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**ANNOUNCES AN OPEN COMPETITION FOR THEMATIC STUDY OF:**

### **BIOENERGY TWG**

**Study type:** Desk study with some application of quantitative and qualitative research methodology

**Research field:** Bioenergy - biogas

**Study keywords:** anaerobic digestion, biogas, organic fertilisers, GHG emissions mitigation, livestock breeding, organic fertilizer

More detailed specification of the expected content of the study can be found in the annex.

**Expected outcome:** 20-page study without annexes

**Expected structure:** Introduction, objectives, study methodology and concept, main outcomes and conclusion

**Duration of work/preparation:** maximum 5 months from 15<sup>th</sup> of October 2021 until 15<sup>th</sup> of February 2022

**Submission deadline:** 15<sup>th</sup> of February 2022

**Payment:** € 15 000 (decreased by the compulsory social insurance rates if the applicant is a natural person, but in the case of private applicant either as an individual or as a research institute, the payment should be reduced with VAT). In order to prepare the good quality thematic study, it is possible to involve external competencies even in the framework of further contracting, however, the main contract is concluded only with the candidate.

The BIOEASTsUP project supports the completion of 7 thematic studies related to the scope of the macro regional Thematic Working Groups (TWGs). The aim of the thematic studies is to make a deep analysis that is not covering those specific needs identified by the TWGs. Thematic studies make a significant contribution to the macro-regional development of a given theme by presenting a new aspect of it. Thematic studies will be one of the cornerstones of the common BIOEAST Strategic Research and Innovation Agenda (SRIA).

The thematic studies for each TWG are:

1. Agroecology and Sustainable Yields TWG
2. Bioenergy TWG:
3. Food System TWG:
4. Forestry Value Chain TWG:
5. Freshwater based Bioeconomy TWG:
6. Bio-based material TWG:
7. Education TWG:

#### **Required documents for the application:**

1. Curriculum Vitae or Institution introduction
2. List of references including Impact Factor publications and international and national projects in the context of study' research field
3. Work plan for preparing the study max. 2 pages.

The required documents shall be sent to the Hungarian Ministry of Agriculture by email in pdf format to Ákos Kristóf ([mailto: akos.kristof@am.gov.hu](mailto:akos.kristof@am.gov.hu)) by the latest 20<sup>th</sup> of September 2021.

The open calls have been sent out to relevant institutions and experts via the BIOEAST Board members, so that the calls are distributed to all BIOEAST Member States. Submitted applications will be assessed by a “Core Team” on the basis of the required documents sent. The Core Team will be composed of TWG coordinators and other consortium partners of the BIOEASTsUP project. The core team will be led by the Task Coordinator (HuMA) and the Project Coordinator (IUNG). Applications received will be evaluated and selected within two weeks after the submission (deadline 4<sup>th</sup> of October 2021). Institutions or experts from Non-BIOEAST countries as well as BIOEASTsUP consortium partners are freely to apply. The Study preparation process will be regularly monitored by the Core Team.

### **Annex**

**Required conditions in terms of content, focus and expected results for Thematic studies: *Anaerobic digestion for renewable energy, carbon sink and organic fertilizers as an integral part of bioeconomy development***

#### **Study content**

- focus on identifying good practice examples to expand the scope of anaerobic digestion from production of biogas to a small scale biorefinery that allows achieving carbon sinks, production of organic fertilizer and improves soil health to aid decoupling growth between livestock sector and GHG emissions.

#### **Expected results**

- overview of the current situation in the livestock sector combined with biogas sector in the BIOEAST countries
- analysis of potential anaerobic digestion contributions to renewable energy targets, organic fertilizer and GHG emissions in BIOEAST countries,
- assessment of the impact of the manure management with AD on the environment
- analysis of obstacles (generally binding regulations, economic, natural, social, political) for linking AD benefits with livestock breeding
- indication of countries' priorities within the development of AD for reduction of methane from livestock sector
- proposal of common practices and recommendations for coupling AD with the livestock sector

#### **Link to the BIOEAST SRIA, Vision paper, BIOEAST Foresight Exercise**

- The thematic SRIA identifies the challenge related to keep the current position of the meat and dairy produce in the carbon-neutral future. To decouple livestock breeding from GHG emissions, manure management through broaden valorization of anaerobic digestion is needed, while considering renewable energy goals as well as carbon emissions reduction goals.
- Efficient manure management coupled with production of renewable energy and materials to reduce methane emissions from agriculture is important from recent as well as long term perspective. Biogas production will have long-term impacts on total share of RES in BIOEAST countries, will contribute to better air and water quality, whereas digestate will aid to soil health (more carbon content to the soil). Meat and dairy sector are important part of the linear bioeconomy of the BIOEAST countries, where related products such as sausages, fresh or chilled meat and carcasses, milk and other fermented products as well as all sorts of cheese are among the top 10 goods that generate the most value from the production of manufactured goods carried out by enterprises on the national territory (PRODCOM database) (PL, RO, LV, BG, HR,

EE, LT, HU, SI). In CZ and SK, meat and dairy products are placed among the top 30 most valuable goods.

- According to BIOEAST initiative's Vision Paper the sector faces the challenges of heavy investments coordinated from the energy policy domain. Without a concerted policy between agriculture (livestock, soil, organic agriculture), climate (GHG emissions), environment (healthy soils, clean water and air) and social (vibrant rural areas) and energy (renewable electricity, transport), an opportunity to have an efficient horizontal policy with numerous socio-economic effects in rural areas is missed. . The study should contribute to the vision regarding this component.

#### **Link to the EU policies, strategic documents, goals**

- According to the European Bioeconomy Strategy, the bioeconomy is defined as "the production of renewable biological resources and the conversion of these resources and waste streams into value-added products, such as food, feed, bio-based products as well as bioenergy".
- To deliver the European Green Deal, there is a need to rethink policies for clean energy supply across the economy, industry, production and consumption. Renewable energy sources will have an essential role. The smart integration of renewables, energy efficiency and other sustainable solutions across sectors will help to achieve decarbonisation at the lowest possible cost.
- The Methane Strategy sets out measures to cut methane emissions in Europe and internationally. It presents legislative and non-legislative actions in the energy, agriculture and waste sectors, which account for around 95% of methane emissions associated with human activity worldwide. Methane is the second biggest contributor to climate change, after carbon dioxide. The European Commission will improve reporting of emissions from agriculture through better data collection, and promote opportunities to reduce emissions with support from the Common Agricultural Policy. The main focus will be on best practice sharing for innovative methane-reducing technologies, animal diets, and breeding management. Targeted research on technology, nature based solutions and dietary shift will also contribute. Non-recyclable organic human and agricultural waste and residue streams can be utilised to produce biogas, bio-materials and bio-chemicals. This can generate additional revenue streams in rural areas and avoid methane emissions at the same time. The collection of these waste products will therefore be further incentivised.
- Link to the Horizon Europa, cluster 5 Climate, Energy and Mobility and cluster 6 Food, Bioeconomy, Natural Resources, Agriculture and Environment.