THE EUROPEAN WOOD WASTE PLATFORM: WOOD WASTE RECYCLING FOR CIRCULAR BIOECONOMY

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‘Absorbing the Potential of Wood Waste in EU Regions and Industrial Bio-based Ecosystems — BioReg’

Sources of wood waste

Demolition wood  Industry  Municipal waste

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MODEL REGIONS

Västsverige; Gothenburg (SE)
Vorarlberg; Styria (AT)
Karlsruhe; Baden-Wurttemberg (DE)
Lombardy, Emilia-Romagna, (IT)
North-West England (UK)

RECIPIENT REGION

Normandy (FR)
Lubelskie (PL)
Alentejo, Lisboa (PT)
European Wood Waste Platform – BIOREG

The first multi-stakeholder platform in Europe is dedicated to wood waste to facilitate the identification and selection of best practices and success factors among European demonstrator (successful) regions which have set up pertinent mechanisms all along the value chain of wood waste management (collecting, treatment, valorisation such as reuse, wood waste to materials, wood waste to Energy) and outputs management (gas, ash, other waste from valorisation processes).

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The platform aims to:

• **improve wood waste management** in Europe along the value chain by increasing its collection rate and reducing bad practices such as landfilling or combustion without smoke treatment.

• **replicate the most relevant industrial ecosystems** in deficient regions, by following the logic of a cascading system and the circular economy.

• **provide information** on the expected evolution of the regulatory and normative framework at a national and European Scale (regulatory watch), or structural trends (cascade use, carbon storage, circular economy, etc.).
The analysis of:  

- geographical context,
- market,
- recycling or recovery rate,
- specific policies,
- management, (collecting, sorting, treatment, supply),
- valorization,
- favorable environment.

[https://www.bioreg.eu/platform/](https://www.bioreg.eu/platform/)
Geographical context

Theoretical potential of municipal wood waste

Theoretical potential of construction and demolition wood

Technical potential of wood waste from wood industry

Sources: Borzęcki K., Pudelko R., Kozak M., Borżeka M., Faber A. Spatial distribution of wood waste in Europe. SYLWAN, 2018, r. 162 (7): 563-571
Total theoretical potential of wood waste in EU = 50 Mt

7.85% of estimated waste biomass and by-products of the EU

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Three types of ecosystems were distinguished:
- energy recovery,
- recycling,
- mixed.
1 – Structure the offer of wood waste products by setting up a classification

- Considering the examples of existing classifications (ISO standards, German, Finish and British regulations), the specifications and structuring needs in relation to recycling and energy recovery systems, and after hearing stakeholders and players, it is recommended for beneficiary regions, that wood waste could be classified into four groups:

<table>
<thead>
<tr>
<th>Classes</th>
<th>Composition criteria</th>
<th>Targeted origins</th>
<th>Main uses and recovery modes</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Recovered virgin wood waste</td>
<td>Packaging wood; Solid wood processing waste without adjuvants</td>
<td>Material recovery (panels)</td>
</tr>
<tr>
<td>II</td>
<td>Recovered wood without organohalogens and with low levels of heavy metals</td>
<td>Waste from furniture components; Construction waste; Second wood processing companies’ waste</td>
<td>Material recovery (panels); Combustion installations</td>
</tr>
<tr>
<td>III</td>
<td>Recovered wood with organohalogens and heavy metals, but not considered as hazardous waste</td>
<td>Demolition and renovation waste; Mixed wood waste; Second wood processing companies’ waste. All wood waste that do not respect the Class II specifications</td>
<td>Energy recovery in incineration and co-incineration installations</td>
</tr>
<tr>
<td>IV</td>
<td>Impregnated wood waste classified as hazardous waste</td>
<td>Impregnated wood waste: creosote wood (railway sleepers), autoclaved wood CCA (outside wood like cladding, garden huts, wooden terraces)</td>
<td>Energy recovery in hazardous waste incinerators</td>
</tr>
</tbody>
</table>

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TOOLBOX OF EU SUCCESS FACTORS
Toolbox of EU success factors

Main Page

- Policy Makers
  - Key Activities
- Waste Management Stakeholders
  - Key Activities
- Recycling Units
  - Key Activities
- Energy Processing Units
  - Key Activities
- Research and Academia
  - Key Activities
- General Public
  - Key Activities

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Supporting policy-makers developing adaptive policies and legislation in Europe towards wood waste valorisation is the main aim of this tool.

This step defines that a current baseline analysis of the existing institutional, political and legal framework in wood waste valorisation is needed. The scope and direction of necessary interventions is then derived from comparing the regulatory framework with the defined objective, for example, encouraging the valorisation of wood wastes either by energy recovery or recycling into new materials.

The implementation and development of wood wastes policies depend on various factors. These include governance, communication, shared common objectives, financial resources and influence, coordination of actions and stakeholder and public management, amongst others.

Key-Question: Are there local, regional or national legislation and policies that promote wood waste valorisation?
Toolbox of EU success factors

Policy Makers

Main Page

Step 1
- Identification of the existing institutional, political and legal framework in wood waste valorisation

Step 2
- Identification if the existing institutional, political and legal framework in wood waste valorisation is effective or if building a good regulatory framework that will enable the wood waste valorisation is needed

Step 3
- The existing institutional, political and legal framework in wood waste valorisation is effective - no further action is needed

Step 4
- The existing institutional, political and legal framework in wood waste valorisation needs to be improved
Toolbox of EU success factors

Policy Makers

Examples from model regions

- Austria
- Italy
- United Kingdom
- Sweden
- Germany
Toolbox of EU success factors

Policy Makers

Austria

Legislation and regulations

Austrian Waste Management Law (WML 2002)
- Definition of overall framework conditions
- Order of priority for waste management measures:
  1. Waste prevention/avoidance
  2. Preparation for re-use
  3. Recycling
  4. Other utilization measures (e.g. combustion)
  5. Disposal
- Definition of areas of responsibility
  1. Municipal waste and waste from commercial operations similar to municipal waste is managed by the nine Austrian provinces (municipal wood waste, demolition wood)
  2. All other waste is managed at federal level (industrial waste wood streams)
Lessons and recommendations for recipient regions

The good practices identified in the model regions have highlighted the deficiencies in our regions that explain their backwardness in terms of wood waste recovery.

These lessons and recommendations are organized around 5 main themes:

- Set up a classification of wood waste
- Remove wood waste from traditional channels
- Develop sorting of different classes of wood waste
- Promote material recovery in panels
- Develop and optimize energy recovery
The European wood waste platform will assist members in:

• getting access to good practices from model regions
• presenting their company and their skills using the Geoportal
• displaying their products, services and offers as well as proposals for cooperation
• identifying and contacting potential partners in the wood waste sector easily and directly at a European level
• fostering the development of industrial projects
• fostering cooperation between regional authorities
• influencing policy makers to adapt the relevant regulatory framework;
Thank you

http://bioreg.eu/platform/

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