

# Report on Session 4

## „Biomass for biofuels – policy, markets, effects“

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## Main topics:

- Ecologic and social effects caused by biofuel policies (e.g. RED) in producer countries (Ukraine and Brazil)
- Integrated analysis through different scientific approaches on how to track, capture and govern these effects - political science/empiricism and computational modeling:
  - 1) Characteristics and political-institutional conditions for the agrofuel project in Ukraine, which actors are involved, how do they shape the economic sector and therefore the use of nature.
  - 2) Possibilities and limitations of certification schemes against the background of the rapid changing Brazilian agricultural sector.
  - 3) Impacts of a future demand of biofuels on land use change, projecting the magnitude and spatiotemporal pattern of sugar cane expansion and the effect on other land uses (iLUC) in Brazil towards 2030, and assessing the uncertainty herein.
  - 4) Agent-based approach for testing the robustness of standard economic bioenergy policy models in a trade and land use context.

## Main results and outcomes:

- Possibility to assess indirect effects (iLuc), future developments with computational modeling which are empirically not observable, include policy options and outcomes into scenarios BUT: remaining uncertainties and need to discuss the modeling results in the context of empirical studies, “real world” observation to draw the right conclusions.
- Importance of analysis of political ties and power relations in the producing countries cannot be left aside when talking about land use and land use change. Power relations, access to land, social inequalities cannot be tackled by models but must be interpreted in the political, social, economic and historical context of a country.
- Combination of perspectives can enhance insights of different approaches! While models can especially indicate biophysical changes on land use, political approaches analyse social aspects that relate to changes in nature.

## Research needs:

- Look at political perspectives to explain why things might happen: Could be included in the model, e.g. finding ways to include political influence such as oligarchical structures. How to operationalize political influence of different groups in models?
- Science-policy interface: make the results more visible for policy makers. What happens to the results of the different research approaches? How to put results into practice? Collaborations?
- Need to assess and/or rethink instrument of certification: private, voluntary action vs. national regulation.
- Specify which economic value, employment results for whom: diversifying agents, look at different types of crops which have different efficiencies and costs, production systems, e.g. small or large scale, include data on landownership into the models -> Possible? Additional benefit through inclusion of social aspects into models or need for combination of different research approaches and their results?