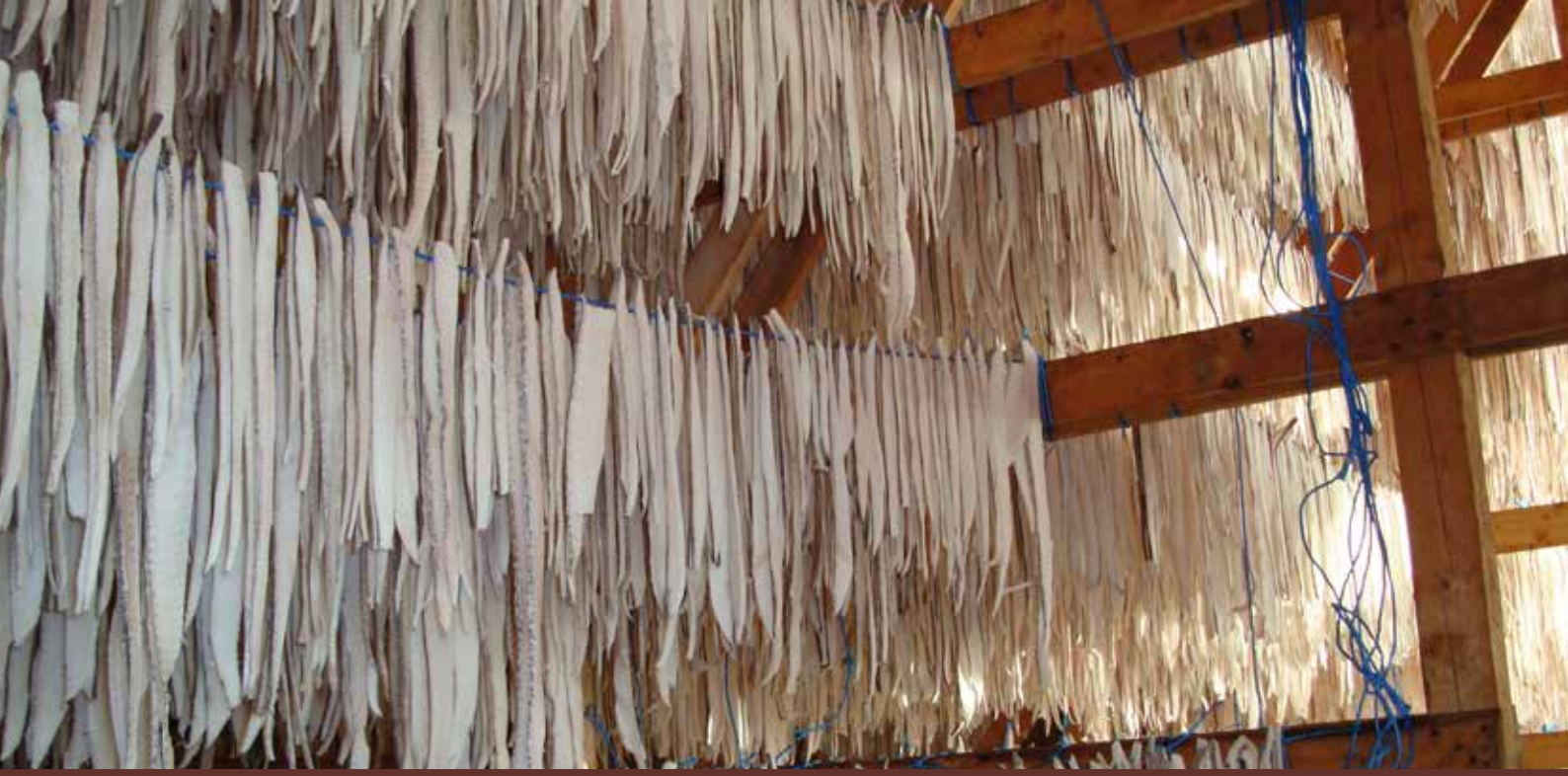

CREATING NEW VALUE IN FOOD PRODUCTION

Innovation in the Nordic Bioeconomy

The overall objective of the project was to have direct economic impact through innovation and value creation in the Nordic bioeconomy and thereby strengthen regional and economic growth. Focus was put on executing pilot projects covering one or more category: product development, sustainable food production and increased production of biomass.

Different approaches to innovation were applied in the project.

Firstly, number of product development projects were carried out with local producers in the west Nordic region (Faroe Islands, Greenland, Iceland), focusing on innovation and increased sustainability of food production, utilizing better bio-resources and creating new value from side streams of food processing. In those projects the approach was minimal administration, maximum contribution to the execution of projects. Application process was simple and open to the public. The projects were selected on predefined criteria and support was given in the form of innovation vouches administrated by the specialist assisting each entrepreneur. In total, 152 application were turned in, of which 66 were selected for participation. 50 projects were finalised.

This method of using innovation vouches proved well, resulting in the majority of the funding going directly into solving issues in the projects themselves.

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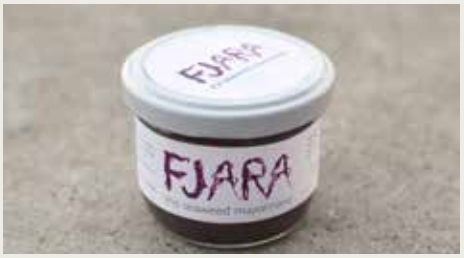
Secondly, bioeconomy consortiums throughout the Nordic countries were founded to share knowledge and work on common goals connecting academia, research and industry together for further development and implementation of the bioeconomy. The project was planned in collaboration with Nord Regio on the basis of their prior in-depth regional study of the Nordic bioeconomy in 2014. A network was established with key players from Forsså region in Finland and Örnsköldsvik region in Sweden for planning innovative research in support of bio-industries in these regions and subsequent strengthening of the regional bioeconomy, specifically targeting Nordic and European H2020 funds for collaborative projects in the field of biorefineries. Participating countries are Sweden: SP-Processum & Lund University; Norway: SINTEF Materials and Iceland MATIS. Denmark: DTU, the Center of Biosustainabililty. Finland: Häme University of Applied Sciences, Forsså and Natural Resources Institute Finland Forssa.

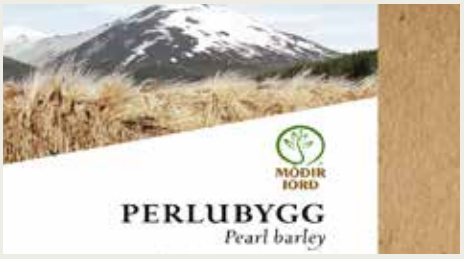
Three main subjects were selected:

- The Wood biorefinery with the goal of (1) increasing fermentability of wood hydrolysates; (2) production of high added value chemicals from wood (enzymatic, chemical, microbial) and (3) production of feed for aquaculture from wood using microbes.
- Agricultural side stream and rest raw materials as feedstock biomass for biorefineries. with two main goals: (1) production of added value products from agricultural waste and (2) identify products, thresholds, challenges and subsequently innovative bioconversion tools and processes.
- Feed production with two main goals: (1) convert organic "waste" into valuable products and (2) producing protein rich feed for salmonids developed from waste from agriculture and fish processing with black soldier fly.

Activities in the period include:

- Network meetings for strategy planning and subject developments were held in Reykjavík, Forsså, Trondheim and Örnsköldsvik
- A test project for utilizing side streams from wood biorefineries for production of single cell protein enriched in biocolorants for fish feed using a novel thermophilic bacterium was carried out by, MATIS, Lund university, SP-Processum and Domsjö in Örnsköldsvik.
- Two Finnish projects involving research groups in Forsså were started in the period with MATIS as a foreign partner: 'Value added compounds from food industry by-products' and 'Utilization of algal components and biomass as food, feed and fuel'.
- Two Nordic project applications Wood4Chem and 'Advancing bioeconomy by practical application of research results in education and enterprises' and two EU-H2020 applications, Thermorefine and Microbricks, to the European Union have been submitted by the consortia in the period.





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