The BIOEAST Initiative – good example of CEE cooperation in the area of bioeconomy research

SCAR National Meeting in Poland
14 November 2018

Barna Kovacs PhD
BIOEAST Secretary General
Why do we need a common approach the CCE region?

<table>
<thead>
<tr>
<th>Area</th>
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<td>79</td>
<td>8</td>
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Weak FP7 and H2020 participation
The role of the BIOEAST Initiative to support the development of Bioeconomy systems thinking in Central and Eastern Europe

Source: GBC2018
EU bioeconomy diversity

Value added in the bioeconomy by sector, 2015 (million €)

**Estonia**
- Bio-based textiles
- Paper
- Forestry: 229.9
- Wood products and furniture: 540.38
- Agriculture: 378.1
- Food, beverage and tobacco

**Bulgaria**
- Bio-based chemicals, pharmaceuticals, plas...
- Paper
- Wood products and furniture
- Forestry
- Bio-based textiles
- Agriculture: 1.64k
- Food, beverage and tobacco
- 1.06k

Source: JRC DataM, 2018
From turnover to value added

Turnover in the bioeconomy in Hungary, 2015 (million €)

Value added in the bioeconomy in Hungary, 2015 (million €)

* The data set contains negative or zero values that cannot be shown in this chart.

Source: JRC DataM, 2018
Bioeconomy today

Key socio-economic indicators: value added

Employment

- 9.5% of the value added in the EU's bioeconomy correspond to BIOEAST countries.
- Poland main contributor with 45% of the share.

Source: JRC DataM, 2018
Analysing the potential Biomass production

Agricultural land abandonment:
• EU is expected to continue at a rate of 0.2% in utilised agricultural area (UAA) per year until 2030
• Literature not clear about situation in BIOEAST countries

Yield development:
• Production of major crops is expected to increase significantly in BIOEAST countries, almost entirely through increased yields (e.g., for wheat and maize, increases of 15% and 50% respectively are projected for 2026).
• For instance Global yield gap atlas explains the difference between actual yields and agro-climatically achievable yields in the same region. For the BIOEAST countries, several examples underpin the existing gap from the northwestern EU countries.

Residues:
• Potential from forestry and agroforestry residues could be further exploited (see also JRC research brief on forest-based bioeconomy).

Animal production:
• Higher productivity through an improved input/output ratio would therefore require less feedstock (available for other uses)
“BIOMASS has legs”

the BIOEAST countries exporting (red)
the Western countries importing (Green/Blue)
Analysing the potential
Industrial perspective - biorefineries

Geographical distribution of biorefineries per type of bio-based production

Geographical distribution per type of biomass feedstock used

Source: Parisi, 2018
Biorefineries in Europe 2017

Lack of biorefineries in BIOEAST, except for some sugar-/starch-based clusters in Central-Eastern Europe

The poster is available for download at www.biconsortium.eu and www.bio-based.eu/graphics
Analysing the potential:
Jobs in an economic context

Bioeconomy employment multipliers
(persons per million €)

- Romania: 55.1
- Bulgaria: 53.8
- Poland: 51.4
- Latvia: 48.4
- Croatia: 42.7
- Lithuania: 41.0
- Hungary: 39.0
- Slovenia: 38.4
- Estonia: 33.6
- Czech Rep.: 25.4
- EU28: 18.6
- Slovakia: 14.1

Location quotients (job concentration)
for the bioeconomy

Source: Ronzon, 2018
Source: Mainar, 2017
Schematic view on EU MS Bioeconomies: Jobs and productivity

Bioeconomy transition process? (2008-15)

- Finland
- Slovenia
- most BIOEAST countries stable

Resilience of the bioeconomy? Economic crisis) in Greece - 10% bioeconomy jobs vs. -21% in total jobs

Source: Ronzon et al, 2018
The pushing factors (outside) are calling for: strategic thinking at national level

1. To solve „food first” issues  
2. To ensure sustainable yields  
3. To have cascading approach for biomass use  
4. To secure circularity  
5. To sustain the diversity of production systems
The (internal) national level factors not necessary pushing for complex strategic thinking

1. Lack of societal understanding and participation in addressing challenges
2. Traditional knowledge transfer process
3. Sector based, parallel processes (ex. agro-food sector)
4. Often missing evidence based policy-making
5. Market driven economy (mostly profit driven, sometimes technology driven, but less governance)
6. Missing macro-regional approach for the sustainability (economic, environmental, societal)
OBJECTIVES of the macroregional BIOEAST Initiative:

1. **Initiate cooperation**: establish a multi-stakeholder network to facilitate joint actions;
2. **Provide an evidence base**: establish data-driven support for implementation of policies;
3. **Support strategies**: create the cross-sectorial approach for the development of a national circular and bioeconomy strategies;
4. **Focus on research**: map specific challenges for a Strategic Research and Innovation Agenda;
5. **Improve skills**: train a new generation of dedicated multi-stakeholder actors;
6. **Develop synergies**: promote regional, national, EU and international funding opportunities;
7. **Increase visibility**: draw attention to specific challenges of the CEE regions.
Three political agreements of the Agri Ministers

26. October 2016: VISEGRAD 4 Group + 3 Countries: on stronger inclusion into H2020

21. September 2017: VISEGRAD 4 Group + 4 Countries: on broadening the remit of the BIOEAST initiative beyond HORIZON2020

## Intervention logic of the BIOEAST Vision

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Scope</th>
<th>Goal</th>
<th>Level</th>
<th>Objectives</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is hindering?</td>
<td>Where to focus?</td>
<td>What is the aim?</td>
<td>Where to act?</td>
<td>How to overcome?</td>
<td>What to do?</td>
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<tr>
<td>C1. Research and Innovation deadlock</td>
<td>S1. Strategic thinking in bioeconomy</td>
<td>Productivity: Sustainable increase of biomass production;</td>
<td>L1. Macro-regional</td>
<td>O 1. To develop strategies;</td>
<td>Further develop specific objectives</td>
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<tr>
<td>C2. Stalemate in the bio-based value chains</td>
<td>S 2. Quality Food and Feed for Europe and for the World</td>
<td>Sustainability: Developing biodiversity and biosecurity;</td>
<td>L2. National</td>
<td>O 2. To cooperate and develop evidence-based policies;</td>
<td>Develop BIOEAST SRIA</td>
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<tr>
<td>C3. Governance impasse</td>
<td>S 3. Industrial boost for rural areas</td>
<td>G3. Resource efficiency: Circular and value-added use of the available biomass;</td>
<td>L3. Regional and local</td>
<td>O 3. To identify common challenges and validate common research areas;</td>
<td>Start to implement the action plan of BIOEAST SRIA based on the objectives</td>
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<tr>
<td>C4. Societal indifference</td>
<td>G 2.2. Rural development: Increasing the viability and attractiveness of rural areas and society</td>
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<td>O 4. To provide an evidence base;</td>
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<td>C5. Financial barriers</td>
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<td>O 6. To develop synergies;</td>
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<td>O 7. To increase visibility;</td>
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</table>
Next Steps

1. 8. November 2018 BIOEAST conference: TODAY

2. BIOEAST CSA call in HORIZON 2020 WP2019

3. Establishing Thematic Working Groups

4. Macro-regional Strategic Research and Innovation Agenda (SRIA) for addressing the goals and challenges of the Initiative
Thank you for your attention!
www.bioeast.eu

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