

Bioeconomy in the forefront of national policies  
BIOEAST conference



# BIOEAST Bioeconomy Capacity Building Survey

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**PRESENTATION is based on:**



Content:

- conceptualization of bioeconomy,
- analysis of key socio-economic indicators of the 'BIOEAST countries' bioeconomy,
- description of implications for policymakers



**'CHARACTERISTICS OF SUSTAINABLE BIOECONOMY IN THE CEE MACRO-REGION'**

Methodology: Primary research - BIOEAST Bioeconomy Capacity Building Survey'



jointly elaborated during the Danube-INCO.NET project by the Central European Initiative and PANNON Pro Innovations and was hosted online

# Results of the BIOEAST survey

## Responses to BIOEAST Survey by stakeholder group and region

	Business or Industry or SME/start-up	Academic or Research	Public Sector or NGO	Total	Percent
Bulgaria	4	13	3	20	14,2
Croatia	1	3	2	6	4,3
Czech Republic	0	14	12	26	18,4
<b>Hungary</b>	<b>14</b>	<b>19</b>	<b>12</b>	<b>45</b>	<b>31,9</b>
Poland	0	8	0	8	5,7
Romania	3	14	3	20	14,2
Slovakia	1	8	2	11	7,8
Slovenia	1	1	3	5	3,5
<b>Total</b>	<b>24</b>	<b>80</b>	<b>37</b>	<b>141</b>	<b>100,0</b>

“Capacity mapping” section (I)

**to better understand the activities of companies, institutes and government agencies**

Most companies operate in the **energy (45%), agriculture (37%)** and environmental protection (29%) sectors.

The majority of business activities of the ‘Business’ sector’s respondents are related to **biomass production (37%), R&D service and consulting (37%)** and biomass conversion (29%).

The academic activities of the respondents are principally related to **agriculture (30%),** environmental studies 15% and bio-sciences (14%).

Cover principally **horizontal topics (34%)** such as economics of the supply chain (22%), sustainability and climate change (18%),

The majority of the third stakeholder group is employed by **Governmental Agencies or Bodies (32%)** and NGOs (29%).

The focus of the organizations in the public sector is on **agriculture (12%), research and innovation (12%), biomass (11%).**

## Section (II) with a focus on the bottlenecks

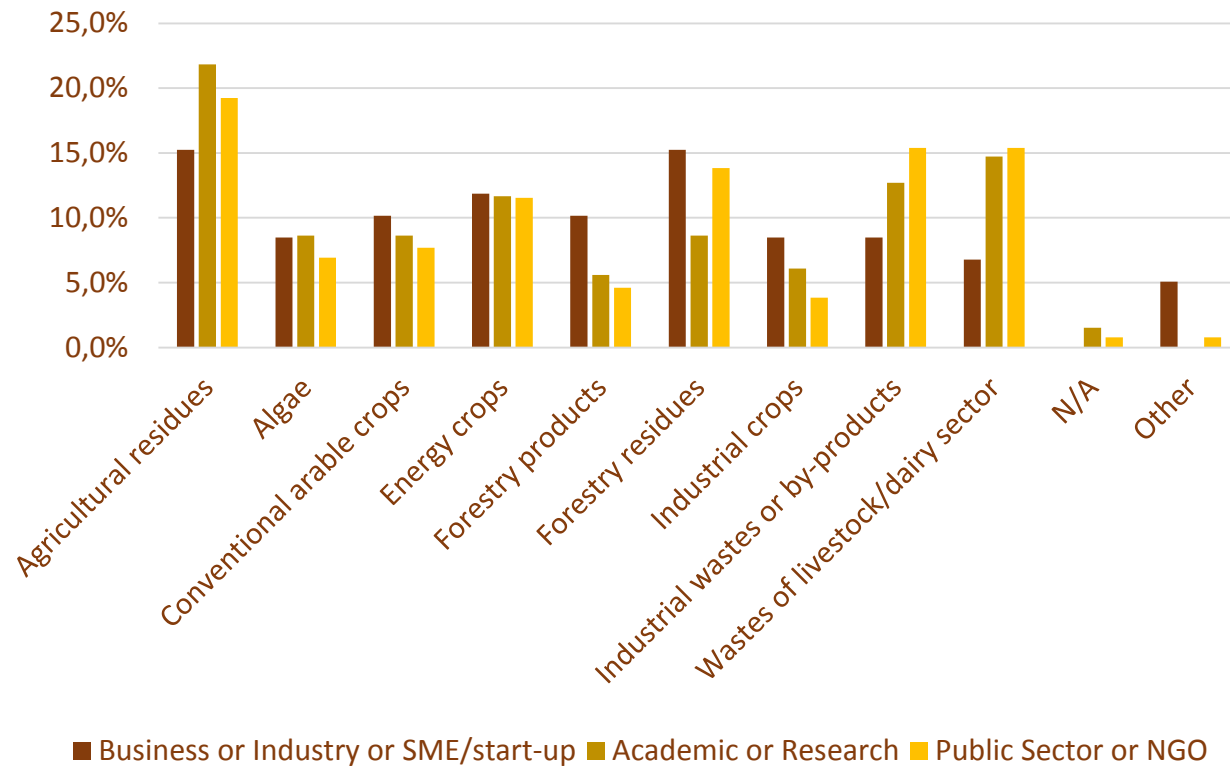
- Bottlenecks preventing the production of advanced bio-based materials and fuels which are produced from biomass sources not competing with current patterns of food and feed production and mostly considered as waste or by-product.

conversion technology (37%)

+ lack of financial possibilities followed by not suitable policy framework (43%)

## Section (III) on what stakeholders think the most beneficial for the CEE macro region in developing the bioeconomy

All three stakeholder groups think that agricultural residues could be the main feedstock for bioenergy/biorefinery purposes.




**Figure: Main feedstocks for bioenergy/biorefinery purposes by stakeholder groups (expressed as a percentage of the total number of answers given by the individual stakeholder groups)**

## Section (IV) aimed at the identification of wished interventions

<b><i>Innovation system functions</i></b> <b>(by Hekkert, 2007)</b>	<b>Intervention</b>	<b>CZ</b>	<b>PL</b>	<b>HU</b>	<b>SK</b>	<b>BG</b>	<b>CR</b>	<b>RO</b>	<b>SI</b>
<b>I. Knowledge development (R&amp;D)</b>	Easy access to pilot facilities				X			X	
<b>II. Knowledge exchange</b>	<b>Further academia to business collaboration</b>	X	X			X	X		
	Develop regional networks or clusters						X		
	Develop international networks or clusters		X						
	Facilitate business to business collaboration				X				
<b>III. Guidance of search</b>	Boost engagement with policy makers		X	X					
	Advocate use of standardised LCA (Life Cycle Analysis)								X
<b>IV. Market formation</b>	Champion utilisation of local resources	X			X				X
	Create conditions for niche markets	X							
<b>V. Resource mobilisation</b>	<b>Provide access to financial support</b>		X	X	X	X		X	
	Develop a skilled workforce			X		X			
<b>VI. Resistance to change and legitimacy</b>	<b>Build investor confidence in the bioeconomy</b>			X	X		X	X	
	<b>Ensure continuity of policy</b>			X		X	X		X
	Raise public awareness of bio-based products	X					X		X
	Promote demonstration of technologies and products	X							X
<b>VII. Entrepreneurial activities</b>	Focus more on industrial demands in RDI strategies							X	
	Include business modelling and market perspective into research projects					X		X	
	Promote open innovation approaches		X						

# Ranking of interventions grouped by innovation system function based on their perceived importance in certain old MSs and in BIOEAST countries

Innovation system functions (by Hekkert, 2007)	Intervention	FR, DE, IT, ES, UK*	BIOEAST countries
I. Knowledge development (R&D)	Establish knowledge of best conversion routes for biomass type	3.	
II. Knowledge exchange	Further academia to business collaboration	3.	2.
III. Guidance of search	Stimulate industrial symbiosis - sharing of resources	2.	
IV. Market formation	Champion utilisation of local resources		3.
V. Resource mobilisation	<b>Provide access to financial support</b>	<b>2.</b>	<b>1.</b>
 1st – 2nd? VI. Resistance to change and legitimacy	<b>Build investor confidence in the bioeconomy</b>	<b>1.</b>	<b>2.</b>
	<b>Ensure continuity of policy</b>	<b>2.</b>	<b>2.</b>
	Raise public awareness of bio-based products	4.	3.
	Promote demonstration of technologies and products	2.	4.



# Conclusion

- Firm confirmation
  - the **low level of bioeconomy maturity** - i.e. their potential in terms of employment, creation of value added or apparent labour productivity etc. is not fully exploited
  - **strong willingness of the different stakeholder groups to cooperate.**
- **Suggestive results** - in terms of what are
  - (1) the missing elements hindering competitiveness in the bioeconomy,
  - (2) the opportunities to raise competitiveness,
  - (3) most important innovation system functions,
  - (4) major bottleneck in the supply chain

**verify and strengthen the objectives of the BIOEAST Initiative.**

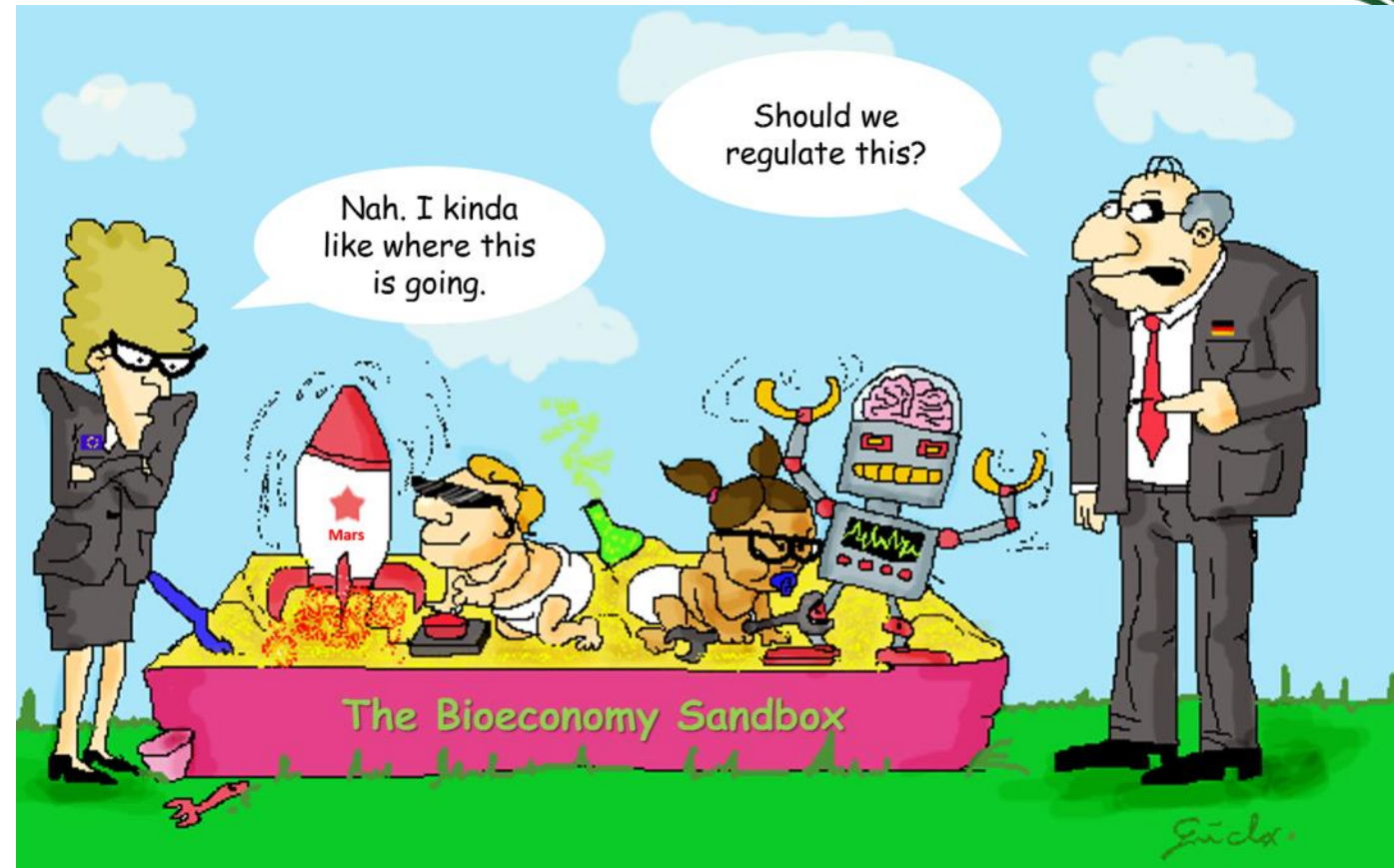
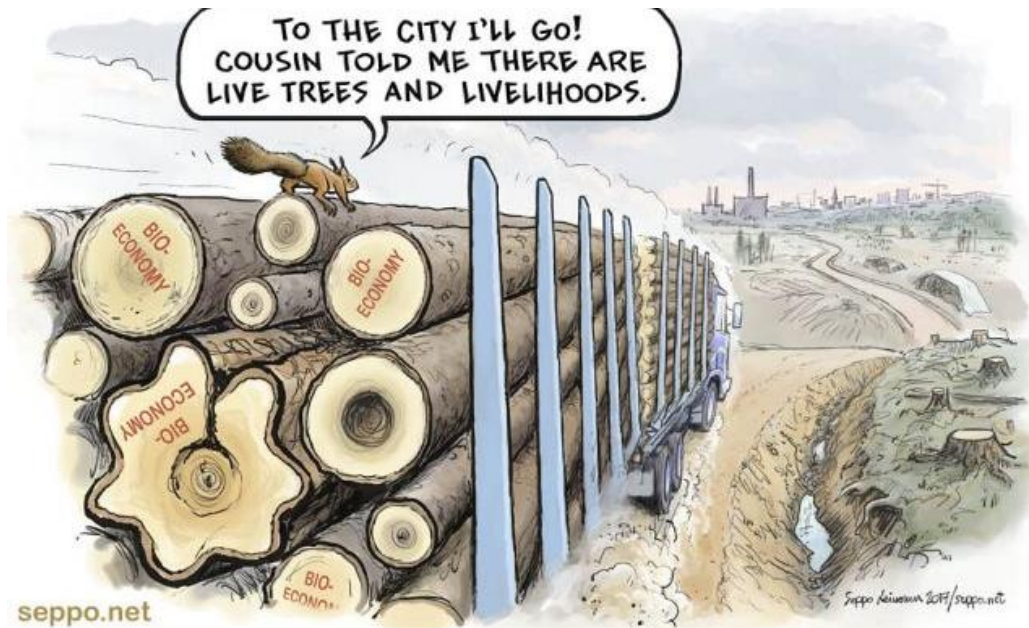
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