

Creating BioBased Value in the Alpine Space – Welcome to the AlpLinkBioEco Project



Michael Keller
Lead Partner AlpLinkBioEco



Jacques Bersier
Lead Partner AlpLinkBioEco

“Bio” is everywhere. From the products on the shelf of our supermarkets to the bills we receive from our energy providers, from the buzzwords in political debates to the pièce de résistance in research calls or the headlines of our newspapers. In the area of innovation and regional development, the concepts of bio- and circular economy have become indispensable companions of any researcher, practitioner or policymaker. The transition from a linear fossil-fuel based to a bio-based economy is recognised as a crucial contribution to the objectives of the European Green Deal. And indeed, this shift towards a bio-based economy seems particularly relevant for the regions of the Alps with an important reservoir of biomass resources and excellence in the development of sustainable solutions in sectors such as wood, agrofood, green chemicals or bio-based materials.

Obviously, an omnipresence of an idea in the public discourse can be the sign of an abundance of real opportunity or of hot air and empty talk and does, most often, combine aspects of both. How to draw the line? How to identify the potential for real value creation, while avoiding to be drawn into the jungle of ever-growing mountains of reports never read, concepts never tested, and strategies never implemented?

Our approach to this question has been, first and foremost, a practical one. The AlpLinkBioEco project was kicked-off in Fribourg, Switzerland, in the early summer of 2018 in one of those much-regretted real-world meetings, uniting interesting and interested project partners in flesh and blood, overflowing with motivating and beautifully enthusiastic ideas to make the project something special.

At the core of the project, a Value Chain Generator (VCG) was developed to provide a hands-on, data-driven contribution to overcoming existing information gaps and to unearthing unexploited business opportunities for bio-based value chains. The VCG tool is delivered as a web-based demonstrator software giving access to an anonymized database of actors of the bio-based economy, and to a set of natural language algorithms allowing to match these actors into value chain ideas. The creation of the VCG tool during the project was characterized by a continuous interplay between software development and practical work. On the one hand, project partners teamed up with their stakeholders and trawled the Alpine Space in search of bioeconomy actors and clusters to populate the database. On the other hand, new functionalities were added to the software on a regular basis. The source code of the final version of the software is available to all interested parties under a permissive software license.

In spring 2020, the growing database and the software allowed to take the developed ideas to a real-world setting and confront concrete actors with identified business opportunities. In spite of the pandemic that was paralyzing activities around the globe, the AlpLinkBioEco partners have been able to engage their stakeholders into discussing the feasibility of bio-based value chains from a technical, economic

and ecological perspective. The frail ideas grown under the shelter of the VCG tool were sent out to confront the rough climate of the business world. Can bio-based inputs replace fossil-fuel-based ones in existing production processes? Can residual outputs and waste streams of actors from the knowledge base become inputs for new innovative bio-based business models? Can an opportunity that works in a neighboring region be implemented at home? Can concrete actors be identified to move from ideas to action? Can suppliers or buyers from overseas be replaced by local alternatives?

The pilot experience was encouraging. Some of the identified business opportunities turned out, of course, to be illusional or at least difficult to implement under the given circumstances. On the whole however, many interesting approaches have been generated with a promising outlook for successful implementation, both intra- and cross-regionally, by a network of actors that could be continuously grown over time.

In parallel to the practical work of developing and using the VCG tool, the AlpLinkBioEco partners have also conducted comprehensive research and policy oriented activities throughout the project's implementation. Benefits and opportunities of bio-based value chains in the Alpine Space have been studied from multiple perspectives. Existing bio-based value chains and clusters have been mapped and documented. An inventory of existing regional strategies and policies has been established and updated throughout the project. The research activities provided a picture complementary to the empirical experience: the potential for bio-based value chains in the Alpine Space is immense, well-anchored in existing capacities and resources, and addressing alpine specific economic, societal and environmental challenges. In order to fully benefit from the potential however, actors and regions need to intensify cooperation across borders. In spite of all the significant complementarities and synergies, the Alpine Space remains a diverse territory, marked by almost as many regional borders as watersheds, home to a multitude of regional specificities and identities and a variety of administrative and political contexts. A joint strategic approach among Alpine regions is needed to ensure that bio-based business opportunities can bear fruit across the fertile bioeconomy soils of the Alps. To this end, a masterplan to move towards a joint bioeconomy strategy for the Alpine Space has been drafted.

Today, we are delighted to present this final project publication as a documentation of the project's main results. The book follows the three lenses through which the challenge of creating bio-based value in the regions of the Alpine Space has been studied during the project: the VCG software tool, the collaborative pilot experience, and the masterplan towards a joint Alpine Space bioeconomy strategy.

Creating Bio-based value in the Alpine Space – a complex objective, indeed. Only time will tell if AlpLinkBioEco has succeeded in providing valuable contributions. With its masterplan the project intends to promote the valorization of the bioeconomy potential at a macro-regional scale by proposing concrete fields of action and recommendations oriented towards a joint strategic approach. The pilot experience with bio-based value chain ideas, gathered thanks to the tireless and solidary cooperation among our project partners and their stakeholders, stands as an example for concrete implementation work, hopefully to be continued and imitated by other actors and regions in the future. And with its Value Chain Generator (VCG) tool, the project provides a hands-on contribution with a demonstrator software and source code, waiting to be discovered, improved, used to unearth business opportunities or applied to different contexts in new projects. As a very practical, tangible contribution it has, at the very least, the advantage that it can avoid the gruesome destiny of being sentenced to life in a drawer.

Muri bei Bern / Fribourg, March 2021

Michael Keller and Jacques Bersier

Lead Partners AlpLinkBioEco

University of Applied Sciences and Arts Western Switzerland

School of Engineering and Architecture of Fribourg

(HES-SO//FR HEIA-FR)



Take a look!

<https://alplinkbioeco.tic.heia-fr.ch/>