

Introducing Task 45 “Climate and Sustainability Effects of Bioenergy within the broader Bioeconomy”



JRC and IEA T39 Joint Workshop | May 16-17, 2019

“Biofuels Sustainability - Focus on Lifecycle Analysis”

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Outline

- Intro and objectives
- Why a new task on sustainability?
- T45 Structure and work programme
- First activities of T45
- Topics and opportunities for T39 & T45 cooperation

Intro and objectives of T45

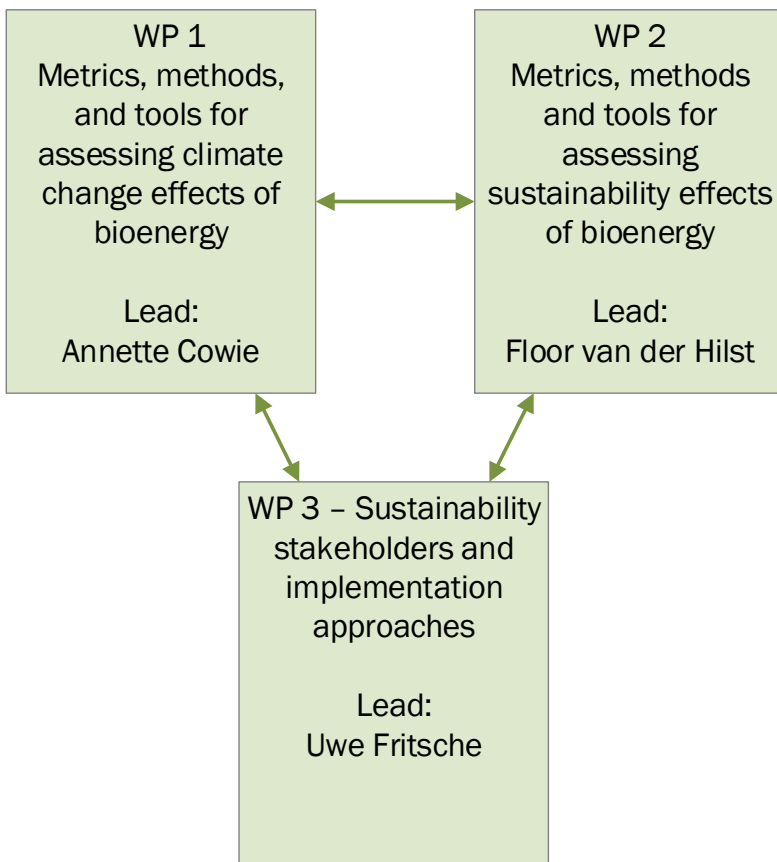
- T45 has started operations beginning of 2019
- T45 will be based on previous T38 work (Climate Change Effects of Biomass and Bioenergy Systems) while the focus and work program will be extended.
- T45 main objectives are:
 - Develop, refine, compare and promote suitable tools for assessing the climate and sustainability impacts of bioenergy
 - Identify how regulatory systems governing land use and bioenergy supply chains can be improved
 - Foster international collaboration and shared views on key technical and methodological issues
 - Aid decision makers in identifying and promoting implementation strategies

Why a new IEA Bioenergy Task on sustainability?

- General agreement: we need to develop modern bioenergy / the biobased economy sustainably
- Concerns about sustainability is hampering the development of the biobased economy
- Some consensus about the key areas of concern:
 - Environmental and socio-economic
 - Key issue is: how to comply?
 - How do we measure / quantify sustainability of biobased systems?
- Objectify the sustainability debate → move forward

T45 Structure

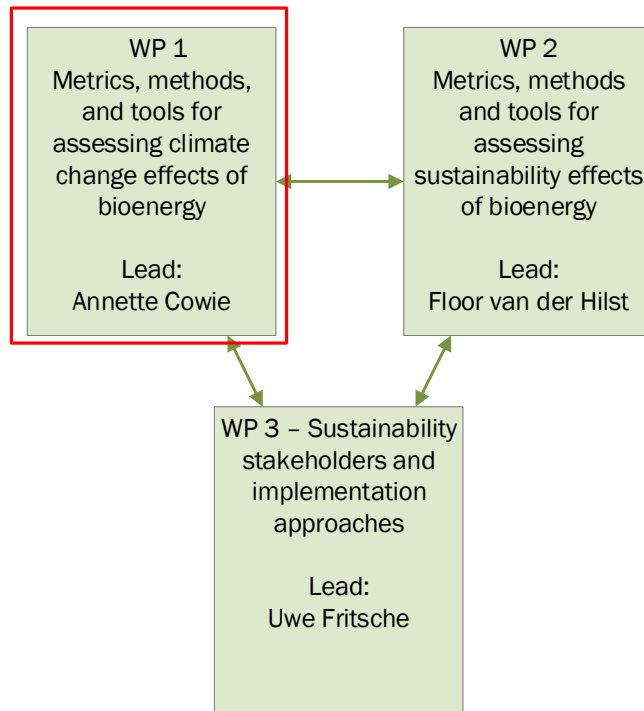
Work packages



Members

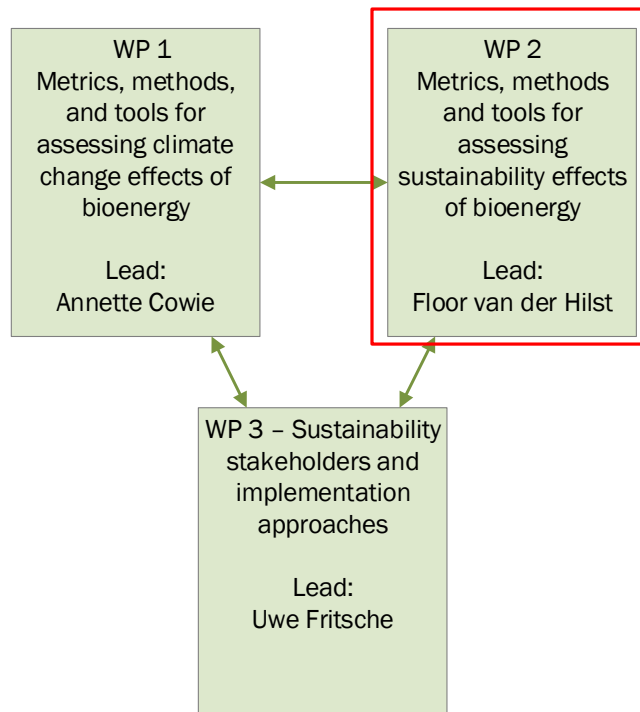


T45 Structure and work programme | WP1 topics



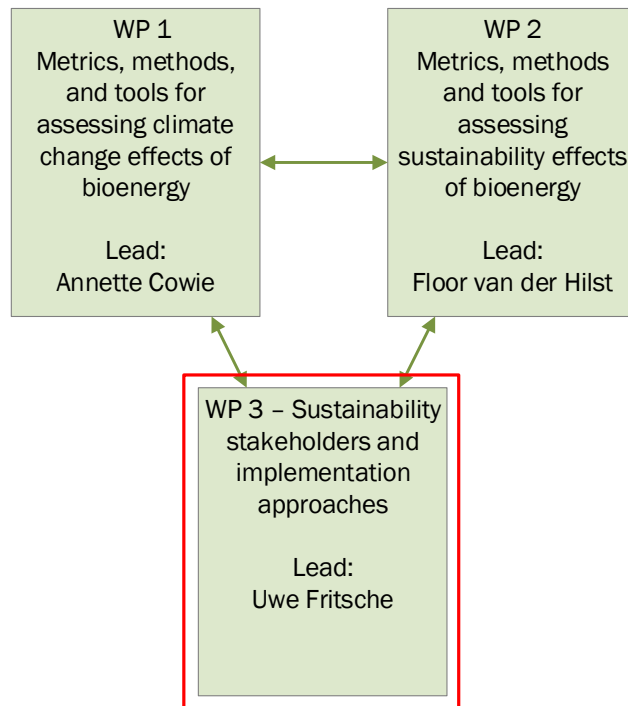
- Guide on methods and tools for quantifying climate change effects of bioenergy
- System-level assessment (demonstrated through national scale studies):
 - land use and energy systems modelling
 - sectoral assessment
- Environmentally extended input-output analysis
- Reconciling top-down global modelling and bottom-up approaches
- Optimizing land carbon balance / biomass production /other forest products; in the context of
 - a) short-term emissions reduction and
 - b) long-term climate stabilisation targets
- Regional studies demonstrating spatial LCA - linking LUC, biomass supply
- Quantifying uncertainty in studies of climate change effects
- Translate building product LCA approach for bioenergy
- Case study: biomass power plan in Drax/UK

T45 Structure and work programme | WP2 topics



- Availability and applicability of metrics, methods and tools to measure and monitor sustainability
- Spatio-temporal assessment bioenergy induced land use change and related environmental and socio-economic effects
- Social and economic net effects of the bioeconomy
- Inform and guide sustainable land use and other resource planning
- Methods and tools for the assessment of location specific trade-offs

T45 Structure and work programme | WP3 topics



- Broader support among stakeholders for sustainable bioenergy as an integral part of the broader bioeconomy
- Organized in three interrelated activities
 - identifying perspectives of stakeholder and promoting exchange of views
 - suggesting ways to make indicators and tools provided by WP1 and WP2 useful for implementation procedures and instruments
 - support the implementation of such necessary procedures and instruments

First activities of T45

- Task Kick-Off meeting in Stockholm, February 2019
- Strong involvement in ExCO 83 workshop; Utrecht, May 23rd
- Involvement in InterTask projects:
 - The Role of Bioenergy in a WB2/SDG World
 - Renewable Gas
- Development of a T45 work plan and prioritization of topics during T45 meeting in Utrecht, May 22nd

Topics and opportunities for T39 & T45 cooperation

- Conventional and advanced biofuels are key elements in future bioenergy systems
- Concerns about sustainability are hampering the acceptance, development and implementations of new technological pathways → several potential links do exist to T45 WPs
- Proposal: Organisation of a T39-T45 conference session at the BBEST in spring 2020 in Brazil



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