

Seizing opportunities for the biobased economy in the border region



The biobased economy, in which biomass takes over the role of fossil fuels and raw materials, offers opportunities for economic growth in the Flemish-Dutch border region. In the umbrella strategy Delta Region 2030, 'biobased' is included as one of the top three clusters and drivers of innovation and specialisation. This region alone is expected to generate some 5,000 new jobs in the biobased economy over the next five years. Unfortunately, current industry employees still lack the necessary knowledge and skills to capitalise on growth potential and new jobs cannot be filled by graduates. As a result, the number of students and the link between education and the labour market form a serious bottleneck.

The project

As part of the project Grenzeloos Biobased Onderwijs (Borderless Biobased Research, GPO), fourteen Flemish and Dutch partners are working together to develop demand-driven biobased education programmes at the secondary education, higher education and university levels, as well as better training and research facilities for the academic and business communities. But what does market demand look like now and what can we expect in the future? And which competences will future biobased professionals need? To answer these questions, we are collaborating with experts and the business community to develop roadmaps that help explore the promising sectors of agriculture and horticulture, non-food, chemistry, biotechnology, clean technology and materials.

Demand-driven approach

Several objectives were defined in order to substantively shape the project. A market survey was carried out to determine the competences of biobased professionals. Learning materials were then created and the necessary training facilities established to help future professionals develop the desired competences. Finally, an online platform and network was created for the various nets.

New biobased curricula

One of the objectives of this project is to paint a clear picture of the competences young professionals of the future are expected to develop in order to help shape the creation of a biobased economy. An extensive market survey in the first phase generated the 'competence mushroom': the starting point for the development of biobased learning lines within this project.



The biobased value chain

Biomass production

Biomass conversion

Biobased materials

Social valorisation

Economic valorisation

Flexible entrepreneurship

Team communication

The educational institutes within this project have a sustainability goal and are actively engaged in developing innovative biobased programmes. However, these tend to focus on specific aspects, such as biocomposites or green chemistry. GPO will focus on meeting the broader needs of the market, within which the demand for valorisation and transverse competences (see image) is equally as high as the need for technical competences.

Cross-border training and research facilities

One of the GBO objectives is to improve, create and utilise cross-border training and research facilities. This concerns facilities within the academic and business communities. The project identifies the existing infrastructure in the border region and examines the development of a 'modus operandi' with opportunities and the conditions for concrete collaboration. A digital shared facilities network will also be developed with information about availability and the possibility to make reservations. Finally, the project has (limited) room for investment in missing infrastructure and optimisation.

Knowledge network

GPO aims to encourage the cross-border exchange of educational models, lecturers and students from all biobased educational institutes in the border region by creating a cross-border knowledge network and a supporting digital platform. An important secondary objective is to bring together businesses, sectors and educational institutes in the biobased economy in order to stimulate industry developments and create a structural link between education and the labour market through the platform.

Financial support

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