

# Understanding policy barriers for a bioeconomic transition: Institutional settings and stakeholder positions

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## Introduction

The development of a smart bioeconomy replacing the traditional value chain from raw materials to waste has received increased attention in Europe. New bioeconomic strategies were developed at EU level (EU-Commission, 2012) and in many European countries such as Norway. A bioeconomic transition is a comprehensive endeavour calling for coherent parallel activities from societal actors and institutions and vertical and horizontal policy integration (Kleinschmit et al., 2014). Through mapping of the institutional context involved in implementing policies, literature studies, stakeholder survey analysis, we seek a better understanding of the reasons and consequences of siloed policies. The poster identifies policy and institutional barriers for bioeconomic transitions in Norway.

## Policy analysis of bioeconomic transitions in Biosmart

Agricultural policy in Norway and Europe is sectoral in nature. As the bioeconomy grows and sectoral integration increases, 'siloed' sectorally based policy approaches will become increasingly unable to manage bioeconomic development.



The policy analysis in Biosmart aims at improving the understanding of the impacts of current policies and their institutional settings on the transition to a smart bioeconomy in Norway and to identify opportunities for greater coordination of policies based on lessons learnt from other countries.

Key objectives of the policy analysis:

- To identify policy and institutional barriers for bioeconomic transitions
- To assess required changes to institutional settings to reduce 'siloing'
- To test the feasibility and acceptability of new institutional settings in collaboration with the Biosmart foresight analysis
- To recommend how policies may assist the transition to a smart bioeconomy

## Methodological approach

Multiple Stream approach (e.g. Kingdon, 1984, Zahariadis, 2007)

- Differentiates between problem, solution and political stream
- Useful approach to explain policy processes linked to the window of opportunity for niches
- Stresses importance of policy entrepreneurs
- Recent extensions have improved coverage of institutions

Policy transfer theory (Dolowitz and Marsh, 1996)

- Lessons learnt approach
- Transfers of success and failures
- Successfully used in studies on policy innovations
- Importance of specific settings between cases

Review of policy framework and institutional settings

- To identify policy barriers for transitions to elicit an understanding of the reasons and potential consequences of siloed policies

## Review of policy framework and institutional settings

	Political goals	Stakeholders	Infrastructure	Technology	Culture	Processes & procedures
<b>Agriculture</b>	Sustainable intensification National food security Residuals as raw materials (LCA) Biogas (dung/manure)	Ministry of Agri and Food Governmental agencies Farmers Unions Agri. Co-ops Food industry	Political strategies Public programs (e.g. Innovation Norway, Investinor) R&D (e.g. Norwegian Research Council)	Bioenergy (second gen.; small and large scale) Fossil energy replacement GMOs	Risk perception (private) Importance of public sector (high degree of trust; policy) Sector focus (siloing)	Formalized or ad-hoc? Environmental legislation Corporate elements
<b>Forestry</b>	Value creation, employment, competitiveness Sustainability and climate mitigation Main sector in a new bioeconomy	Ministry of Ag. and Food Governmental agencies Forest co-ops and private organisations Environmental orgs (eg. WWF)	Political strategies Public programs (e.g. Innovation Norway, Investinor) R&D (e.g. Norwegian Research Council)	Volume - construction, bioenergy  Value - biotech, nanotech, pharmaceuticals  Fossil energy replacement	Risk perception (private) Importance of public sector (high degree of trust; policy) Sector focus (siloing)	Formalized or ad-hoc? Environmental legislation Corporate elements

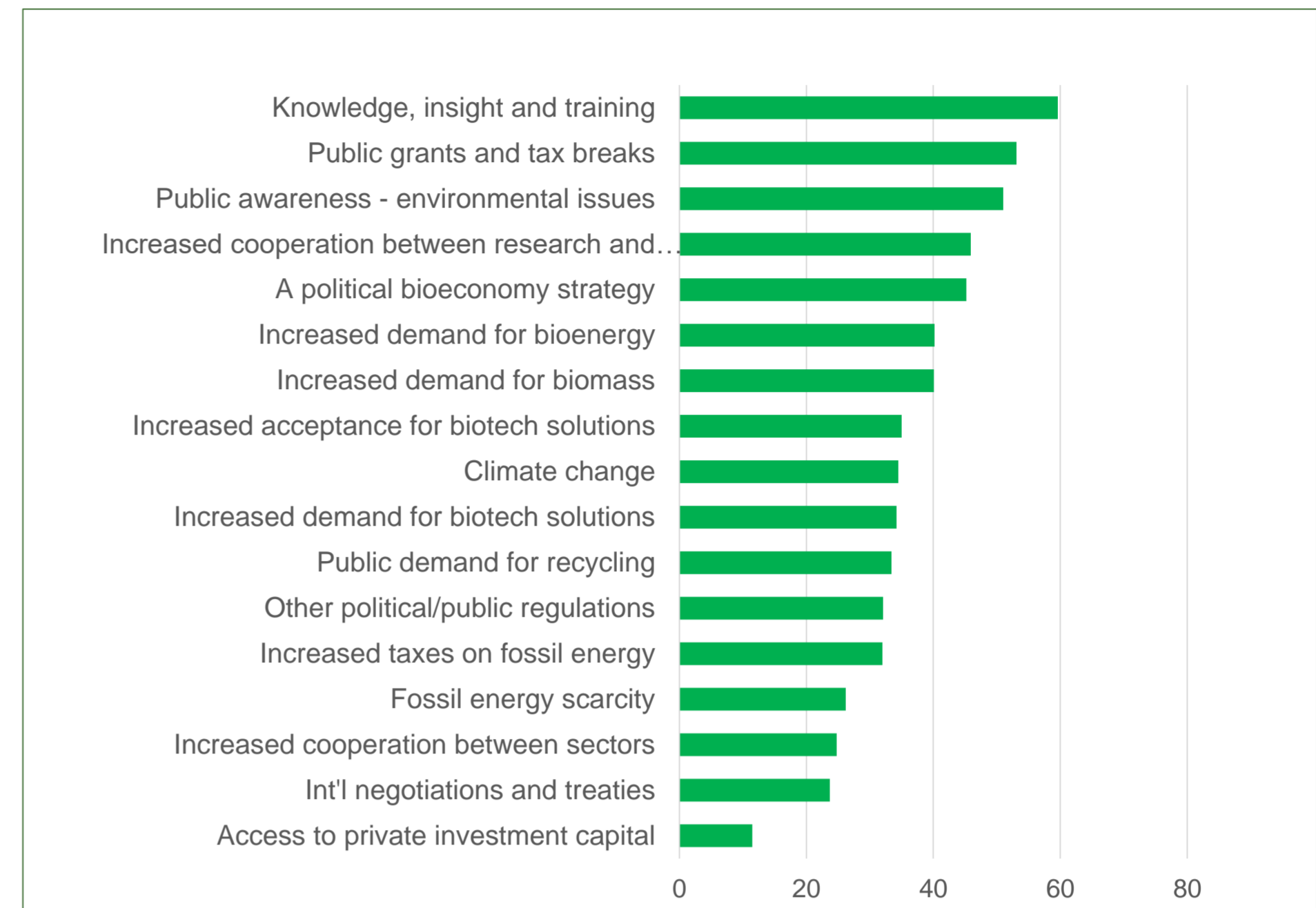


Figure 1: 15 years from now, in your opinion: which factors would have contributed to an increased share of bioeconomic activity? Replies from stakeholders across all sectors in percent.

## Findings from the review and first Biosmart survey

- Knowledge and training, policy and economic incentives and public awareness of environmental issues are important factors contributing to increased bioeconomic activity.
- Fossil energy scarcity is not seen as a driver of bioeconomic change in the future.
- State initiatives and governmental policies emerge as key drivers with the highest priority across different stakeholder types.

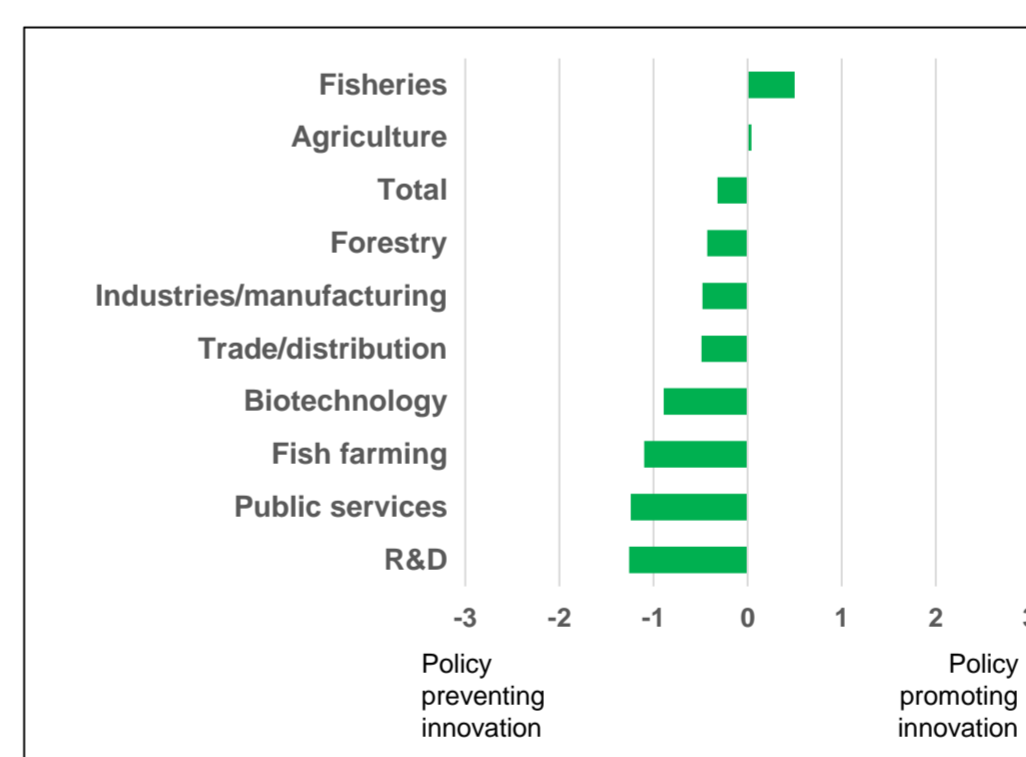


Figure 2: To what extent are political regulations affecting innovation and development for your business? (N=1312)

## Conclusions and emerging policy barriers and conflicts

- Different strategic behaviour of stakeholders across sectors :
  - Agriculture:** currently not actively engaged in bioeconomic discussions, different voices and strategies, highly subsidised
  - Forestry:** very active in bioeconomic excurses, common vision and joint strategy, more regulated than subsidised, open to competitive markets
- Policy measures seen as drivers of bioeconomic development, but...
- ...dominating governing principles enhance siloing effects – although often unintended
- Separate bioeconomy strategies emerge from sectoral siloes reflecting different interests and objectives and hindering coherent activities and balanced policy development

