

BE-Rural Policy Brief

Mainstreaming the Bioeconomy in Pre-Accession Assistance (IPA) Projects in the Western Balkans



Main recommendations:

- **Foster competitiveness and inclusive growth in the bio-based sector by agricultural residue utilisation.** An enabling environment with an appropriate regulatory framework, dedicated incentive programmes and suitable infrastructure is crucial for supporting the development of innovative bio-based business models.
- **Facilitate discussions among the Quadruple Helix regarding the bioeconomy concept.** New project ideas for the bioeconomy, as well as new rules, practices and regulations can be more effectively developed and implemented if stakeholders from different backgrounds collaborate on a regular basis.
- **Improve territorial and cross-border cooperation by sharing good practices, business models and mutual projects in the field of the bioeconomy.** Geographically close regions can share knowledge and experience about the bioeconomy through IPA cross-border projects.
- **Support the participatory development of regional bioeconomy roadmaps and strategies.** The development of inclusive regional bioeconomy roadmaps and strategies provides stakeholders with a co-created vision for the future advancement of the bioeconomy.
- **Utilise IPARD financial and technical support for bioeconomy projects in the areas of sustainable agricultural and rural development.** Making local economies more bio-based and circular is synergistic with the IPARD priorities. IPARD can be used to support bioeconomy projects in the areas of sustainable agricultural and rural development.
- **Integrate the bioeconomy in national strategic documents.** Integrating the bioeconomy in national strategic documents provides policy coherence and certainty for the bioeconomy.

Context

The Instrument for Pre-Accession Assistance (IPA), with the current multiannual financial framework period 2021-27 (IPA III) and a budgetary envelope of approx. 14 billion Euros, aims to support beneficiaries ('enlargement region') in spurring the long-term recovery underpinned by the twin green and digital transitions. In the Western Balkan countries, the necessary reforms underlying these transitions are aligned with the EU's Green Agenda for the Western Balkans and the UN's Sustainable Development Goals (SDGs).

The IPA III programming framework is structured in five windows:

- Window 1: Rule of law, fundamental rights, and democracy;
- Window 2: Good governance, acquis alignment, good neighbourly relations, and strategic communication;
- Window 3: Green agenda and sustainable connectivity;
- Window 4: Competitiveness and inclusive growth;
- Window 5: Territorial and cross-border cooperation.

One particular tool of IPA is the Programme for Regional Development (IPARD), which provides the Western Balkan countries with financial (approx. 500 million Euros) and technical support in the fields of agriculture, rural development and food security. Nevertheless, public authorities and key stakeholders in the Western Balkans have not fully taken advantage of IPA, even though it can help enhance the economies and foster development of rural regions.

On the other side, the global economic, health and energy crises have pushed the countries to pursue their reforms through local and regional solutions and by making concepts such as the bioeconomy a part of future sustainable development. It is thus worth exploring how Western Balkan countries can mainstream the bioeconomy by means of 'twinning projects' in the context of IPA to maximise the utilisation of this financial mechanism. Although none of the IPA windows specifically target the bioeconomy, many cross-cutting aspects can be found between the bioeconomy and IPA windows 3, 4 and 5.

The Republic of North Macedonia's strategic response to IPA III states that between 2021 and 2027, the country will focus on, but not limit itself to, the following areas:

- "Decreasing pollution to air, waters, and soil, enforce the environmental regulations, introduce new technologies, encourage greener and more sustainable citizens' behaviour, economic activities and agriculture;
- Preserving and restoring the environment and improving the efficiency in the use of natural resources;
- Substantially reducing greenhouse gas emissions, gradually moving to a low-carbon path without undermining energy supply and increasing resilience to climate and natural hazards".

Source: IPA III Strategic Response - Republic of North Macedonia

The bioeconomy can pave the way for these goals by playing a role in the low-carbon transition pathways of regions, helping them reduce local pollution, foster economic activities in the agricultural sector and improve the responsible use of natural resources.

Methodology

This policy brief presents recommendations for regional-level public administrations in Western Balkan countries, which aim at maximising the use of IPA III funds through the support of bioeconomy-related projects. The recommendations draw from the knowledge generated in the context of the activities, which have been implemented in the frame of the BE-Rural project in North Macedonia, specifically the preparation of the [Bioeconomy Development Roadmap for the Strumica Region](#), as well as other accompanying activities, such as the analysis of the bioeconomy potential of the region and the analysis and elaboration of small-scale bio-based business models. The collaboration with regional stakeholders, who actively participated in the project activities, provided additional insights, as they helped to develop an understanding of the conditions and challenges faced by public administrations and businesses in the use of IPA support.

Although the recommendations have been developed with knowledge from the Strumica region in North Macedonia, they target public administrations in regions throughout the Western Balkans.

Recommendations

Foster competitiveness and inclusive growth in the bio-based sector by agricultural residue utilisation

As highlighted in IPA III, greater competitiveness and inclusive growth should be

fostered within three priority areas: (i) education, employment, social protection and inclusion policies, and health; (ii) private sector development, trade, research, and innovation; and (iii) *agriculture and rural development*.

By making use of what is currently considered waste – such as agricultural residues – regions in Western Balkan countries can both transition away from fossil fuels and create added value through inclusive growth. This helps foster competitiveness by creating new revenue streams for actors in rural areas (e.g. primary producers, food processing companies, etc.), and by spurring the creation of new bio-based businesses.

The Strumica region is the largest producer and exporter of agricultural products in North Macedonia, which means that it has notable quantities of agricultural residues. Although the feedstock may not be suitable for large-scale applications, analyses conducted in the BE-Rural project showed that it should be sufficient for smaller scale, high value-added applications. It was found that the production of mycelium-based packaging from agricultural residues is a possible bio-based business model that could be implemented in the region. The value proposition is to produce high-quality, sustainable, and degradable packaging material, using local agricultural residues, while having regional wineries and stores as potential customers.

Source: Khawaja (2019); Colmorgen (2019)

To support these innovative business models, public administrations should provide an enabling environment through adopting an appropriate regulatory framework and dedicated incentive programmes, as well as through supporting the development of suitable infrastructure.

Facilitate discussions among the Quadruple Helix regarding the bioeconomy concept

The development of a sustainable bioeconomy is possible if it is done alongside the necessary social, economic, and environmental transformations. Each of these transformations requires the involvement of different key actors who are *currently not cooperating with* each other. Facilitating and improving the communication and coordination between different actors in the Quadruple Helix can help create new ideas and initiate multi-actor projects that are fundable through IPA. To achieve this, public authorities should organise regular meetings, workshops, seminars and matchmaking events with and for relevant stakeholders.

With support from the previous IPA Operational Programme for Regional Development, a wastewater treatment plant has been developed in Strumica, North Macedonia. The wastewater treatment plant generates around 1,200 - 1,400 m³ of sludge annually and consumes a considerable amount of energy for its operation. When local stakeholders with different backgrounds got together, they recognised that the sludge from the wastewater can be used to generate around 500 MWh of electricity. The introduction of the circular economy concept would simultaneously reduce the amounts of waste sludge and increase the amount of green energy generation, aligning it with IPA priorities. Therefore, it is a potential project suitable for IPA, which requires investments of around EUR 2 million.

Source: Păuna et al. (2021)

The activities carried out in the BE-Rural project showed that *World Café*-style workshops are very effective in providing an inclusive

discussion space. Besides creating new ideas, these events could also shape the rules, standards, policies and practices of the beneficiaries in alignment with those of the EU, which is also part of IPA III window 1.

Improve territorial and cross-border cooperation by sharing good practices, business models and mutual projects in the field of the bioeconomy

Territorial and cross-border cooperation is of high relevance in the context of IPA III as it is one of the windows of the programme. For public authorities to maximise the utilisation of IPA III funding, they should look for bioeconomy-related cooperation not only within their respective region, but also beyond, e.g. with regions in neighbouring countries. For instance, geographically close regions can cooperate in cross-border projects to share knowledge and best practices, especially if their local economies are similar in structure and activities.

The Municipality of Strumica has participated in multiple IPA cross-border cooperation projects with partners from Bulgaria and Greece. One such initiative is the project “Green Kindergartens for Sustainable Future”, funded through the Interreg IPA Cross Border Cooperation Programme. In this project, training and information materials on environmental issues were provided to teachers and parents in kindergartens, while also making the kindergartens “green” through investments in renewable energy and energy efficiency.

Source: Interreg IPA Cross Border Cooperation

Support the participatory development of regional bioeconomy roadmaps and strategies

Through its window 3, IPA III supports the efforts of beneficiaries in aligning with the European Green Deal, as well as the climate and energy goals of the EU. Given that the bioeconomy helps regions transition away from fossil fuels and towards a more sustainable economy, public authorities should establish common ground of the optimal pathways in this transition. However, because the bioeconomy is a cross-cutting concept, it is often the case that no dedicated strategies or roadmaps are created for the development of the bio-based sector.

The process of creating the 'Bioeconomy Development Roadmap for the Strumica Region' showed that rather than including parts of the bioeconomy in different local and regional strategic documents, greater value is created from the development of a single strategy or roadmap that provides all stakeholders with a long-term vision. The value in such a document is that (i) it facilitates the local cooperation among the Quadruple Helix, but also (ii) provides all stakeholders with a co-created vision based on which future activities can be planned in a coherent and inclusive way.

To attract IPA finance for bioeconomy projects, it is important to align regional bioeconomy roadmaps and strategies with IPA III priorities. In the case of the Strumica region, the Bioeconomy Development Roadmap consists of five thematic pillars, which are aligned with windows 3, 4 and 5 of IPA III:

- Business sector development,

- Research and Innovation capacities and activities,
- Synergies with other policy fields, such as rural and regional development,
- Education and information in relation to bioeconomy
- International collaboration and sharing good practices among regions,

Source: Bioeconomy Development Roadmap for the Strumica Region

Utilise IPARD financial and technical support for bioeconomy projects in the areas of sustainable agricultural and rural development

Within the IPARD programme, beneficiaries should focus on aligning their agricultural and rural development policies with the EU's common policies, measures, and standards, as well as with the objectives of the Green Agenda for the Western Balkans, and the European Green Deal. Specifically, IPARD focuses on development in six areas: improving manure and waste management, modernisation of assets, renewable energy production and increasing energy efficiency, organic production, transfer of innovative and environmentally friendly technologies, and climate-sound farming production methods.

These areas strongly indicate that the effort of making local economies more bio-based and circular is synergistic with the IPARD priorities. IPARD can thus be used to support bioeconomy projects in the areas of sustainable agricultural and rural development.

As stated in the [Annex of the Rural Development Programme of North Macedonia 2021-2027](#), “economic growth and new business opportunities under IPARD III are linked to more sustainable consumption and production patterns, including promotion of a circular economy, conservation of scarce resources, and better re-use of waste products.”

Source: EU Instrument for Pre-Accession - Rural Development programme 2021-2027 (IPARD) of North Macedonia

It is therefore recommended that public authorities approach the IPARD programme not only from a conventional agri-food sector viewpoint (support for traditional farming), but also bearing in mind the possibility for development of new bio-based businesses. For example, beneficiaries could focus on using agricultural residues to create value-added products (e.g. pots, packaging, energy) or offering rural tourism (e.g. slow food experiences).

Integrate the bioeconomy in national strategic documents

When it comes to the bioeconomy, siloed policymaking is not only a local or regional, but also a national issue which may jeopardise the potential of the future bioeconomy projects and initiatives.

To avoid this, national governments should integrate the bioeconomy in national policy documents. Creating strategic certainty about the future of the bioeconomy from the top down in this manner minimises the risk for public administrations and companies at the regional level seeking ventures in the bioeconomy. To encourage such developments, regional stakeholders should become active in relevant discussions at the national level.

In the Smart Specialization Strategy (S3) of North Macedonia, potential for cross-cutting innovation was acknowledged between the bioeconomy and the S3 domains for “Smart agriculture and food processing with higher added value” and “Sustainable materials and smart buildings”. As a result, relevant measures were integrated in the S3, which utilise the bioeconomy as a concept to attract finance for green and digital transformation of society.

Source: Khawaja et al. (2019)

By taking part in the Entrepreneurial Discovery Process of the S3 in North Macedonia, the local BE-Rural team, along with additional stakeholders of relevant domains, had the opportunity to alleviate the bioeconomy at the national level by proposing to include financial support mechanisms for bio-based businesses (e.g. use of agricultural residues for energy generation) in the S3. Moreover, other policy measures that build on the insights from the BE-Rural project were also proposed, such as support for the development of regional bioeconomy roadmaps and strategies, tax reduction for companies that apply bio-based and circular practices, and integration of the bioeconomy concept in academic curricula.



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About the project

The transition towards a new, bio-based regional economy with opportunities for rural employment and sustainable growth requires the active involvement of a broad spectrum of stakeholders and the sustainable use of agricultural, forest and marine ecosystems. Building on this idea, BE-Rural explored the potential of regional and local bio-based economies and supported the development of bioeconomy strategies, roadmaps and business models. To this end, the project focused on establishing Open Innovation Platforms (OIPs) within selected focal regions in five countries: Bulgaria, Latvia, North Macedonia, Poland and Romania. More information on the project can be found at <https://be-rural.eu/>.

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