



**NORDREGIO**  
Nordic Centre for Spatial Development

# **Bioeconomy, innovation, and regional economic development**

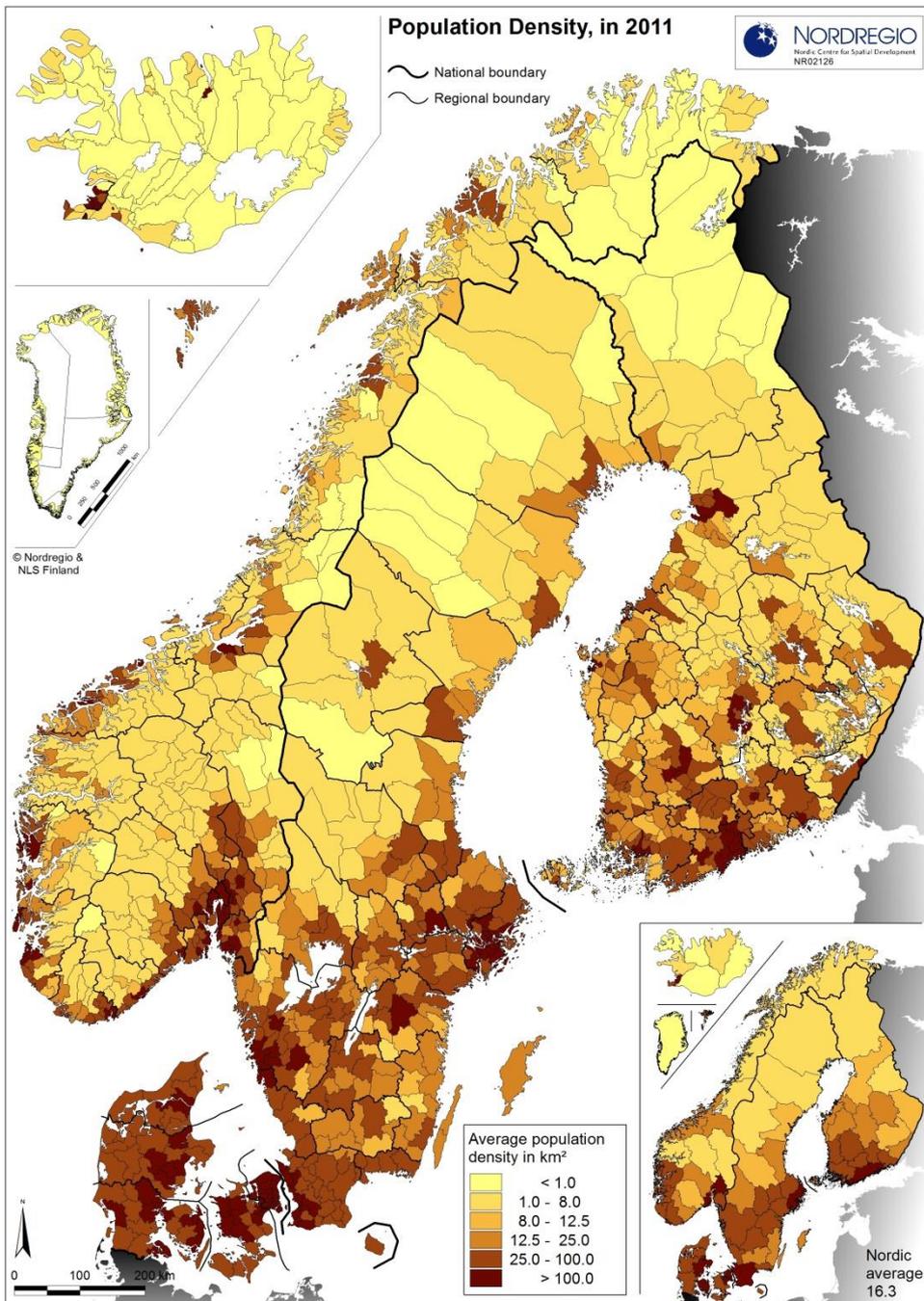
**Jukka Teräs, Nordregio**

Realizing the Bioeconomy in the Baltic Sea Region – Workshop I  
Tallinn, March 26, 2014



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Nordic Council of Ministers



**Nordregio** ( established in 1997) is a leading international Nordic research institute in the broad field of regional studies.

Nordregio is acting as the secretariat for Working Groups of the Nordic Council of Ministers in 2013-2016:

- Demography and welfare
- Sustainable regional development in the Arctic
- **Green growth – innovation and entrepreneurship**
- Green growth - sustainable urban regions

# The Working Group Green Growth – Innovation and Entrepreneurship

**Finland:** Kaisu Annala (Chair), Ministry of Employment and the Economy , Liisa Saarenmaa, Ministry of Agriculture and Forestry

**Denmark:** (*Ministry of Environment*)

**Faroe Islands:** Oyvindur av Skarði, Ministry of Trade and Industry

**Norway:** Pål Erik Holte, Ministry of Local Government and Regional Development

**Sweden:** Örjan Hag, Ministry of Enterprise, Energy and Communications

**Iceland:** Sigrídur Kristjansdóttir, Innovation Centre Iceland

**Åland:** Robert Mansén, Åland Technology Centre

**Nordregio secretariat:** Jukka Teräs, Lise Smed Olsen  
(Kjell Nilsson attending the WG meetings)

# WG Green Growth: Activities 2013-2016

- Knowledge overview on Green Growth 2013-2014
- In-depth studies 2013-2015, **bioeconomy as the first in-depth study**
- WG meetings, Workshops, dissemination activities & cooperation with other Nordic and international actors
- Deliverables including Handbook, Popular synthesis report, Green Growth Nordic cooperation programme proposal

# Bioeconomy, blind men and the elephant

(adapted from Mintzberg & Jain stories)

- “All of you are right. The reason every one of you is telling it differently is because each one of you touched the different part of the elephant. So, actually the elephant has all the features you mentioned” (*Jain Stories*)



# Workshop on Bioeconomy in Stockholm

January, 2014

- The workshop focused on regional development, innovation, and entrepreneurship.
- The participants represented national authorities, businesses and academia, and international institutions from Nordic countries and Estonia.
- The international session by James Philp, OECD and Damien Plan, from the European Bioeconomy Observatory.



# Regional cases on Nordic bioeconomy

- The main objectives:
  - to identify the **role of the regions** in driving a bioeconomy development in selected Nordic regions
  - to analyse the regional key factors: **enabling conditions & impeding factors** influencing the development of bioeconomy from a regional perspective and having an impact on the environment, economy, society and territories
  - to identify **good practices** of regional transition to bioeconomy as well as to identify examples of potential Nordic future “rising stars”.
- First cases: Forssa/Finland, South and Southeast coast of Iceland
- The complete selection of Nordic cases includes at least one case of Finland, Sweden, Norway, Denmark, and Iceland & one case study in Åland
- The case studies include **desk research, field work & interviews** (approximately 5-6 interviews with key actors of each region), and **additional analysis of information & phone interviews** when appropriate.

# CASE Forssa, Finland: Envi Grow Park – eco-industrial park of material recycling, bioeconomy and renewable energy



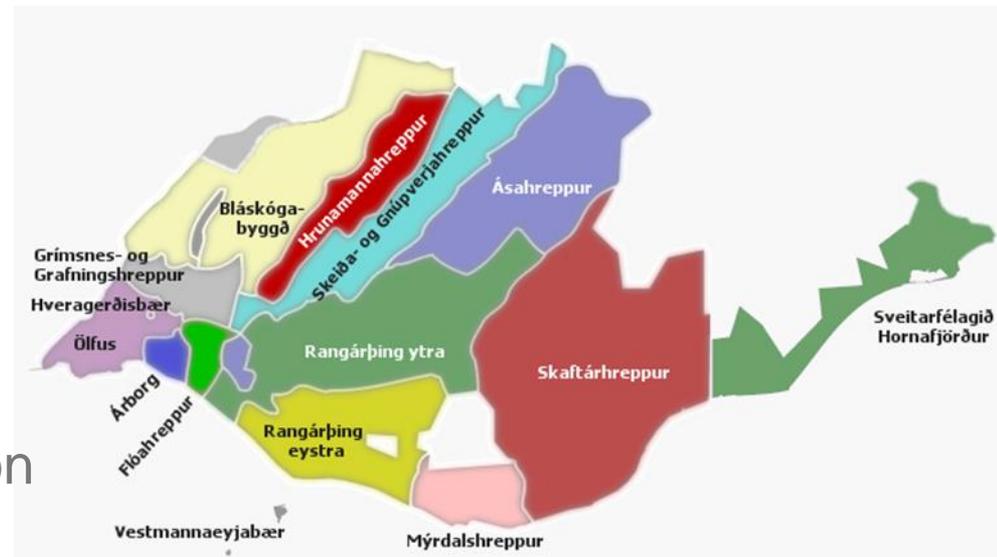


# Forssa: findings

- Bioeconomy concept has been used in Forssa already for some years. The symbiosis of agriculture and industry in the Forssa region has a tradition of more than 100 years back to the history of Forssa
- The local bioeconomy is focused around a few ecosystems; e.g. Envi Grow Park, and Humppila eco-logistics area
- Flagship investment plan: Envor Group to build up the biggest biorefinery in Finland (ethanol from ryewheat/wheat/barley, press release 2014)
- Research & educational assets include e.g. MTT Agrifood Research Finland (Jokioinen), and HAMK University of Applied Sciences
- The branding of regional/local bioeconomy seen as one of the most important challenges in the near future

# CASE: South and Southeast coast of Iceland

- Large region across the South and SE coast of Iceland (30 966km<sup>2</sup>, population approx. 26 000)
- Fisheries & agriculture the main sectors together with expanding tourism
- Lower than average education level
- Case study focus: innovation in fisheries & agriculture (esp. food innovation), not one specific cluster or ecosystem but more small scale innovations



# Case South and Southeast Iceland: Preliminary findings

- Natural resources and strong tradition of agriculture and fisheries combined with the increasing opportunities of tourism can provide a good background for increased added value from bioeconomy
- Some areas strong in innovation related to agriculture and forestry but large variations within the region in terms of innovation activities
- The role of state level support in the form of Matís Food Innovation Centres and employees from Innovation Centre Iceland considered essential as they provide facilities for developing food innovation products and offer different types of business support in the region
- Low average education level can be a challenge but the situation has improved partly because of the establishment of the University Centre of South Iceland with several facilities along the coast (distance learning, owned by the municipalities)

# Bioeconomy in-depth study: Co-operation with other actors

- International: OECD, EU (European Bioeconomy Observatory, EU Bioeconomy Panel)
- Nordic & Baltic: Nordic Council of Ministers, Nordic Innovation, Icelandic research on bioeconomy
- National level: e.g. national bioeconomy strategy groups and bioeconomy innovation promotion in Nordic countries
- Regional and local actors: good practice case studies
- Co-operation with (Nordic) academic experts on bioeconomy

# Creating value from bioresources - Innovation in Nordic Bioeconomy (Nordic Innovation, Gaia 2014)



The objectives of this study are to identify the innovation-oriented challenges as well as areas with high growth potential within the Nordic bioeconomy.

The study also produces important background data concerning the volume and constituents of bioeconomy in Nordic countries.



<http://www.nordicinnovation.org>

# Creating Value from bioresources

(Report 2014 Nordic Innovation, press release)

- “The largest innovation and growth potential of bioeconomy seems to be in its crosscutting nature. The following interesting crosscutting growth areas of the bioeconomy in the Nordic countries were identified: bio-based chemicals, biomaterials, biofuels and bioenergy, biorefineries, resource-efficiency and industrial symbiosis and services based on ecosystem services”



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Photo: Kjell Nilsson

**Thank you!**

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