The ENERGY BARGE modal shift platform and its transferability to other projects as a decision support tool

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YES, WE LINK

PETROLEUM-BASED CHEMISTRY

BIO-BASED CHEMISTRY

NEW FEED-STOCKS FOR THE CHEMICAL INDUSTRY · www.GREEN-CHEMISTRY-BELT.com
Initial Idea

Biomass Availability

Biomass Potentials

Use & Demand Scenarios

Food

Biomaterials

Residuals

Bioenergy
WP 3: Target Groups & Benefits

EnergyBiomass production → EnergyBiomass supply → Conversion → Energy Products & markets → Energetic Use

- Knowledge for actors from the public and private sector along the bioenergy value chain for increased market actor cooperation and tapping of potentials
- Knowledge for private actors from the bioenergy and the Danube logistics sectors for increased cooperation
D.3.1.2.: Catalogue and visualization of biomass feedstock flows

Biomass Feedstock Flows - Austria Import in Tons

- Durum wheat
- Wheat and meslin
- Rye
- Barley
- Oats
- Maize
- Grain sorghum
- Triticale
- Soya beans
- Rape or colza seeds
- Sunflower seeds
- Fresh sugar beet
- Sugar beet
- Cereal straw and husks
- Crude sunflower-seed or safflower oil
- Biodiesel and mixtures
- Fuel wood
- Coniferous wood chips
- Wood chips (excl. coniferous wood)
- Wood pellets
- Wood waste
D.3.1.2.: Catalogue and visualization of biomass feedstock flows

Biomass balances in Austria, Last data available 1000 T of dry matter

Source: data from the BIOMASS project, European Commission – Joint Research Center.
Please note: Supply and use figures might not match due to estimation errors, stock changes, waste and/or loss of biomass or differences in the data sources used. Known data gaps are shown as dotted red lines. Data derive from missing or incorrectly reported data, data not assigned to a specific category or data that cannot be estimated.
Feedstock Flow Visualisation
Project objectives & instruments

• Building a **green energy and logistics belt** in the Danube region

• Foster the sustainable use of biomass for **bioenergy** and material purposes

• Analyse the role of **Danube logistics and ports** for the biobased economy

• **Encourage a modal shift** with regards to transport of biomass (= all kinds of biobased feedstock, intermediates, and products)

• **By...**

• **Mapping** the market actor landscape in a cross-sectoral and cross-border approach

• **Facilitating information exchange** and learning within the sectors via online modal shift platform

• **Informing actors** from the biomass/bioenergy and the Danube logistics value chains about the sectoral needs via B2B channels

• **Equipping ports** for the biobased economy
Platform Objectives

- Establish integrated cross-sectoral and transnational info and **know-how exchange platform**

- **Provide practical** tools for public and private stakeholders along biomass, bioenergy & logistics value chains

- Encourage private actors to **actively register and use platform** for business development to depict Danube region bioenergy market landscape

- **Inform market actors** along the bioenergy value chain about inland waterway navigation & vice versa

- Intuitive usability, central element: **map view**
Modal shift platform: Main map view

- Central element: map view → distances, location, spatial features

- Color-codes indicating tools and sectors

- Elements and tools of the modal shift platform:
Danube Logistics Services

- Overview on Danube ports along the river
- Specific suitability for handling of biomass (equipment!)
- Port profiles
- Data base of shipping companies

66 Ports
DANUBE PORT PROFILE

Baja Public Port

- Location: Baja (Hungary)
- Port company: Nemzeti Közlekedési Hatóság (National Transport Authority)
- Website: www.nfm.gov.hu
- E-Mail: intcomm@mk.gov.hu
- Port is suitable for biomass handling.

<table>
<thead>
<tr>
<th>Type of storage</th>
<th>Open storage area</th>
<th>Covered storage area</th>
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</thead>
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<tr>
<td>Dry bulk</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Break bulk</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Liquid bulk</td>
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</table>
Shipping companies are commercial transport companies that professionally organise and implement the transportation of goods on inland waterways by using their own vessels. In order to market their services shipping companies often cooperate with ship brokers. Brokers are the contract partner of the consumer to secure the order for transport and rent cargo space from shipping companies. Both shipping companies and ship brokers act as experienced logistics service providers for the bioenergy and biomass industry.
General information on inland waterway transport

Information for potential customers: **Handbook for a modal shift towards inland waterway transport incl. practice examples**

Inventory of logistics services on the Danube

Logistics requirements of biomass cargo
Biomass & Bioenergy Atlas

- Overview of market actors: suppliers, traders, processors & end users
- Dynamic zooming to location → association with port locations
- Filter: biomass feedstock types, bioenergy products, residue materials
- Additional info on clusters, associations, etc.
Biomass and Bioenergy Atlas

- Feedstock flows: depict trade of biobased materials from / to Danube countries
- View biomass land cover based on CORINE data
Numerous actors work in the biomass and bioenergy markets and along the relevant value chains. In this overview, you find a comprehensive - but by no means complete yet - landscape of companies active in the biomass and bioenergy sectors of the Danube-bordering countries. We would like to welcome you here! The categories listed are supplier, trader, processor and end user (excluding biogas plants). Most companies listed are classified as more than just one category. For example, most pellet processors are also active in trading. In case you don’t find your company in this list, we would like to have you on board - register here.
If you want to update your company’s information, please send an email to: webmaster@energy-barge.eu

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>City</th>
<th>Company type</th>
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<td>Tököbalint</td>
<td>Trader, Processor</td>
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<td>Dombóvár</td>
<td>Supplier &amp; Trader</td>
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<td>Bio-Fungi Ltd</td>
<td>Hungary</td>
<td>Aporka</td>
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<td>Processor</td>
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<td>Balassagyarmat</td>
<td>End user</td>
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<td>Dunge Zrt.</td>
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<tr>
<td>Fővárosi Hulladékhazasítható Mű</td>
<td>Hungary</td>
<td>Budapest</td>
<td>Processor &amp; end user</td>
</tr>
</tbody>
</table>

Showing 1 to 10 of 29 entries (filtered from 523 total entries)
Danube Logistics meets Bioenergy

- Screen landscape for potential customers:

**COMPANY PROFILE**

Pannonia Ethanol
Supplier & Trader

Street: Sas u. 7
City: Dunaújváros
Postal code: 7020
Country: Hungary
Email: info@pannoniaethanol.hu
Website: http://www.pannoniaethanol.com

Raw materials and products processed or traded
- Starch-based raw materials
Logistics or bioenergy actor: REGISTER!

- Easy registration with basic data
- Option to be present on a cross-sectoral, transnational thematically relevant platform free of charge
- Get easy access to actors from foreign, but useful sectors or regions: potential customers, service providers, experts!
Good Practice Tool

- Depict the ENERGY BARGE case study locations in more detail (8 cases in Germany, Austria, Hungary, Slovakia, Croatia, Romania, Bulgaria)

- Learn about supply chains, involvement of logistics modes, options to include inland waterway transport

- Provide lessons learnt

- Option to suggest new good practice site based on criteria
www.energy-barge.eu/goodpractice/register

• Provide information about your good practice by integrating biomass processing, bioenergy production and Inland waterway transport

• Biomass-Company has to be registered first

• Good practice cases will be reviewed before publishing
Statistics

• 1841 Visitors (15 months)

• 10 visitors/d (average)

• > 600 registered companies and institutions
Perspectives

• Fill the gaps

• Follow Up DanUp2Gas

• European Coverage

• Biomass potential

• Instruments to leverage network effects

• Energy -> Biomaterials -> Bioeconomy