

Networks matter for the Nordic bioeconomy



Joining forces contribute to a better and nuanced understanding of the impacts of, and need for, this transition for society at large and for different stakeholders.

The BioWiseTrans network created a space for businesses, academia and public organisations to meet, to exchange knowledge and to discuss challenges and opportunities in the transition towards a new bioeconomy. People and networks matter – The Nordic countries are frontrunners in many aspects on transition to bio-based and circular economies, BUT more support of innovation in particular around consideration of different interests and knowledge providers, on more regional targeted policies and market support and more support to facilitation of networks especially between public authorities, private businesses and the interests of civil society.

The BioWiseTrans network aimed at encouraging and empowering stakeholders, such as businesses, civil society and public sector, to participate in research and innovation processes, to identify conflicts, and to gain improved governance and utilization of land and resources.

In what way is your subject relevant and particularly in a Nordic perspective

Local development in rural areas has always been linked to use of natural resources, including bioresources like forest, fish, land. Some rural regions have succeeded to build on their bioresources to create development paths characterized by strong local economies and social welfare up until today. When the Northern areas were



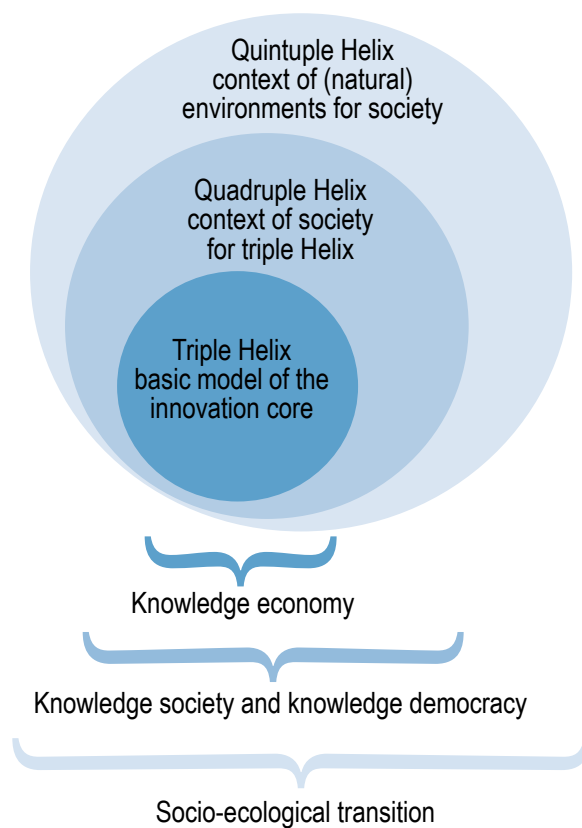
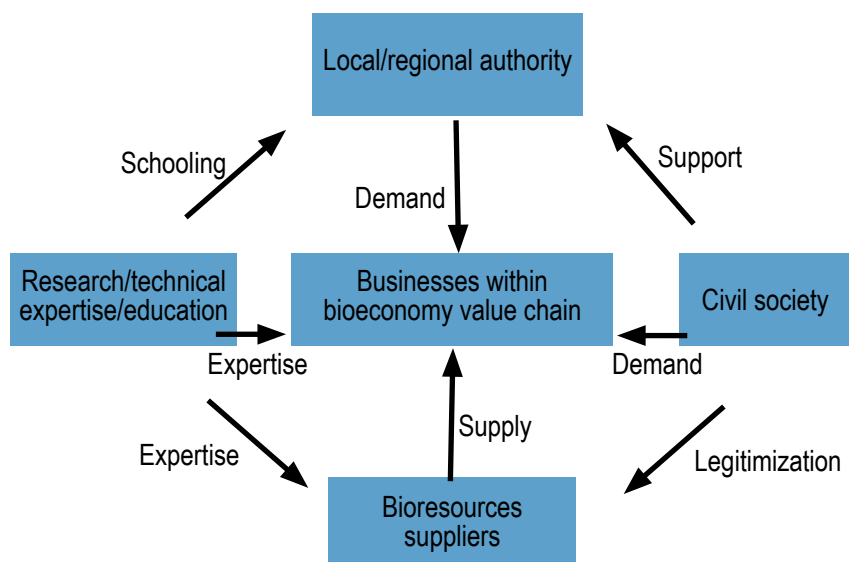
BioWiseTrans Network meets in Joensuu, Finland, January 2018.

inhabited, it required exceptional adjustment to climate and to extreme natural conditions.

Sources for livelihood have been collected from a wide area, combining various activities (forestry, hunting, fishing, agriculture, reindeer herding, collecting nature products). The practice of using natural resources has been closely linked to sparse population, to local types of rural community and tradition.

During centuries, skills and practices to cope with these solutions have developed and become connected to social structures. Eventually many institutional solutions ensuring equivalent development across regions as very much in Norway, and access for different groups in society like cooperative ownership to key natural resources for hydropower, oil or wind or access to recreation and foraging through the Allman Rights have been widely developed and established across Nordic countries. These are what the OECD would call “low-density economies”, and they are functional, but their fundamental economic structure follows a considerably different logic than that of urban or more densely populated areas.

The policy implications are to respect the logic, culture and structure, and build the activities accordingly; work with the people and communities, not against them.



Illustrations adopted from Bryden et al (2017, 2018), Horizon 2020 Disclose and SmartBio proposals.

Conclusions and Policy implications

The bioeconomy is of fundamental economic importance for the Nordic countries and a vital aspect in the sustainable development of rural areas. This is for several reasons and not the least because of the following:

- Contribution to food security and locally produced and consumed food
- Fight against climate change and fight for local business development, through many noteworthy initiatives, some included in BioWiseTrans, such as GreenLab Skive, Paper Province Värmland etc.
- “New” business opportunities (also e.g. experience economy), such as through incubator programs provided by partners in Joensuu / Finland
- Provision of new jobs and thus counterbalancing outmigration of people from rural areas, see examples above.

There is a great deal of science-based and technological knowledge out there. Innovation and development contribute to problem-solving for both social and economic reasons. The risk, however, is that often initiatives, through e.g. the support systems or the knowledge and competence structures are too science driven and not driven by place-based needs and knowledge as well as the understanding the value of cooperation. We came across, visited and engaged great Nordic examples of networks and entrepreneurs: GreenLab Skive in Denmark, Paper Province Värmland in Sweden, Joensuu Science Park & Eno Cooperative, Apila Group and Pielinen Karelia Development Center in Finland, Veldre Almenning and Phil AS in Norway. These initiatives show that communities and businesses engaged in the transition towards a new bioeconomy can achieve great socio-economic and environmental impacts in different parts of Nordic rural areas. They are all good examples of place-based approaches, where trust, networking, organized collaboration, and smart specialization strategies matter for their success.

The Nordic Countries can become the leaders of the transition to bio-based and circular economies.

There are several conditions that need attention and that can contribute to a further boost of this transition and put the Nordic Region on top:

- more support for innovation actions and awareness rising of different types of innovation
- more targeted policies and market support, especially for small and medium-sized businesses
- emphasis on local ownership for the long-term success for value-added and job creation
- continued support of networking efforts – both building on informed networks between businesses and utilizing common infrastructure
- consideration of the importance of local people and local networks to be shareholders of bio-based business initiatives
- creation and sustaining of the trust-based culture and dialogue that often exist between businesses and municipalities in a region;
- creation and further development of structured dialogue among the different levels of governance, and include private sector and civil society
- utilize place-based knowledge and connecting it to capacity building including involvement of youth

Some of these findings and approaches were also presented at the OECD rural development conference in Seoul, 25 September 2019 (see photo). One scientific approach that was widely discussed in this connection and in different activities of the BioWiseTrans network is the quintuple helix model. For the bioeconomy to be sustainable, ethically sound and inclusive, different interests and different forms of knowledge need to be considered carefully. The so-called quintuple helix model as proposed by Refsgaard et al (2017) and Bryden et al (2017), and reflected in the SCAR report (2012) on innovation partnerships and the EU report on Bioeconomy development in EU Regions (2017) reflects these needs (see the figures below).

Thea Lyng Thomsen from GreenLab Skive– an industrial symbiosis in rural Denmark, nicely sums up the perception and needs of local and inclusive businesses. “The vision is to prove the green transition as not only a feasible – but also a profitable – solution. Being first-mover is always a position with challenges, wanting to change the system and at the same time working within the system. There are systems of laws, policies, administrations, behavioral, cultural and human system understanding and thinking. There is a continuous need for dialogue between all levels, the human approach for bringing a new paradigm into existing and having the courage to stand by it.”

A nice video summarizing our final conference is available online:

<https://www.youtube.com/watch?v=UgxXpG7UGYw>

Selected scientific references:

John Bryden, Stig S. Gezelius, Karen Refsgaard & Judith Sutz (2017) **Inclusive innovation in the bioeconomy: concepts and directions for research, Innovation and Development**, 7:1, 1-16, DOI: 10.1080/2157930X.2017.1281209.

Refsgaard K, Bryden J. and Kvakkestad K. (2017). **Towards inclusive innovation praxis in forest-based bioenergy. Innovation and Development** 7(1):153-173.

Elias G. Carayannis, Thorsten D. Barth and David F.J. Campbell. 2012. **The Quintuple Helix innovation model: global warming as a challenge and driver for innovation Journal of Innovation and Entrepreneurship. A Systems View Across Time and Space** 1:2 <https://doi.org/10.1186/2192-5372-1-2>