

## WEF Nexus in Energy Models - The Case of Biofuel

**Event:** EMP-E Conference 2019, Focus Group, Parallel Session 1C

**Venue:** EC CDMA building, 21 Rue du Champ de Mars, 1050 Brussels

**Date:** Wednesday 09.10.2019

**Time:** 09:30 - 11:15

### Framework and concerns:

According to Renewable Energy Directive II, biofuels remain instrumental in helping EU countries meet their renewables target in transport. In the EU28, biofuel consumption in the transport service has grown more than six fold over the last decade, however biofuels still account for just three to four percent of all transport fuel energy (even less if the double counting approach for 2<sup>nd</sup> and 3<sup>rd</sup> generation biofuels is taken into account). In addition, around half of the EU's production of crop biofuels is currently based on imports of feedstock rather than crops grown by EU farmers.

Indeed, EU Member States like the Netherlands currently still strongly depend on (imported) fossil fuels and alternative feedstocks, and hence, externalise the required resources (e.g. land, water, labour, etc.) and environmental impacts (e.g. land use change, greenhouse gas emissions, etc.). It is unclear whether EU Member States will be able to replace significant fractions of the imported "energy sources" with locally produced biofuels—causing conflicts with food production for instance—or whether such ambitious targets can be met at all.

### Objectives:

This session aims at a critical examination of the uncertainties, trade-offs and controversies surrounding the role of biofuels in decarbonisation objectives using a biophysical perspective based on the water-energy-food-land-climate nexus. The discussion will be informed by the results of the Horizon2020 research project MAGIC – Moving to Adaptive Governance in Complexity: Informing Nexus Security.

The following specific concerns will be addressed:

- To what extent do biofuels contribute to sustainability (e.g. GHG savings, pressures on land), security of supply and market competitiveness -locally and globally-?
- Is the long-term commitment to biofuels encouraging potentially dangerous loopholes (e.g. favour some unsustainable second-generation biofuels)?
- Do advanced biofuels represent a reliable net energy supply for the future (considering the current and future costs and scalability)?

### Expected outcomes:



- Identification of common problems and challenges in modelling the role of biofuels in EU energy policy; evaluating the added value of the WEF-nexus approach.
- Maintaining an open and informed deliberation about the uncertainties and trade-offs inherent in EU policies and related technological innovations in order to guarantee the quality and fairness of the process of decision-making.

### Format of the focus group:

Following two short 10 minutes presentations to prime the discussion, the focus group will take the form of a world café: three twenty-minute rounds of small group conversation around three tables. Each table will be presented with a specific set of questions around the issues listed above.

### Time schedule:

Item	Who	Time allocation
Welcome & Introduction	Raúl Velasco-Fernández	<b>10 min</b>
Presentation of the 'primers'	Mario Giampietro	<b>15 min</b>
World Café	All participants (3 tables)	3 rounds of 20 min each <b>Total: 60 min</b>
Feedback from table hosts and plenary discussion	Table hosts wrapping-up and all participants discussing	<b>15 min</b>
Closing remarks		<b>5 min</b>

**Organizers:** Raúl Velasco-Fernández (Autonomous University of Barcelona), Maddalena Ripa (Autonomous University of Barcelona), Mario Giampietro (Autonomous University of Barcelona)

**Table hosts:** Zoltan RAKONCZAY (DG Research & Innovation); Raúl Velasco-Fernández (Autonomous University of Barcelona); Abigail Muscat (Wageningen University)

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*MAGIC has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 689669. The results presented at the*





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