

Future images and expectations of the bio-economy: Survey of the Norwegian bio-sectors

NoRest-conference in Copenhagen 25th-26th of October 2016
Paper-team: Lillian Hansen, Hilde Bjørkhaug, Magnar Forbord, Brit Logstein and Alexander Thanem



Methods & Findings

Survey of 100 Norwegian bio-sectors
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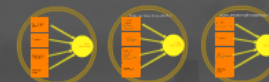
Measuring expectations using a survey for the bio-sectors

- The survey is designed to assess the future, and the likelihood of the bio-sectors to be successful in the future - respondents
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Results for each

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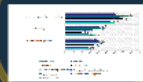


Main findings

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Further findings and implications

- Expectations to competing energy sources a potential barrier
- Coordination of regions and niches needed?
- Exploring expectations - a tool for long-term policy planning?



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Main findings

- Need to be strong sector-wise variations in expectations-different sectors
- Many and interestingly different variables
- Expectations with agriculture as industrial factor
- The role of Transformation Result of Innovation - an "integrating" result?

Again we ask:

Do you believe that the Norwegian bio-economy will be a success in the future?

Why or why not? (For individual experts, please fill in the box below. For the whole group, please fill in the box below.)

Measuring expectations using a survey for the bio-sectors

- Reached a high number of stakeholders, and individual experts in their respective bio-sectors - 133 responded
- Based on the European Commission's Bioeconomy Panel (see EU, 2010: 10): (i) industrial sectors, (ii) the scientific community, (iii) farmers, (iv) forestry and (v) fisheries/aquaculture
- Private commercial industries

Operationalisations

- Measuring expectations in a survey:
 - How many respondents from the survey?
 - Which sectors are represented in the survey?
 - Which variables are measured in the survey?
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'Incidents in Bioeconomy'

- How many incidents are there in the bio-economy?
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Further

- Expect source
- Coordi needed
- Explor long te

Towards a Bioeconomy

- Needs participatory governance with relevant stakeholders
- Awareness of political context and power relations
- The interpretation and mobilization of actors
- A focus on the pre-development and take-off phase of the transition

TH

"A bioeconomy can be defined as an economy where the products for materials, chemicals and energy are derived from renewable resources."
-McCormick and Klerks

The work of Bugge, the bioeconomy concept is a vision, a bio-resour

However

- further
- not su

Still being
inclusion

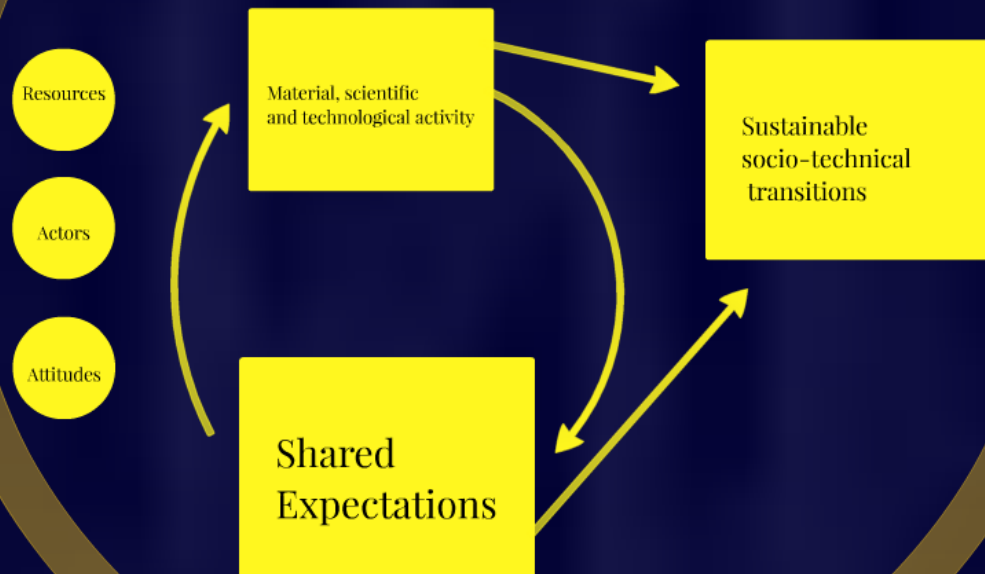
Measuring expectations and drivers of change

[Expectations guiding and coordinating socio-technical system change]

-Input from several research fields:

- Sociology of expectations: expectations as self-fulfilling prophecies:
- Innovation literature: only innovations where there are mutually aligned strategies are those that will “survive”
- Transition management through ‘guiding visions’ by
 - 1) giving plausible alternatives 2) showing the problems that need to be solved 3) a stable frame for thinking in the same manner or monitoring progress 4) get certain types of actors into networks, and excludes others 5) a symbol used for attracting resources outside the core of a regime.

System level change enacted through
coordination of ...



Two main research questions guide this research:

- (1) what degree of expectations do the biosectors have to the bioeconomy, are there sectorwise expectations
- (2) and to what degree are biological resources, cooperation and concern for sustainability associated with these expectations.

Measuring expectations using a survey for the bio-sectors

- Reached a high number of stakeholders, and individual experts in their respective bio-sectors – 1315 responded
- Based on the European Commission's Bioeconomy Panel (see EU, 2012b: 16): (1) industrial sectors (2) the scientific community, (3) farming, (4) forestry and (5) fisheries&aquaculture
- Private/commercial industries





Operationalisations

Measuring the potential for a Future Bioeconomy through expectations to:

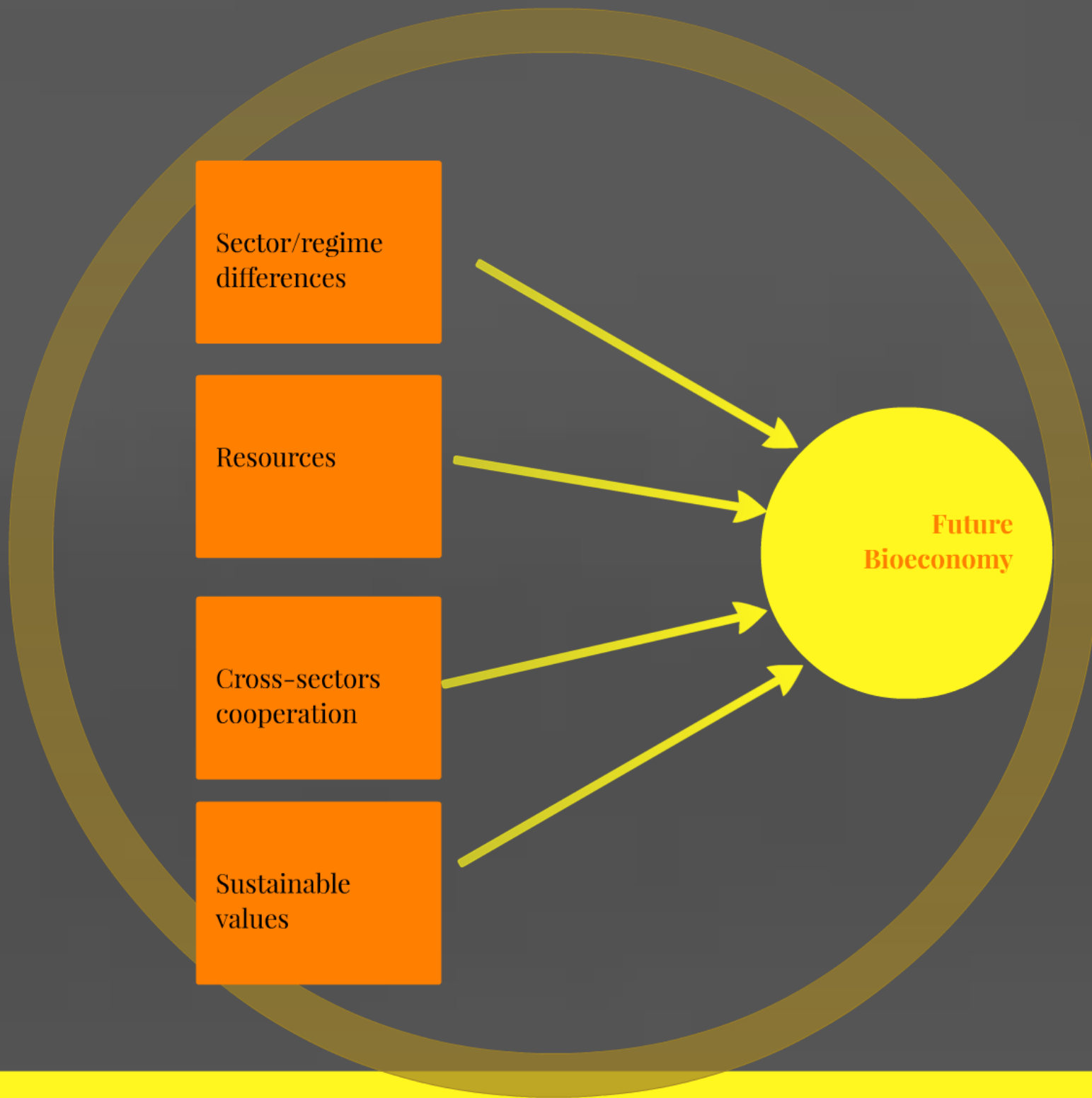
- **Belief/motivation in contributing to a future bioeconomy (expectations to one's own business)**
- Production and demand for biomass for different purposes in the future (context expectations)



Again we ask:

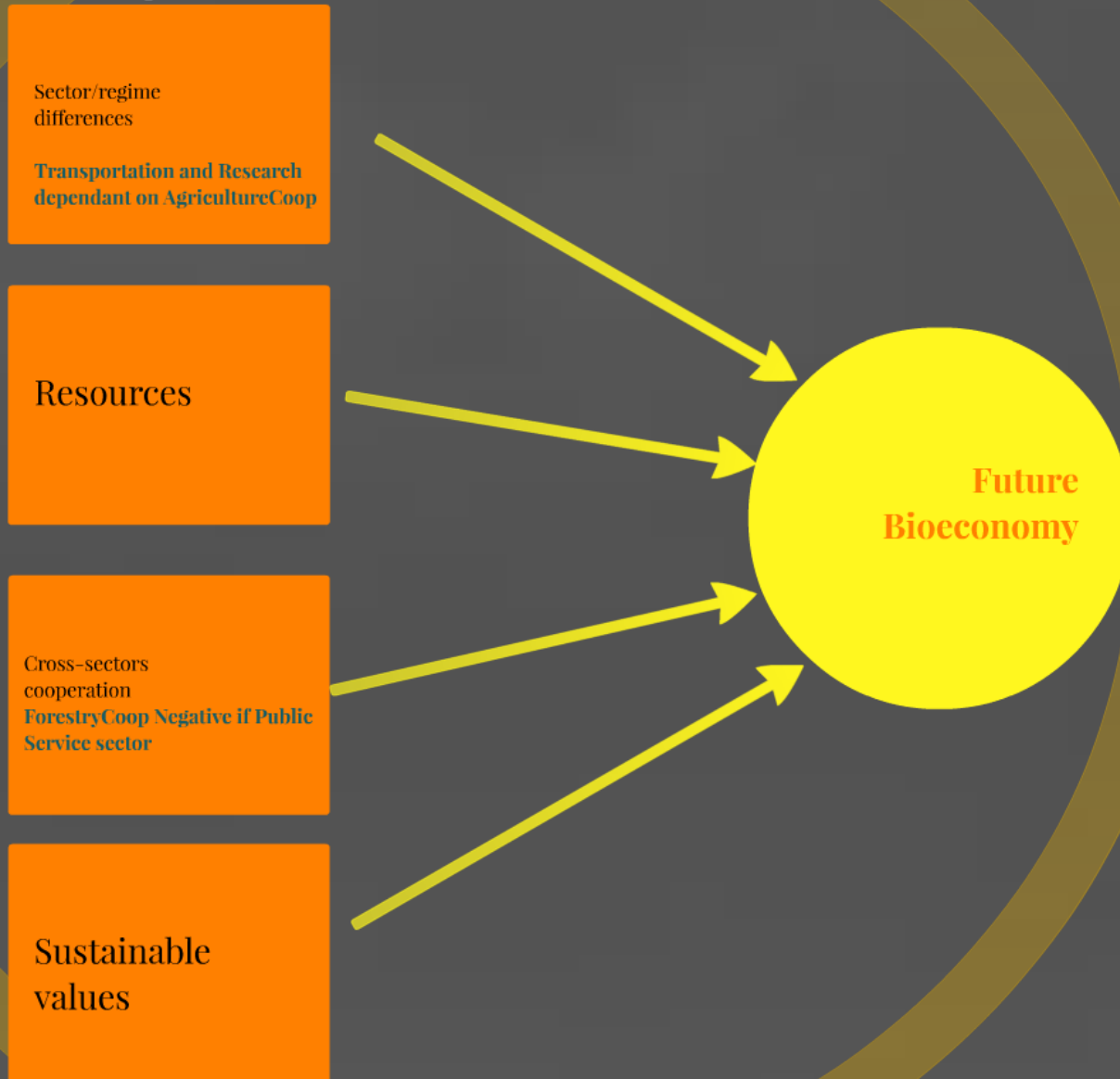
- To what degree do the biosectors see themselves as contributors in the future Bioeconomy?
- When controlling for individual resource factors of age, education level and income, are high expectations to the bioeconomy determined by special types of resources and sector-cooperations today?







Negative associations and potential barriers



Main findings

- Seems to be strong sector-wise variations in expectations-different regimes
- Plants and fish empowering the actors, controlling for other variables
- Cooperation with agriculture an important factor
- The role of Transportation/Retail of importance – an "integrating" regime?

Further findings and implications

- Expectations to competing energy sources a potential barrier
- Coordination of regimes and niches needed?
- Exploring expectations – a tool for long term policy planning?



Thank you for your attention !

Lillian Hansen, 25th of October 2016
PhD Candidate
lillian.hansen@rural.no