BioSTEP

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

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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).

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BIOSTEP RESEARCH RECOMMENDATION #2

DEVELOPING AND TESTING MODELS FOR CO-CREATION IN THE BIOECONOMY

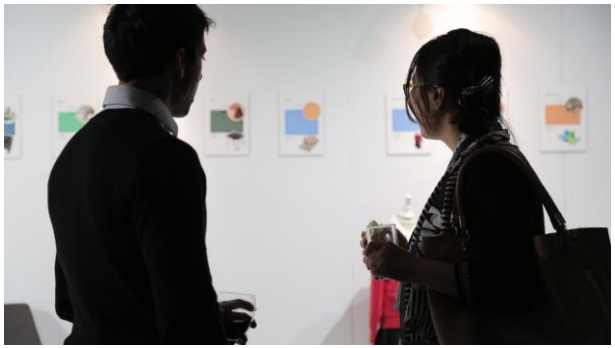
Kate Millar, University of Nottingham

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

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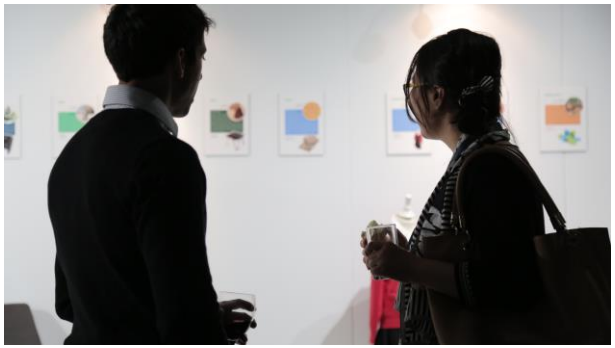

- **Importance of public engagement increasingly recognised**, but many activities direct dissemination / dialogue

- 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**

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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

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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?
- How do **relationships support/inhibit transition** to bioeconomy?
- Could **support for engagement** accelerate transition?

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

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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

Scope (Goal)

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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

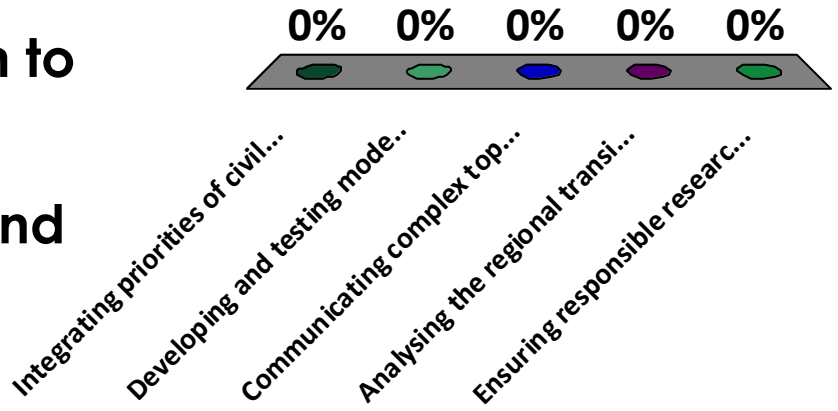
A. Integrating priorities of civil society into bioeconomy research agendas

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

E. Ensuring responsible research and inclusive innovation in the bioeconomy



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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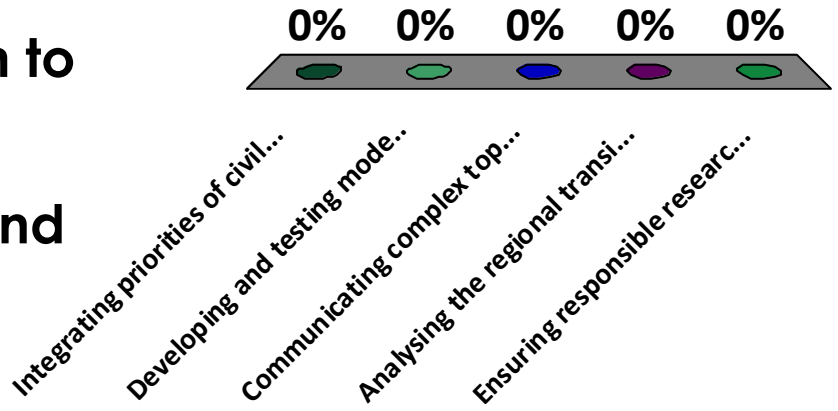

Research Recommendations – Open Discussion

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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