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West Nordic Countries

Which bioeconomy-related policy strategies exist?

The Nordic Council of Ministers has developed a bioeconomy strategy for the West Nordic countries, including Iceland, Greenland and the Faroe Islands. The document, **"Future Opportunities for Bioeconomy in the West Nordic Countries"**, was published in 2014. The Nordic Council of Ministers is composed of government representatives from Denmark, Finland, Iceland, Norway and Sweden. Greenland, the Faroe Islands and Åland are current autonomous member states of the Council. The Council was founded in 1971 as a forum for Nordic governmental cooperation.

Interestingly, the continental member states have already developed a national bioeconomy strategy or have committed to developing one. In contrast, the non-continental member states (Iceland, Greenland and the Faroe Islands) have decided to develop a macro-regional bioeconomy strategy because of the similarities in their economies. Marine bioresources represent the countries' competitive advantage and bioeconomy must also account for a large proportion of the countries' GDP. The bioeconomy strategy of the West Nordic countries is related to previous Nordic initiatives. In 2014, Iceland initiated the NordBio program during its presidency of the Nordic Council of Ministers. Within the program, a group of national experts was set up to discuss Nordic projects related to bioeconomy. The aim of the group is to establish a Nordic Bioeconomy Panel in 2015 which will consist of the Nordic Council's member states and autonomous member states. One of the panel's priorities will be the creation of a Nordic Bioeconomy Strategy. In 2012, the Nordic Joint Committee for Agriculture and Food Research (NKJ) published the Nordic Bioeconomy Initiative which targeted the creation of a common Nordic policy platform. The initiative goes back in turn to the Nidaros Declaration (2012) of the Nordic Council of Ministers which addressed green growth including bioeconomy in the Nordic Region.

Is the term "bioeconomy" or "biobased economy" used in the strategy documents?

Yes No

The definition of bioeconomy in the document emphasizes the cascaded use of biological resources, their by-products and waste in different sectors.

Who is the author of the strategies?

During its chairmanship of the Nordic Council of Ministers in 2014, Iceland took the lead in intensifying the council's bioeconomy commitment. The Icelandic government initiated the NordBio program

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and also the bioeconomy strategy of the West Nordic countries which was finally published by Matís, an Icelandic state-owned advisory body.

What are the key goals of the strategies?

The bioeconomy strategy of the West Nordic countries aims at boosting green growth and creating added value through the sustainable use of natural resources. The strategy identifies opportunities for using underutilized local bioresources. By providing four main actions, the strategy document also intends to contribute to the political agenda of the region. Firstly, a West Nordic Bioeconomy Panel should be created, composed of academia, industry, economic actors, NGOs and policy institutions. The panel will act as an advisory body and identify key issues and opportunities for the region related to bioeconomy. Secondly, the strategy aims to establish an interdisciplinary center of excellence which focuses on issues relevant to the region, such as bioeconomy, socio-economic aspects,

rural development and energy production. The center should further bundle existing local and national expertise and knowledge by creating a virtual knowledge network. Thirdly, the strategy paper targets the launch of the project "Arctic bioeconomy II – Biotechnology". The project will focus on value creation by means of biotechnology and its applications. Fourthly, a program focusing on blue bioeconomy should be developed since marine bioresources represent the region's unique feature. The intention is to enable the commercialization of marine bioresources by establishing a central marine raw materials biorefinery and demonstration plant, as well as strengthening the aquaculture industry. 118

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What are the priority areas of the strategies?

In order to create added value, the strategy focuses on the fishing industry since it represents a large part of the region's GDP. Opportunities for value creation are seen in strengthening fish stocks and the aquaculture industry. Knowledge transfer from the Faroe Islands could contribute to promoting aquaculture activities in Iceland and Greenland. The strategy highlights the need for utilizing synergy effects from the fishing industry and biotechnology to create further added value. Biomass from fish waste and macro-algae will become increasingly important as biorefinery feedstock for producing energy carriers or chemicals. Within the agricultural sector, the strategy highlights opportunities for value creation by means of expanded research on such subjects as soil conservation, grazing pressure and new crop variants. As the region faces harsh weather conditions, further efforts for adapting crops to the unique environment should be promoted. Therefore, the strategy recommends establishing a proper research center which will support efforts in this area. Further areas of interest in the strategy paper include the possibility of attracting young educated people by creating a center of excellence. Nature tourism based on ecosystem services will also provide opportunities for avoiding brain drain by creating new jobs.

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