## Bioenergy conflicts and their management - a global review

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### Introduction

- A study conducted in a partially company funded consortium – a practical orientation, with an aim to find recommendations for bioenergy related companies based on existing studies on bioenergy conflicts.
- Conflict = Not only a clear battle or fighting but also observable differences in opinion, clashes of interest, disagreements or public protests among the stakeholders





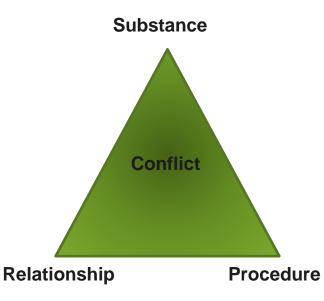
## **Specific characteristics of bioenergy conflicts**

- Bioenergy conflicts are very much like other conflicts encountered related to the use of natural resources (e.g. forestry, agriculture or mining). However, some specific characteristics can be identified:
  - 1. Cross sectoral activities, with simultaneous feedstock management, new technological solutions and the opening of new markets
  - 2. Markets heavily influenced by policy development
  - 3. Large number of stakeholders in long value chains
  - 4. Consumers' high expectation on sustainability
  - 5. Demand for large land areas for biomass production





### **Conflict dimensions**



**Figure 1.** A theoretical framework presenting the three dimensions of conflicts following Walker and Daniels (1997, p. 22).

**Substance**: 'what it is about' the concrete issues about which the disputants argue

**Relationship**: 'how people behave' reflecting the cultural differences at individual, organisational and societal levels, and their interaction

**Procedure**: 'how things are done' Implementation of the bioenergy development, organisational procedures etc.





## **Materials and methods**

- Literature review:
  - 28 peer reviewed journal articles that describe bioenergy conflict onset and/or management
  - Prior, during and after the realisation of bioenergy projects and developments
  - Value chains from feedstock production to consumption
  - Feedstocks: forest biomass, agricultural crops, agricultural waste, municipal waste and algae.
  - 13 countries covering all the continents
- How?
  - Screening of factors and issues that cause conflicts
  - Collecting ideas & experiences in managing the conflicts
  - Analysing them according to the dimensions



## Factors inducing bioenergy conflicts: Substance

- Risks to human health and wellbeing
- Degradation of ecosystems and biodiversity
- Competition with other businesses and forms of income
- Increasing economic inequality
- Questioning climate benefit
- Related to the side-effects of bioenergy production, especially initial stages of value-chain (climate benefit is the exception)
- Initially involves local stakeholders, but if conflicts escalate new stakeholders further along the value-chain get involved
- An emphasized role of scientific data, available information and local knowledge



## Factors inducing bioenergy conflicts: Relationship

- Clashes with culture, way of life and local conditions
- Lack of trust between stakeholders
- Lack of connections between stakeholders to transmit information (no relationship)
- Often about different framings of different stakeholders (esp. neglecting the meaning-making of local inhabitants)
- Common in the beginning of the value-chain with escalation potential
- The role of past behaviors in shaping the future



## Factors inducing bioenergy conflicts: Procedure

- Deficiencies in governance and institutions
- $\circ~$  Lack of recognizing and respecting on-going land use
- Abuse of power
- Exclusion of stakeholders from decision-making
- Relates to substance and relationship by offering the means to e.g. transmit information – procedures can hide or reveal other types of conflicts
- Involves essentially governance structures at state and local levels, thus it may be difficult to influence from a bioenergy company's perspective





# Suggestions for bioenergy conflict management

- Substance
  - Disseminate information
  - Collect more data and information
  - Take improving actions on harmful effects
- Relationship
  - Improve dialogue and communication
  - Increase co-operation
  - Provide capacity building and offer training
- Procedure
  - Increase stakeholder engagement
  - Aim for mediating, harmonization and monitoring of agreements
  - Support, develop and enforce sustainability standards
  - Work with governance





## Conclusions

- Dimension approach facilitates the understanding of the multiple nature of conflicts and gives ideas for conflict prevention
- All serious conflicts include elements from all the dimensions
- All conflicts are unique: it is possible to draw recommendation lists/ check lists, but surprises are inevitable
- The most important recommendation for companies is to consider the entire value chain of the product, even if the particular company is only involved in a very small part of it
- Some conflicts are inevitable, some can even be constructive

