Overview of UNECE activities on wood energy

Florian Steierer
Who are we?

Why do we work on wood energy?

What do we do?
- Data collection
- Capacity building
- Assessment
- Education

Where do we go?
Who are we?

Why do we work on wood energy?

What do we do?

Data collection
Capacity building
Assessment
Education

Where do we go?
Economic Commission for Europe

... Established in 1947, first regional commission of the United Nations

... is a multilateral platform which facilitates greater economic integration and cooperation among its fifty-six member States

... promotes sustainable development and economic prosperity
Regional Scope

The forest in the UNECE region covers:

• 41% of the global total

• 85% certified area

• 60% industrial roundwood
Who are we?

Why do we work on wood energy?

What do we do?
- Data collection
- Capacity building
- Assessment
- Education

Where do we go?
We collect wood energy data, because...

...wood energy is the most important single source of renewable energy in the world – and in the UNECE;

...wood fuels are important for the forest based sector;

...no reliable data available in harmonized form;

...more details required than total consumption only.
Sources and User of wood for energy

FORESTS

S1

S2

S3

U1 Power & Heat

U2 Industrial

U3 Residential & U4 Other
JWEE 2015: wood portfolio

- **Main activity producer**:
  - Unknown: 27%
  - Post consumer recovered wood: 15%
  - Processed wood based fuel production: 11%
  - Woody biomass from forest based industry: 28%
  - Primary solid biomass: 19%

- **Wood processing industry**:
  - Unknown: 18%
  - Post consumer recovered wood: 4%
  - Processed wood based fuel production: 68%
  - Woody biomass from forest based industry: 5%
  - Primary solid biomass: 5%

- **Residential sector**:
  - Unknown: 9%
  - Post consumer recovered wood: 6%
  - Processed wood based fuel production: 83%
  - Woody biomass from forest based industry: 17%
  - Primary solid biomass: 35%

- **Other sector**:
  - Unknown: 34%
  - Post consumer recovered wood: 9%
  - Processed wood based fuel production: 17%
  - Woody biomass from forest based industry: 35%
  - Primary solid biomass: 35%
Who are we?

Why do we work on wood energy?

What do we do?

- Data collection
- Capacity building
- Assessment
- Education

Where do we go?
Table IV – main structure

Fully complementary and compatible with the energy questionnaires (IEA/Eurostat)

<table>
<thead>
<tr>
<th>SOURCES</th>
<th>U1 Power &amp; heat</th>
<th>U2 Industrial</th>
<th>U3 Residential</th>
<th>U4 Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 Direct</td>
<td>DQ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S2 Indirect</td>
<td></td>
<td>DQ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S3 Recovered</td>
<td></td>
<td></td>
<td>DQ</td>
<td></td>
</tr>
<tr>
<td>S4 Unspecified</td>
<td></td>
<td></td>
<td></td>
<td>DQ</td>
</tr>
</tbody>
</table>
Joint Wood Energy Enquiry

Table I: Availability of the raw material (P+I-E)
Table II: Production of processed wood based fuels (P+I-E)
Table III: raw material used for wood based fuels production
Table IV: consumption of wood for energy by sectors and source
31 member states reported wood energy consumption in table IV
## EU4Energy coverage 2005-2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Armenia</td>
<td>NC</td>
<td>NC</td>
<td>-</td>
<td>B</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>NC</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Belarus</td>
<td>-</td>
<td>-</td>
<td>I</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Georgia</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>A</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>NC</td>
<td>NC</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>B</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>NC</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Moldova</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Turkmenistan</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ukraine</td>
<td>NC</td>
<td>-</td>
<td>-</td>
<td>A</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**A:** good dataset. Table IV filled  
**B:** partial dataset. Table IV not filled  
**I:** insufficient data  
**NC:** no capacity  
**-:** no response
Relative share of wood energy sources, 2015

JWEE Total 2015
JWEE 12

Armenia
Austria
Azerbaijan

Bosnia and Herzegovina
Canada
Croatia
Cyprus
Czech Republic
Estonia
Finland
France

Georgia
Germany
Iceland
Ireland
Italy

Kazakhstan
Latvia
Lithuania
Luxembourg

Republic of Moldova
Montenegro
Netherlands
Norway
Poland
Portugal
Serbia
Slovakia
Slovenia
Sweden
Switzerland
United Kingdom
United States

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
S1-Direct S2-Indirect S3-Recovered S4-Unspecified

Note: JWEE 12: Austria, Cyprus, Finland, France, Germany, Ireland, Luxembourg, Serbia, Slovenia, Sweden, Switzerland and United Kingdom.
Joint Wood Energy Enquiry

Introduction

The UNECE/FAO Forestry and Timber Section, with the encouragement of the Joint ECE/FAO Working Party on Forest Statistics, and in collaboration with the International Energy Agency (IEA), the Food and Agriculture Organization (FAO) and the European Commission (EC) decided in June 2006 to develop and launch a "Joint Wood Energy Enquiry".

Wood energy data often scattered or lost within renewable energy statistics, making it difficult to assess and evaluate the real role of wood as a renewable source of energy.

The Enquiry aims at improving knowledge and understanding of wood energy consumption and tries to shed light on the potential and future perspective of wood energy in the region.

It collects data of both sources and uses of wood and promotes cooperation between the energy and forest sectors, providing a comprehensive framework on the role of wood energy in Member States.

2015 Joint Wood Energy Enquiry

According to the results of the enquiry (40MB): Situation in 2013

Overall wood energy accounts for 3.5% of the total primary energy supply (+0.2 compared to 2011) and 38.2% of the renewable energy supply (+0.2) in 26 UNECE region countries in 2013, continuing its role as the leading source of renewable energy. Around 47% of all mobilized woody biomass supply (+7.0) is used for energy purposes. 26 countries: Armenia, Austria, Azerbaijan, Bosnia and Herzegovina, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Ireland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, Norway, Republic of Moldova, Serbia, Slovenia, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, the United Kingdom and the United States.

Main trends 2007-2013

Overview of wood energy sources

Wood Energy Sources and Uses in 2013 [1000 m3]

<table>
<thead>
<tr>
<th></th>
<th>U1 Power and Heat</th>
<th>U2 Industrial</th>
<th>U3 Residential</th>
<th>U4 Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>20.374,9</td>
<td>10.909,5</td>
<td>76.995,4</td>
<td>2.956,0</td>
</tr>
<tr>
<td>2012</td>
<td>10.909,5</td>
<td>76.995,4</td>
<td>2.956,0</td>
<td>10.374,9</td>
</tr>
<tr>
<td>2011</td>
<td>76.995,4</td>
<td>2.956,0</td>
<td>10.374,9</td>
<td>10.909,5</td>
</tr>
<tr>
<td>2010</td>
<td>2.956,0</td>
<td>10.374,9</td>
<td>10.909,5</td>
<td>76.995,4</td>
</tr>
<tr>
<td>2009</td>
<td>10.374,9</td>
<td>10.909,5</td>
<td>76.995,4</td>
<td>2.956,0</td>
</tr>
<tr>
<td>2008</td>
<td>10.909,5</td>
<td>76.995,4</td>
<td>2.956,0</td>
<td>10.374,9</td>
</tr>
</tbody>
</table>

Wood Energy Uses (1000 m³)

<table>
<thead>
<tr>
<th></th>
<th>U1 Power and Heat</th>
<th>U2 Industrial</th>
<th>U3 Residential</th>
<th>U4 Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>43%</td>
<td>48%</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td>2012</td>
<td>48%</td>
<td>43%</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td>2011</td>
<td>8%</td>
<td>43%</td>
<td>48%</td>
<td>1%</td>
</tr>
<tr>
<td>2010</td>
<td>1%</td>
<td>48%</td>
<td>43%</td>
<td>8%</td>
</tr>
<tr>
<td>2009</td>
<td>43%</td>
<td>8%</td>
<td>48%</td>
<td>1%</td>
</tr>
<tr>
<td>2008</td>
<td>8%</td>
<td>43%</td>
<td>48%</td>
<td>1%</td>
</tr>
</tbody>
</table>
Who are we?

Why do we work on wood energy?

What do we do?

- Data collection
- Capacity building
- Assessment
- Education

Where do we go?
Workshop on Bioenergy from the Forest Sector - Capacity Building for Information

- 45 participants, 21 countries
- Funded by FAO Forestry Department and IRENA
- Supported by FAO Regional Office Europe and participation from IEA and Energy Community
- Small group work (4)

Who are we?

Why do we work on wood energy?

What do we do?
- Data collection
- Capacity building
- Assessment
- Education

Where do we go?
(Market) analysis

Weblink: http://www.unece.org/forests/publications.html
Who are we?

Why do we work on wood energy?

What do we do?
- Data collection
- Capacity building
- Assessment
- Education

Where do we go?
Available in Albanian, English (Russian subtitle), Georgian, Romanian and Turkish. Serbian is under preparation
Weblink: https://www.youtube.com/watch?v=9z-EGVeKTrc
Fourth Meeting of the UNECE/FAO Team of Specialists on Wood Energy (17 - 19 May 2017), United States, North Carolina, Durham

Main topic discussed: Chapters of the publication on wood energy

More heat with less wood

+14,000 views in 2 years
Who are we?

Why do we work on wood energy?

What do we do?
- Data collection
- Capacity building
- Assessment
- Education

Where do we go?
The way ahead


• Issue JWEE 2017

• Further improve cross-sectoral cooperation

• Work with your countries

• Build more capacities
The Global Framework

Sustainable Development Goals - SDGs
Thank you!

Florian STEIERER
UNECE/FAO Forestry and Timber Section
24 April 2018, Vienna, Austria