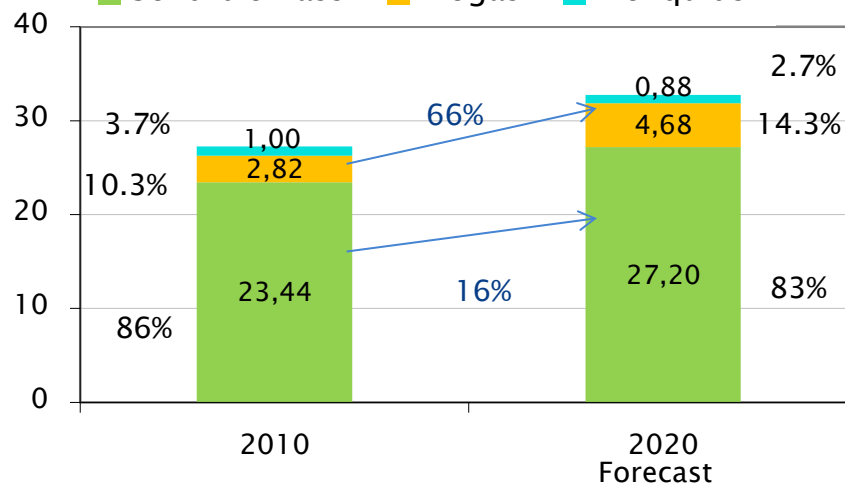


- Most bioenergy is consumed in the form of heat and no change is expected to 2020

In terms of bioenergy consumption in 2010 and in 2020, data are only available for 10 member states of the EUSDR: AT, BG, HR, CZ, DE, HU, RO, SRB, SI and SK.

Consumption of bioheat and bioelectricity by bioenergy carriers [Mtoe]

■ Solid biomass ■ Biogas ■ Bioliquids



- The majority of consumed energy derives from solid biomass and no change is expected to 2020

In terms of bioheat and bioelectricity consumption in 2010 and in 2020, data are only available for 10 participant states of the EUSDR: AT, BG, HR, CZ, DE, HU, RO, SRB, SI and SK.



# Recommendations with full & almost full consensus

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- ▶ General recommendations (8)
- ▶ Overcoming existing barriers (6)
- ▶ Flanking measures (10)
- ▶ Sectoral recommendations (30)
  - ▶ Biomass production from forestry and agriculture, biogenic waste (9)
  - ▶ Biomass for heating and cooling (3)
  - ▶ Biomass for electricity (3)
  - ▶ Biomass for transport fuels (4)
  - ▶ Special case biogas – for heating and cooling, electricity and transport fuels (8)
  - ▶ Transport of biomass (3)

# Action Plan website & Demo project database

Biomass Action Plan & Database






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SEARCH FILTER BY COUNTRY PROJECT TYPE PLANT TYPE ALL PROJECTS

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Show/hide all projects

<input checked="" type="checkbox"/>  <b>Bürger Energie St. Peter eG</b> Bio-Energy village. District heating for 170 buildings, length of the grid is 9,2 kilometers. Heat production 9.000 Mwh/year. Biomass heating plant with wood gasifier & Combined heat and power plant (electrical output... <a href="#">(more info)</a>	Germany Working plant Biomass heat plant & CHP plant & woodchip boiler
<input checked="" type="checkbox"/>  <b>Biomass heating plant in the Archabbey of Pannonhalm...</b> ... <a href="#">(more info)</a>	Hungary Working Plant Biomass Heating Plant
<input checked="" type="checkbox"/>  <b>Szarvas Biogas Plant</b>	Hungary

[www.danubebiomass.eu](http://www.danubebiomass.eu)

# Roadmap of the DANUBIOM project

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- ▶ Preparation of a detailed project concept based on the DRBAP together with *Szent István University (SZIE)*  *Faculty of Agriculture and Environmental Sciences* – Done;
- ▶ Dissemination of the project concept among potential participants – Done;
- ▶ Organization of a workshop and discussion of the concept with the workshop participants – 13 November 2014 in Budapest;
- ▶ Finalization of the project concept by the end of 2014;
- ▶ Submission of the project proposal to open calls in 2015;
- ▶ Execution of the project from 2015 onwards.





For more information please visit:  
<http://groupspaces.com/Energy2/>

**Thank you for your attention!**

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