

Regional initiatives in support of bioeconomy development – regional case [Southern Great Plain/Hungary] –



NEMZETI
AGRÁRGAZDASÁGI
KAMARA

ECRN event- “Realising the bioeconomy potential in the regions”
Brussels, 26 June 2019



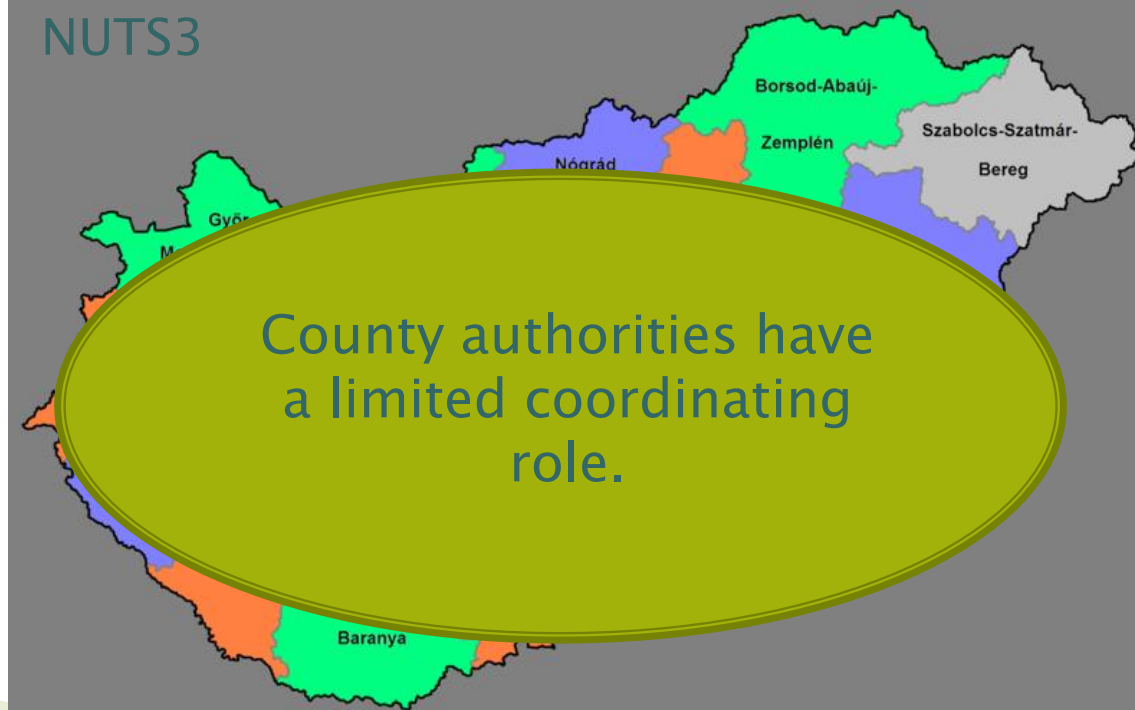
Regional structure of Hungary

NUTS2



Only administrative and statistical territory.

NUTS3



County authorities have a limited coordinating role.

Policy framework and impulses for the transition to a bioeconomy

Already existing official elements	
HuMA: Department for Knowledge-based Agriculture	Coordination of BIOEAST, BIOEASTsUP, AKIS plan, EIP – initiator on bioeconomy discussion
RDI Working Group (Chamber of Agri/HuMA)	Mainly researchers from academia and institutes and industrial players – knowledge exchange, dissemination, awareness raising, networking, funding opportunities in Horizon, thematic workshops for research priorities
Improved participation in SCAR WGs / FACCE JPI / ERA-NETs	
Conferences and workshops organised in Hungary 2015–2019 (Latest 2018 November: BIOEAST international conference in Budapest)	Able to mobilise researchers and some key industrial players nationally and macro-regionally.
Websites (BIOEAST and EIP–Agri) and booklets prepared on bioeconomy	Communication, updated regularly
Power4bio (AKI, BZN) + BIOEASTsUP projects (HuMA, AKI)	Support regional and national level bioeconomy
BIOEAST Governing Board / Secretary/ National Contact Point	Bridging between national and macro-regional level. BIOEAST macro-regional cooperation helps to keep bioeconomy in the political thinking at national level

Policy framework and impulses for the transition to a bioeconomy

Planned elements for the near future (2019–2020)

Inter-ministerial official working group	BIOEASTsUP project will help. First: common understanding of bioeconomy for Hungary (which value chain is viable in Hungary)
Creating thematic working groups at national and BIOEAST level	BIOEAST TWGs are already being set up, national level TWGs will form to feed into macro level. RDI priorities / feeding into national bioeconomy concept paper and SRIA
Establishing national Bioeconomy Hub	All stakeholders related to bioeconomy in a contact list. BIOEAST NCPs task to disseminate info.
Establishing bioeconomy innovation network (BIN)	Management: Bay Zoltan Nonprofit Ltd. For Applied Research (BZN) Industry. Ministries of Agri and Innovation are supporters. Identification of flagship projects / support in applying for EU funding / Development of incubation activity / consultancy
Creating the roadmap for the development of bioeconomy strategy.	Ministries (high-level) and expert groups with the involvement of public bodies.

Types of feedstock available in the region

- No national, in-depth, complex, nationally financed **study on bioeconomy**. Biomass is addressed by several other sector policies (energy, agriculture, forestry, rural development and innovation), it provides a fragmented framework for the biomass utilization.
- Existing biomass assessments closely related to renewable energy/biofuels.
- No national data analysis about general biomass availability/demand, market, consumer acceptance of biobased products etc.

Main biomass sources (for energy purposes)

Forestry

- 2 million ha → 13 million m³ of wood produced /year → 10,5 million m³ (about 7,5 million t) can be harvested in a sustainable way
- 7 million m³ (about 5.3 million t) was logged yearly in the last decade and about 50 % of this amount was used for energy generation. (direct combustion as firewood).
- Every year about 300–400 thousand tonnes of logging waste remains in the forest because it cannot be collected using the common technologies.
- Every year about 700 000 m³ (525 000 t) of **wood by-products** (waste wood, wood chips) are generated in the wood processing plants.

Agricultural residues

- Provide the next highest amount of biomass.
- Every year **4–4.5 million tonnes of straw** is produced from the cultivation of grain cereals and of this about 2.4–2.8 million tonnes could be used for energy production in a sustainable manner.
- 8–10 million tonnes of maize stover is produced annually and 2.5–3.0 million tonnes could be utilised as **biomass for energy production**.
- More than **20 million tonnes of by-products and waste** is produced, significant amount could be used for energy production.

Types of biomass available in the region and identified routes for the utilization

75% cereals, 12% oil bearing crops, 8% green, 3% sugar and starchy crops, 1-1% pulses and vegetables

High lobbying force

BIOMASS		Production (Mtonnes)	EU stat (Mtonnes)	Utilization	Potential of economy
AGRICULTURE	Crops	17,8	15,4	Food	High New opportunities: cascading and circular approach
				Feed	
				Biofuel (1G ethanol and biogas)	
				SOIL	
	Grazed biomass	3-5 ??	n.a.	Only feed	High
	Residues	28-30	22,7	Electricity and heat	Medium New opportunities: cascading and circular approach Missing: small-scale biorefineries
				Paper industry	
Feed					
FOREST		9	7	Energy, but still wasted	High
WASTES	Industrial	1	n.a.	No	High
	Municipal	22	n.a.	No	High

Involved stakeholders

Organization	Stakeholders
Ministry of Agriculture	Members of Bioeast, Other Ministries (capacity building of policy makers)
Hungarian Chamber of Agriculture	Farmers and Foresters (primary biomass providers), Food processing industry, Policy makers
RDI working group	Academia level
Bioeconomy cluster Bay Zoltan Nonprofit Ltd. (BZN)	Businesses, regional stakeholders
Bioeconomy related projects	Local players

Availability of skilled work force

In general there is no systematic structure (curricula) to educate bioeconomy professionals.

New generation of workers/professionals (who understands the bioeconomy) shall be trained:

- ▶ University/college level education
- ▶ Vocational education

Public funding and projects supported

- ▶ NOW: Support policy instruments and legislation are not associated with the bioeconomy.
- ▶ Future support policy instruments, development plans, and the CAP strategy plan will need to be coordinated with the objectives related to the bioeconomy.
- ▶ In the case of measures in the field of individual financial instruments, in particular in the field of research and innovation, it would be important to open up the possibility of funding the bioeconomy.

Inter-regional/cross-border cooperation

- ▶ **POWER4BIO** H2020 project (started in 2018): supporting BIOEAST from regional level, collecting good examples, bioeconomy cluster building.
- ▶ **BIOEASTsUP** H2020 CSA project (starting 2019): to develop macro-regional SRIA and national strategies, all 11 BIOEAST countries involved.
 - **capacity building of policy makers** (and stakeholders),
 - **interministerial working group** : common understanding of bioeconomy in the countries. Identification of value chains at national level and financing forms of bioeconomy activities.
 - **national thematic working groups, and Bioeconomy Hubs,**
 - **macro-regional BIOEAST Thematic Working Groups (5)**
 - application of POWER4BIO results.
- ▶ **PSF (Policy Support Facility)** will be developed together with EC to have Mutual Learning Exercise between those who have and have not yet bioeconomy strategies – sharing good practices.

Public tools to boost market demand

- Based on the Danubionet Position Paper (2016) the market demand for advanced bio-based products is to be considered as a „gap”.
- Customers sensitivity is increasing for topics like „climate change, population growth”.
- Coherent communication endorsed by the Bioeconomy strategy is missing.

Challenges and barriers

- What is really the sustainable biomass production? Rational and sustainable land use and proper management practices for biomass production are essential to maintain the soil fertility and its carbon content.
- Regarding the biomass data collection, uncertainties associated with residue production estimates still relatively large.
- No data on biomass production and land use changes.
- More effort needed in the agricultural sector for biomass production and processing.
- Initial investments for biomass valorization (additives, bio-chemicals, bio-plastics); cascading approach and high efficiency in utilization. Introduction of circular models.
- Stimulate knowledge exchange of different bio-based business models, especially small scale options, for stakeholders and policy-makers to strengthen regional innovation ecosystem.

The transition to the bioeconomy is a long process (2015–), raising awareness of policy makers and the whole economic sector is difficult and takes time.

Thank you for your attention!

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