



ENGAGING STAKEHOLDERS AND CITIZENS IN THE BIOECONOMY BIOSTEP RESEARCH RECOMMENDATIONS

Moderator: Rainer Janssen, WIP Renewable Energies

BioSTEP Research Recommendations

Aim

- Exploit and build upon **lessons learnt from BioSTEP**
- Future **effective stakeholder and public engagement** in the bioeconomy
- Development of **innovative instruments** for stakeholder and public engagement
- **Maximising the impact** of EU Research & Innovation

Target

- **Future Topics** (CSA) for EU R&I Programmes (H2020/FP9)
- Good **ethical and RRI practices** along all R&I projects

BioSTEP Research Recommendations – 5 Topics

1. Integrating priorities of civil society into bioeconomy research agendas
2. Developing and testing models for co-creation in the bioeconomy
3. Communicating complex topics of the bio-economy to the general public
4. Analysing the regional transition to the bioeconomy
5. Ensuring responsible research and inclusive innovation in the bioeconomy



BIOSTEP RESEARCH RECOMMENDATION #1

INTEGRATING PRIORITIES OF CIVIL SOCIETY INTO BIOECONOMY RESEARCH AGENDAS

Greet Overbeek, Wageningen Economic Research

Integrating priorities of civil society into bioeconomy research agendas

Specific Challenge (Background)

- How to include **mission-driven CSOs** who focus more on national and regional policy impacts and the needs of citizens than on building up academic track records?



Future FPs could **optimise the use of CSOs** potential by:

- (1) involving them more significantly in other roles (e.g. agenda setting, proposal evaluation),
- (2) putting stronger emphasis on the societal impacts of the whole programme, and
- (3) funding more and smaller projects to counter concentration effects and reduce entry barriers.

Integrating priorities of civil society into bioeconomy research agendas

Scope (Goal)

- To open up research and innovation agenda-setting through the **engagement of CSOs** and the public at large for co-creation of research agendas.
- Through national strategies, **transformative scenario planning and citizen vision** workshops



Expected Impacts

- **Democratisation** of research and innovation agendas.
- Increased **engagement** of civil society and professionals with bio-based developments.
- More **societal knowledge** about the contribution of the bioeconomy to Sustainable Development Goals (SDGs).



BIOSTEP RESEARCH RECOMMENDATION #2

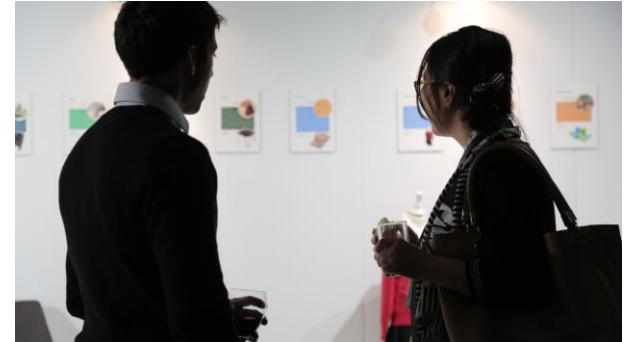
DEVELOPING AND TESTING MODELS FOR CO-CREATION IN THE BIOECONOMY

Kate Millar, University of Nottingham

Developing and testing models for co-creation in the bioeconomy

Specific Challenge (Background)

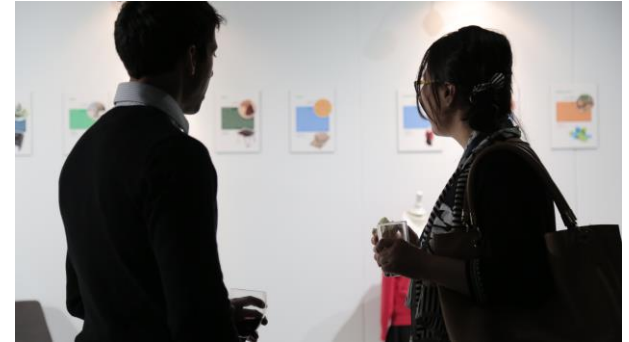
- **Importance of public engagement increasingly recognised**, but many activities direct dissemination / dialogue
- Co-creation is an **innovative and informed type of engagement** in which stakeholders / publics are embedded, empowered & involved.



Developing and testing models for co-creation in the bioeconomy

Specific Challenge (Background)

- **Importance of public engagement increasingly recognised**, but many activities direct dissemination / dialogue
- Co-creation is an **innovative and informed type of engagement** in which stakeholders / publics are embedded, empowered & involved.
- Approaches to **co-creation of research agendas, knowledge, and innovations** aims to actively intertwine technology developers & industry with members of society and their representatives
- Need **great understanding (strengths / limitations)** of co-creation tools.
- **Knowledge is still created in formal R&D spaces** (such as laboratories), but it takes into account activities of citizens outside the laboratory.



Developing and testing models for co-creation in the bioeconomy

Scope (Goal)

Greater awareness and understanding of existing tools

- Further define **co-creation principles**
- Create an **online open access data catalogue** of existing co-creation tools



Develop new forms of co-creation (empower and inform all stakeholders)

- Create **new tools** for co-creation for the bioeconomy and train practitioners
- Create and test **new infrastructure and spaces** (such as innovation locations)

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Expected Impacts

- Enhanced **socially robust product development** through confidence in both product design and implementation
- Increased **awareness** among consumers and citizens about bioeconomy processes and products
- Greater **understanding of bioscience innovation process** (risks and benefits)
- Develop notions of **public ownership of bioeconomy investments**



BIOSTEP RESEARCH RECOMMENDATION #3

COMMUNICATING COMPLEX TOPICS OF THE BIO-ECONOMY TO THE GENERAL PUBLIC

Boris Mannhardt, BIOCOM

Communicating complex topics of the bio-economy to the general public

Specific Challenge (Background)

- The bioeconomy has many facets and is complex to communicate
 - Knowledge about **social, environmental and economic impacts** of bio-based products is indispensable for an informed public debate
 - Express clear messages and easily comprehensible facts to raise **awareness of the bioeconomy** without “overloading” and making it too complex
 - **Reach out to a large number of people** and to a wide variety of citizen groups
- **Answer questions:** What are the overall social, economic and environmental impacts of bio-based products? Are bio-based products *per se* more sustainable than their traditional counterparts? What is the difference between bio-based and bio-degradable? ...
- Develop **communication concepts** that include these answers and succeed to convey them to different stakeholders



Communicating complex topics of the bio-economy to the general public

Scope (Goal)

- Identify, test and evaluate **suitable tools for the communication of complex topics** that are interactive, fun and provide in-depth information
- **Enable citizens** – in particular young people – to make informed decisions (as consumers) and participate in informed debates (e.g. in the context of strategy development)



Expected Impacts

- Increase **public awareness and knowledge** on bio-based products
- Better **informed consumer decisions**
- Broader **public engagement** in bioeconomy debates and in the development of strategies



BIOSTEP RESEARCH RECOMMENDATION #4

ANALYSING THE REGIONAL TRANSITION TO THE BIOECONOMY

Sara Davies, University of Strathclyde

Analysing the regional transition to the bioeconomy

Specific Challenge (Background)

- Bioeconomy = structural changes in relationships
- **Regional capacities** to create new value chains vary - one third of EU regions have low bioeconomy maturity
- Not just due to differences in **supply** of bio-materials, firms in **relevant sectors**, or **policy** strategies
- Regional **productivity disparities** within OECD countries increased in 1995-2013 – esp the gap between leading 10% and bottom 75% of regions

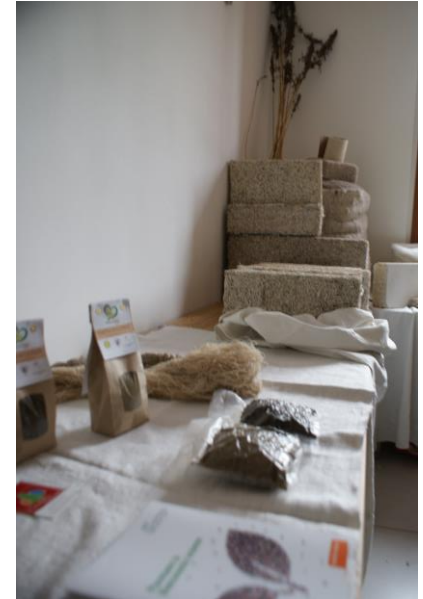


Analysing the regional transition to the bioeconomy

Specific Challenge (Background)

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- **Regional capacities** to create new value chains vary - one third of EU regions have low bioeconomy maturity
- Not just due to differences in **supply** of bio-materials, firms in **relevant sectors**, or **policy** strategies
- Regional **productivity disparities** within OECD countries increased in 1995-2013 – esp the gap between leading 10% and bottom 75% of regions

- **Risk 1:** Transition to bioeconomy may be hindered by variation in capacities to build new linkages
- **Risk 2:** Regional disparities may widen if lagging regions are slower to transition to bioeconomy



Analysing the regional transition to the bioeconomy

Scope (Goal)

- Why does growth of **bioeconomy** **vary** across European countries & regions? Region-specific factors?
- How do **relationships support/inhibit transition** to bioeconomy?
- Could **support for engagement** accelerate transition?



Analysing the regional transition to the bioeconomy

Scope (Goal)

- Why does growth of **bioeconomy** **vary** across European countries & regions? Region-specific factors?
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Expected Impacts

- Improved **evidence base for policy instruments** (inc Cohesion policy & EU rural development policy)
- Better **strategies** & better **allocation of funding**
- Support transition esp in less developed regions



BIOSTEP RESEARCH RECOMMENDATION #5

ENSURING RESPONSIBLE RESEARCH AND INCLUSIVE INNOVATION IN THE BIOECONOMY

Kate Millar, University of Nottingham

Ensuring responsible research and inclusive innovation in the bioeconomy

Specific Challenge (Background)

- Policy-makers increasingly discuss the **need to define responsibilities** in bioeconomy innovation processes.
- **Sustainability assessments & mapping tools** for social, economic and environmental impacts available
- More work needed on **scope, tools and approaches to integrate**



Ensuring responsible research and inclusive innovation in the bioeconomy

Specific Challenge (Background)

- Policy-makers increasingly discuss the **need to define responsibilities** in bioeconomy innovation processes.
- **Sustainability assessments & mapping tools** for social, economic and environmental impacts available
- More work needed on **scope, tools and approaches to integrate**
- **Responsible Research and Innovation (RRI) agenda** constitutes an approach that focuses on ethical and social responsibility in science
 - European Commission Horizon 2020 RRI strategy interprets 'key' themes: engagement; policy; gender equality; science education; open access; ethics; governance
- **New developments must embed core RRI principles** within funding and research processes and at the development and implementation stages



Ensuring responsible research and inclusive innovation in the bioeconomy

Scope (Goal)

- Greater understanding of the **social, economic and environmental impacts**
- Enhanced understanding and management of **uncertainty**
- **Integration and transparency** in bio-based technology assessment
- Embedding of **RRI principles** in research, design and development
- Democratisation and promotion of **social justice and open science** principles



Ensuring responsible research and inclusive innovation in the bioeconomy

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- Embedding of **RRI principles** in research, design and development
- Democratisation and promotion of **social justice and open science** principles



Expected Impacts

- Socially and ethically **informed bioeconomy investment** decisions
- **Socially robust** development and confidence in product credentials
- **Ownership of purchase decision-making** amongst consumers
- Improved understanding of **social, environmental & economic impacts**

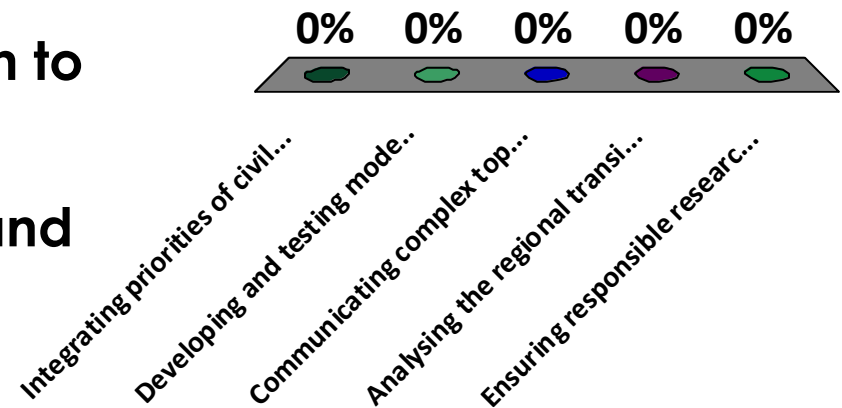
BioSTEP Research Recommendations – 5 Topics

If we reflect on these recommendations, do you have a view on which of these are the most important?

1. Integrating priorities of civil society into bioeconomy research agendas
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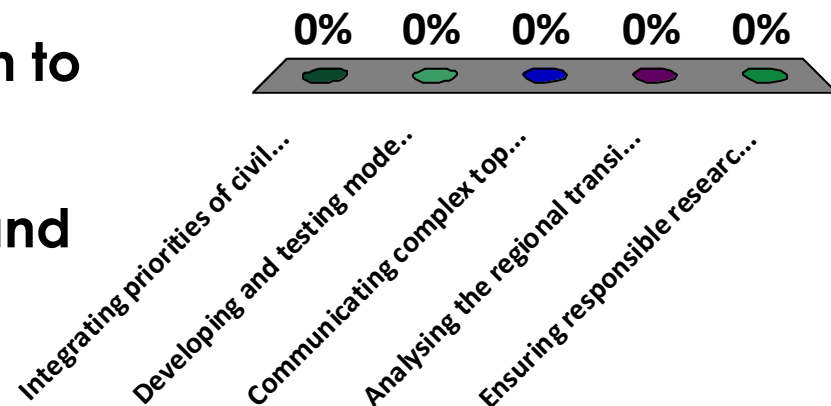
Please choose your most important Research Recommendation

- A. Integrating priorities of civil society into bioeconomy research agendas
- B. Developing and testing models for co-creation in the bioeconomy
- C. Communicating complex topics of the bio-economy to the general public
- D. Analysing the regional transition to the bioeconomy
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Please choose your 2nd most important Research Recommendation

- A. Integrating priorities of civil society into bioeconomy research agendas
- B. Developing and testing models for co-creation in the bioeconomy
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Research Recommendations – Open Discussion

Guiding topics

- Challenges of „**quadruple helix**“ (university, industry and government AND civil society) for agenda setting
- Strengths and limitations of **co-creation**
- **Communicating** potential social, economic and environmental **trade-offs**
- Challenges of **structural shifts** to a biobased economy in different regions
- Ensuring good **ethical and Responsible Research and Innovation (RRI)** practices

THANK YOU FOR YOUR ATTENTION



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