

CEE2ACT

National Bioeconomy Hubs

The EU Horizon CEE2ACT project establishes **10 National Bioeconomy Hubs (NBHs) in ten Central and Eastern European (CEE) countries**, which are **Bulgaria, Croatia, Czech Republic, Greece, Hungary, Poland, Romania, Serbia, Slovakia, and Slovenia**. The hubs share a common mission, i.e. they bring together diverse stakeholders from research, academia, government, NGOs and industry to promote collaboration and advance their circular bioeconomy agendas. Each hub serves as a collaborative platform, often in countries where the concept of bioeconomy is still emerging.

Despite common challenges faced by the hubs, such as fragmented bioeconomy governance, delay in development of national strategies, and competing priorities, the hubs have successfully built shared understanding, mobilised networks and raised bioeconomy visibility in national and regional policies. The hubs' approaches reflect their national contexts (Table 1).



- Coordination, National Bioeconomy Hub, NBH country
- National Bioeconomy Hub countries
- Bioeconomy contributing countries (knowledge transfer & capacity building)



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Collectively, the NBHs demonstrate how collaborative stakeholder engagement, political alignment and resource synergy can drive lasting bioeconomy progress.











Hub	Approach
 Bulgaria	Focuses on inter-ministerial engagement and cross-sector dialogues, even in the face of institutional instability
 Croatia	Builds alliances with similar initiatives to create momentum
 Czech Republic	Prioritises stakeholder education and capacity building to integrate bioeconomy into broader policy discussions
 Greece	Leverages regional strategy successes to amplify national efforts
 Hungary	Through signing bilateral cooperation agreements with similar initiatives, functions as a neutral convening forum
 Poland	Has achieved significant visibility through a multi-organisation leadership model as well as broad and strong institutional partnerships
 Romania	Positions its hub as a bridge between government institutions and regional actors, using established networks to foster trust and coherence
 Serbia	Despite initial unfamiliarity with the concept, effectively frames the bioeconomy in relatable terms and rapidly expands its stakeholder base
 Slovakia	Leverages its established Bioeconomy Cluster and its network to actively contribute to the development of national bioeconomy roadmap
 Slovenia	Avoids duplication by integrating multiple EU initiatives into a single platform, turning the hub into a coordinated, inclusive movement

Table 1 NBH's distinctive approaches according to the national contexts



Challenges

Despite strong progress in building networks and advancing national bioeconomy agendas, the CEE2ACT hubs face common challenges affecting their effectiveness and long-term sustainability.

Engaging the private sector remains strenuous, as companies and SMEs often lack time, resources, or clear incentives to participate, and several hubs highlight the need for a stronger business case to demonstrate tangible benefits. Ministries and policymakers are generally involved but often limited by shifting responsibilities, political instability, or competing priorities, while delays in adopting national bioeconomy strategies further weaken commitment among stakeholders.

Limited resource and capacity constrain the hubs' ability to organise broader dialogues and sustain activities. Balancing diverse stakeholder interests across sectors such as bioenergy, agriculture, and forestry adds another layer of complexity. Moreover, institutional overlaps and fragmented initiatives by existing bioeconomy platforms and projects, require careful coordination to avoid duplication and ensure coherent actions.





Key successes

All ten CEE2ACT hubs have showcased **the effectiveness of the bottom-up approach in engaging stakeholders for circular bioeconomy** implementation. The hubs have strengthened national and regional collaborations, and advanced bioeconomy development by connecting different stakeholders and promoting cross-sector engagements:



Established effective dialogue platforms: Creating/reinforcing platforms for dialogue, networking and collaboration to build trust and understanding between bottom-up initiatives and top-down policymaking (e.g. through structured workshops, regular in-person meetings or spaces for cross-sectoral discussions).



Increased visibility and recognition: Gained acknowledgement from national governments (ministries), international bodies (e.g. FAO in Hungary) and regional initiatives such as BIOEAST, attracting new participants and partnerships.



Contribution to policy and strategy development: Supporting national bioeconomy roadmaps, policy advocacy and integration of knowledge into circular economy frameworks, particularly in Serbia, Greece, Romania, Poland, Hungary and Bulgaria.



Expanded stakeholder networks: Broadened engagement to include new ministries, clusters and international actors, ensuring greater reach and impact.



Enhanced cross-sector participation: Involvement of sectors beyond agriculture and environment, including energy, technology, and education with hubs in Slovenia, Serbia and Slovakia achieving relatively strong industry participation.



Strengthened EU and regional connections: Established networks were expanded to align with EU-level initiatives and thematic groups, notably in Greece and Croatia.

Together, these successes demonstrate the hubs' growing role as national catalysts for bioeconomy collaboration, policy alignment, and long-term capacity building.



Bottom-up stakeholder engagement

Fostering stakeholder collaboration, building knowledge and supporting national bioeconomy strategies through bottom-up engagement are fundamental to the hubs. Across the ten countries, early stakeholder mapping, in-person meetings and workshops are reported to be effective in strengthening awareness and capacity building. The hubs, as inclusive platforms, have brought together many different actors, **strengthening dialogue, peer-to-peer learning and facilitating the co-creation of ten national bioeconomy roadmaps.**



Bottom-up stakeholder engagement

Stakeholders report that participation in the hubs' workshops and events has improved **communication, confidence (trust) and knowledge about bioeconomy**. The majority of stakeholders express their interest in continuing their participation. Overall, gender balance in hubs' events has been achieved, though results vary across hubs. Table 2 shows the diversity of CEE2ACT hubs' tailored engagement approaches.

Hub	Approach
 Bulgaria	Emphasises mutual learning and cross-sector dialogue, organising workshops that incorporate international best practices and encourage adaptation to the national context
 Croatia	Leverages stakeholders with existing expertise, using mirror working groups to align national efforts with BIOEAST thematic groups (education, biomass, forestry/agriculture)
 Czech Republic	Focuses on raising awareness among stakeholders unfamiliar with bioeconomy, evolving workshops from introductory discussions to technical topics like biomass utilisation and roadmap development
 Greece	Employs a relationship-driven "Mediterranean model," blending formal and informal interactions and leveraging external events to maintain engagement while anticipating the forthcoming national bioeconomy strategy
 Hungary	Emphasises short, focused sessions and localised knowledge materials to ensure engagement and relatability, using the hub as a platform for stakeholder input into a national bioeconomy roadmap
 Poland	Applies a structured, solutions-oriented model, combining stakeholder mapping, Delphi methods, and co-creation via living labs to pilot practical bioeconomy solutions alongside strategic development
 Romania	Relies on pragmatic, trust-based engagement through direct communication and in-person meetings, supporting sector-specific working groups led by clusters across Romania's bioeconomy landscape
 Serbia	Builds stakeholder engagement gradually through trusted relationships, weekly updates, and inclusive workshops that encourage co-creation and open discussion
 Slovakia	Focuses on personal outreach and structured dialogue, anchoring engagement in the national roadmap development and thematic working groups led by ministries
 Slovenia	Combines personalised outreach with strategically designed events, organising one-on-one industry meetings and well-attended workshops tailored to the audience, including high-level roundtables to foster cross-sectoral collaboration

Table 2 CEE2ACT hubs' tailored bottom-up approaches

A key outcome of these participatory processes is the development of a Memorandum of Understanding (MoU) for each hub to formalise **collaboration, strengthen networks, and secure long-term commitment**. Designed as flexible and non-binding frameworks, MoUs balance inclusivity with shared purpose and are developed through consultations and feedback with stakeholders by the ten hub coordinators. While the initial development has been slow due to limited stakeholder proactivity and private sector hesitation, the MoU process has reinforced collaboration and shared ownership. In several hubs, MoUs are linked to national roadmap development, long-term institutionalisation of hubs and future funding, which support hubs' sustainability beyond the CEE2ACT project.



Sustainability and the Role of CEE2ACT

All ten hubs have set up plans for a continuity beyond the project lifetime, recognising that it will depend on stable funding, institutional anchoring and strong partnerships. Most hubs are pursuing mixed models combining EU and national project funding, ministry collaboration and partnerships with industry and research networks.

Several hubs aim for formal institutionalisation to ensure lasting structure: Bulgaria through a non-profit registration, Slovenia via integration into the National Circular Economy Centre, Croatia as an expert body for supporting its forthcoming national bioeconomy strategy, and Slovakia through joint coordination between the Bioeconomy Cluster and ministries. Other hubs focus on collaborative continuity, such as Hungary's open umbrella model with ongoing cooperation with strategic partners, Romania's partnerships with business incubators and technology centres, and Serbia's plans for a formal governance structure post-project. Collectively, these strategies reflect a shared commitment to **transforming CEE2ACT momentum into permanent, resilient platforms for bioeconomy advancement**.

The CEE2ACT project has been instrumental in establishing and shaping the hubs by providing **methodologies, tools, and peer-learning frameworks that formalised operations and enhanced stakeholder engagement**. Hubs' coordinators particularly valued the MoU framework, bilateral consultations, and exchange of experiences between hubs and countries, which strengthened facilitation skills and alignment with European bioeconomy goals. Continued peer learning and more frequent, informal and in-person exchanges were identified as key needs for maintaining collaboration and motivation among hub coordinators and countries.





Lessons Learned and a Way Forward

Across Central and Eastern Europe, CEE2ACT hubs demonstrate how bottom-up engagement can drive tangible bioeconomy progress in diverse national contexts. By combining trust-building, pragmatic collaboration and leveraging existing structures, the NBHs have mobilised stakeholders and created durable networks linking local, regional, and national initiatives.

In countries like Serbia, Bulgaria, and Slovakia, trust-building and regular face-to-face interaction were essential to increase stakeholder engagement, while the Czech Republic and Hungary emphasised flexibility and persistence to adapt to limited resources or political uncertainty. Greece and Poland focused on aligning regional and national levels through decentralised coordination.

Building on existing initiatives, hubs found that practical demonstrations, thematic roundtables, and ongoing relationship-building are more effective than top-down directives. Practical tools such as MoUs, cooperation agreements, thematic clusters and knowledge-sharing mechanisms, have strengthened collaboration and supported coordinated action. Looking ahead, securing sustainable funding, formalising cooperation frameworks and scaling joint initiatives across the region are key to maintaining momentum and enhancing policy alignment and EU-level support.



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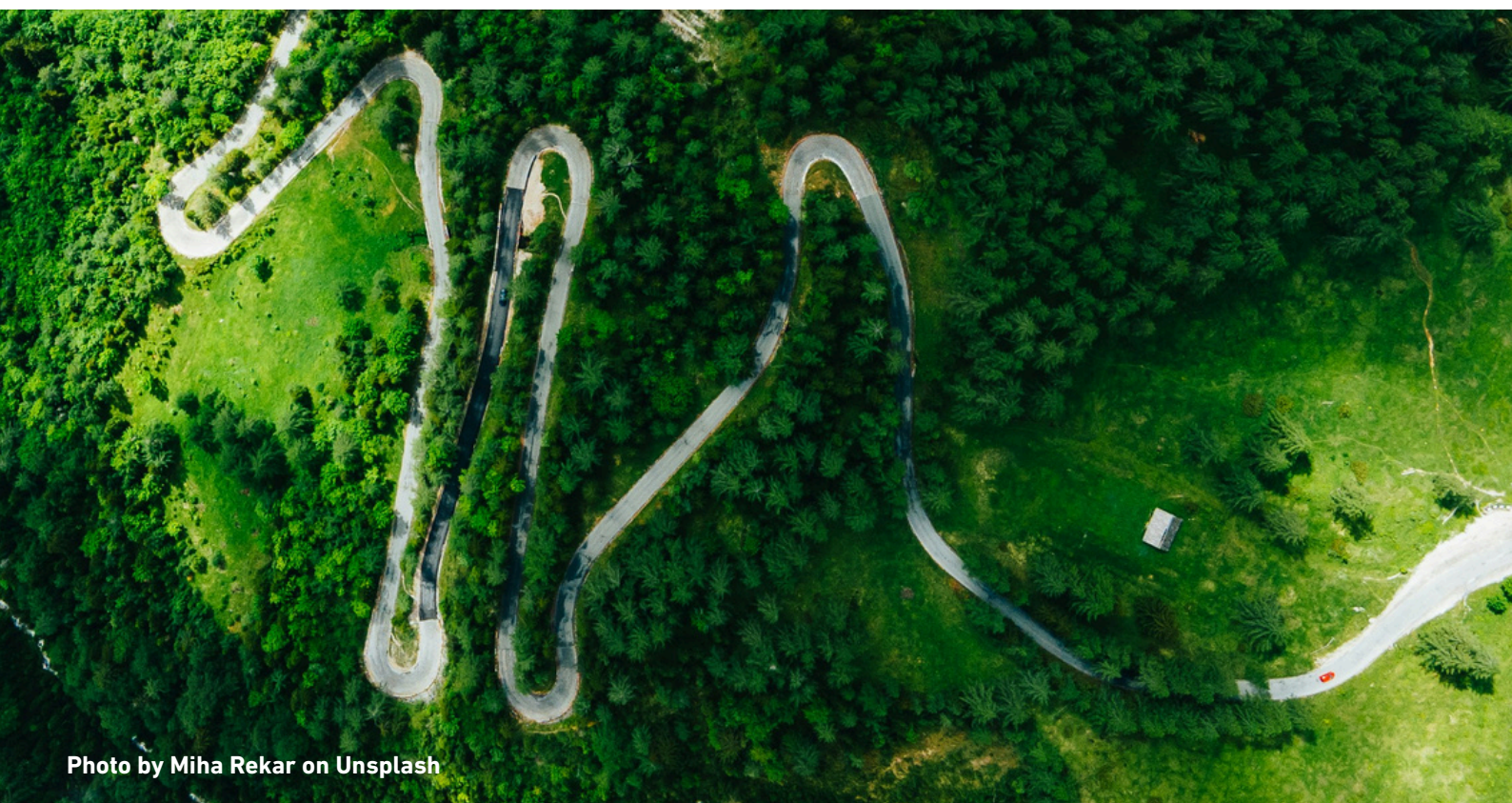


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