

# The production of scientific evidence on indirect land use change and its role in EU biofuels politics



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# Overview

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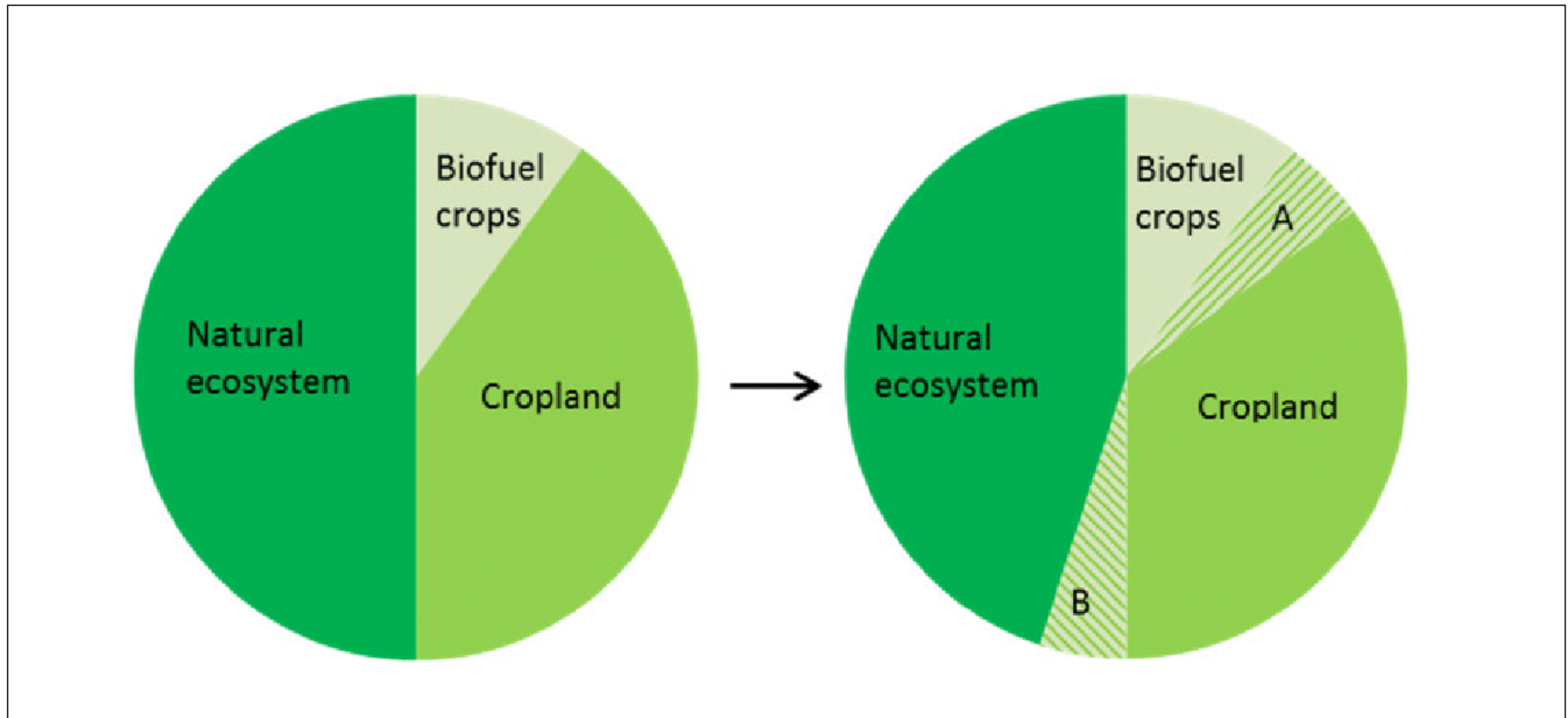
# Background on EU biofuels policy

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- **Biofuels Directive 2003**
  - Non-binding goal of 5.75 percent to be reached in 2010
- **Renewable Energies Directive 2009 (RED)**
  - Binding 10 percent target for biofuels to be reached in 2020
  - Bound to sustainability criteria
    - These exclusively include environmental criteria, e.g. GHG emissions reductions
      - DLUC is included
      - ILUC is not...

# What is ILUC?



## EU ILUC policy process

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- **Recognized as an important issue in 2007/2008**
- **Matter of debate already in the RED negotiations in 2008**
  - Were, however, largely left out of the RED
    - Report on ILUC methodology due in Dec. 2010
- **Remained on top on the political agenda on biofuels**
  - Public consultations in 2009 and 2010
  - Growing research on ILUC commissioned by the EC as well as by other stakeholders
- **Still no decision on how to regulate ILUC**
  - Current proposal: introduce crop-specific ILUC factors

# Research Questions

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- **Starting point: ‚wicked problem‘**
  - Requires new kinds of scientific knowledge production
    - Transdisciplinary knowledge production
- **Questions**
  - How has scientific knowledge on ILUC been produced? Who was involved? Does it qualify as transdisciplinary knowledge production?
  - How has this knowledge been taken up and used in the different stages of the policy process? What kind of scientific evidence gained particular importance?

# Scientific knowledge production on ILUC I

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- **Focus on commissioned research**
- **Several societal actors involved as contracting entities**
  - EU, national authorities, NGOs, business associations
- **Common result**
  - ILUC is a severe problem that cannot be measured or observed, but need to be modeled
- **Methodologies for quantification**
  - Economic models, simplified models

# Scientific knowledge production on ILUC II

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## – Results with regard to regulation

### – Crop-specific ILUC factors

- Estimation of these factors is possible (mainly based on economic modeling)
- Put forward mainly by the studies commissioned by the EC and national authorities

### – Avoid ILUC

- ILUC factors are not sufficiently robust → therefore other regulation measures such as certification, use of on unused land, increasing productivity, using residues, etc. are suggested
- Put forward by studies commissioned by national authorities and business associations

### – Need for action as well as uncertainty are recognized



# What kind of knowledge production?

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## – Transdisciplinary?

### – Partly yes

- Problem-focused research carried out ,in the context of application‘
- Based on societal and scientific problems
- Wide array of societal actors involved in knowledge production

### – But

- Limited formation of a common research object
- No interdisciplinary integration → traditional disciplinary research
- Limited transdisciplinary integration

# Role of scientific evidence in the policy process?

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- **Varying in the different stages of the policy process**
- **Policy formulation**
  - Broad inclusion of many actors and many sorts of scientific knowledge on ILUC
    - ‚extended peer community‘ and ‚extended facts‘
    - ‚science’s finest hour‘
  - Informing and horizon broadening role of science
- **Decision making**
  - Narrowing the relevant scientific knowledge
    - Focus on evidence geared to ILUC factors
    - Focus on ostensibly clear-cut numbers and ‚hard facts‘
  - Legitimizing and rationalizing role of science

# Conclusion & questions

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## – Conclusion

- Science on ILUC fulfills certain criteria of transdisciplinarity, but still has rather been a driver of political struggles than a knowledge broker

## – Questions

- What kind of science would have been needed to prevent this?
  - Would transdisciplinary research have made a difference or would it have been misused as well?
  - Or would this be an excessive demand?
  - What kind of boundary management would have been needed?
- Is the application of the conceptual model of transdisciplinarity applicable in this case?
  - On the societal level instead of on project level?

# Thank you!



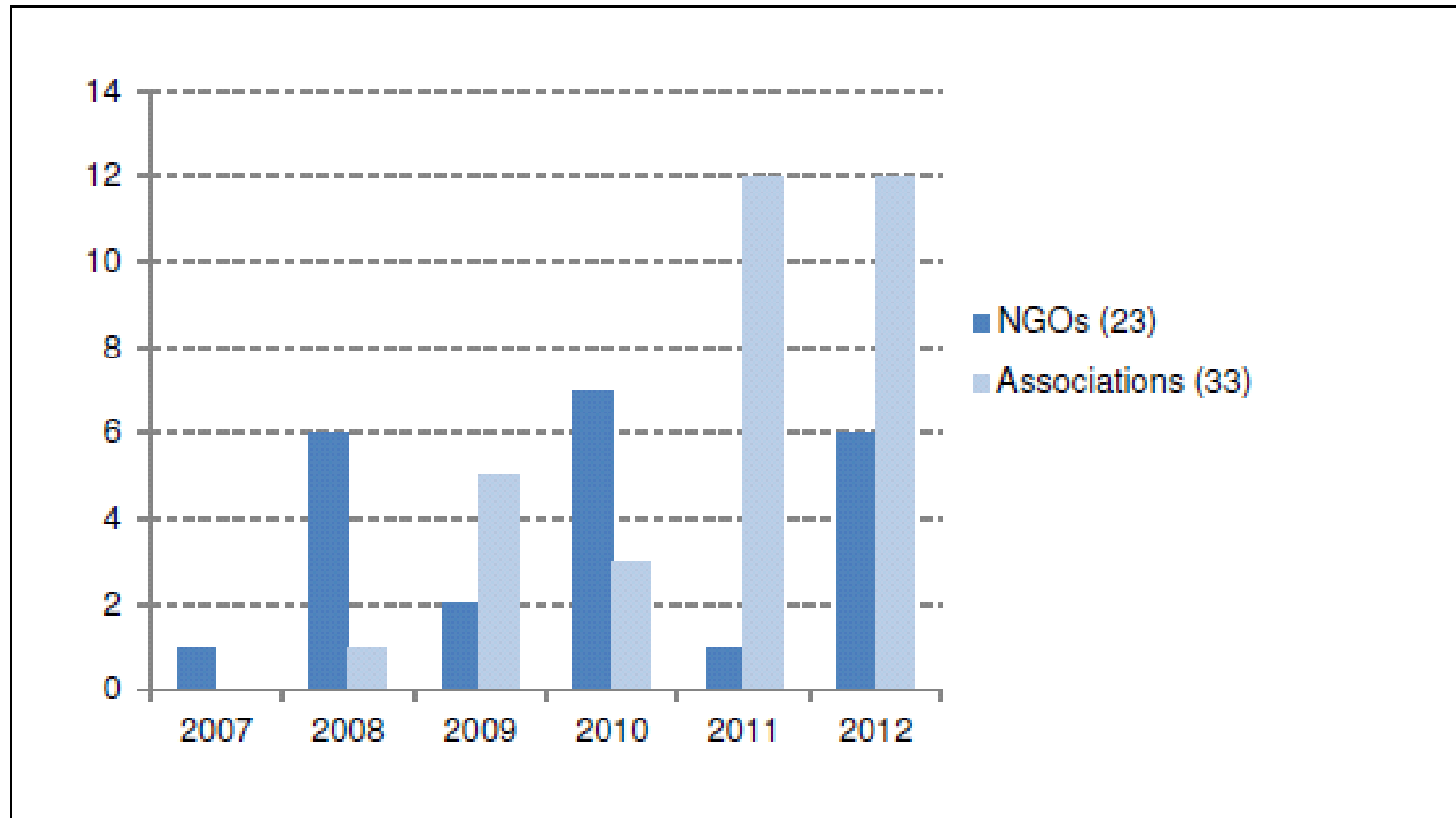
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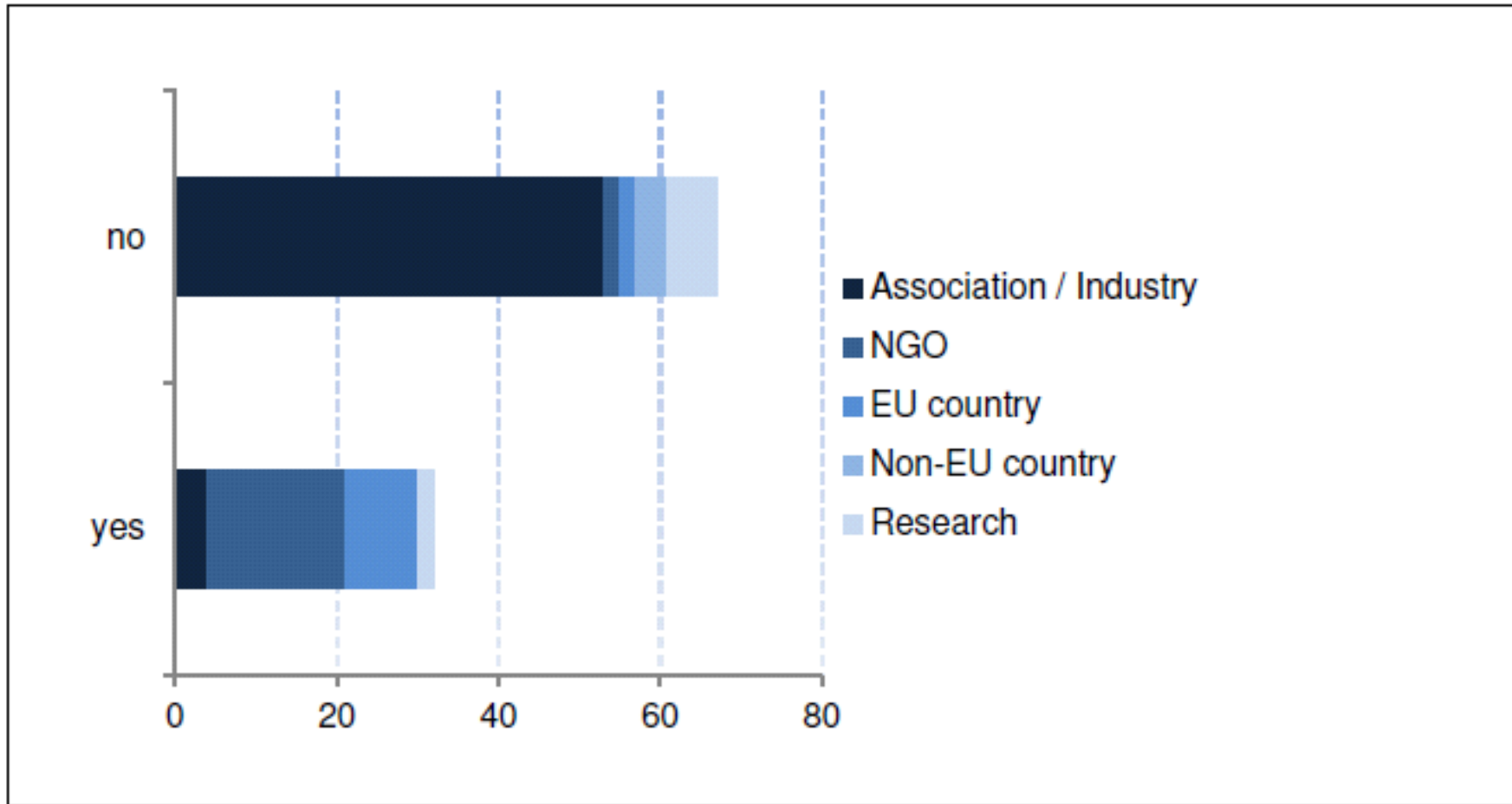
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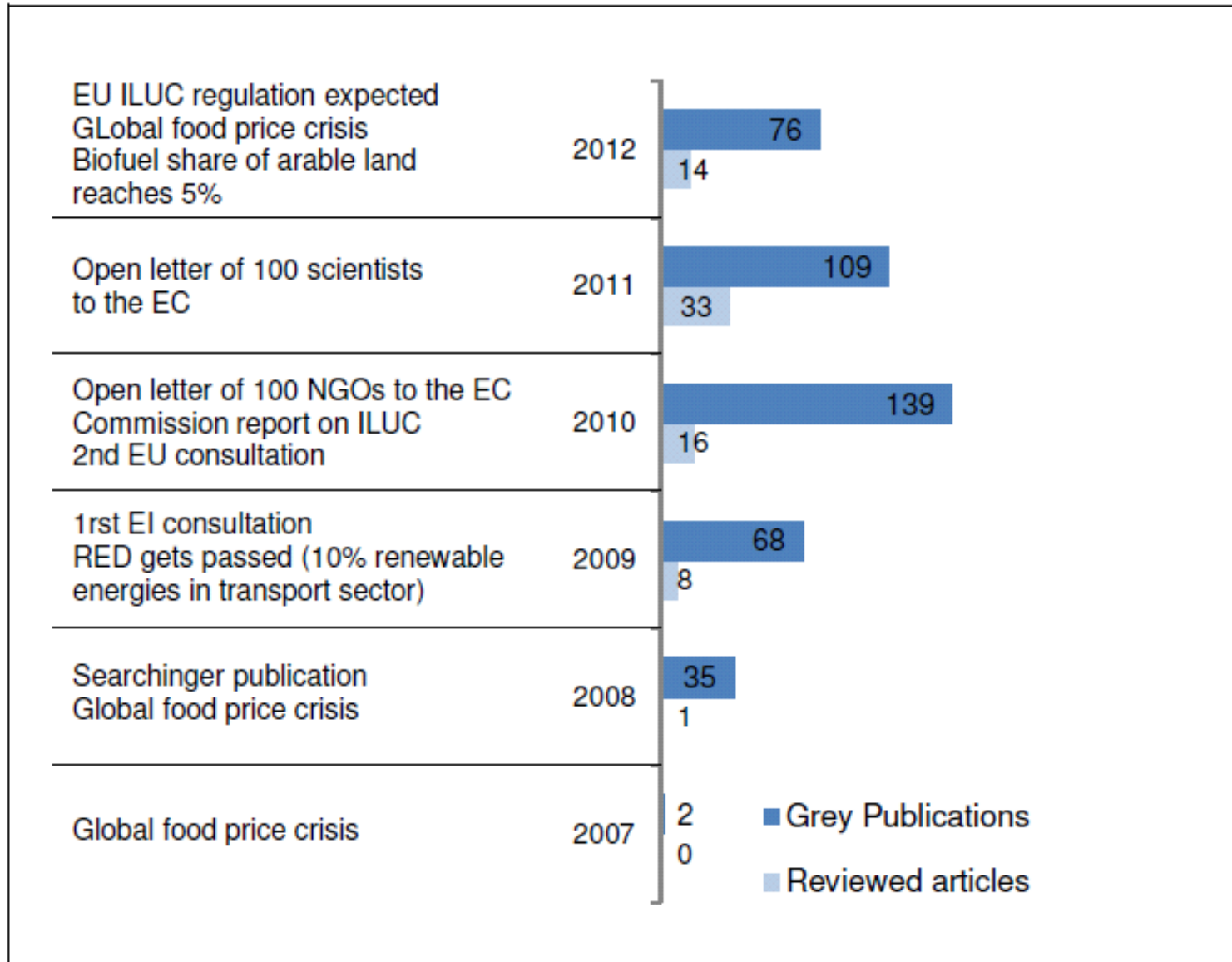
# Number of position papers on ILUC published by NGOs and associations



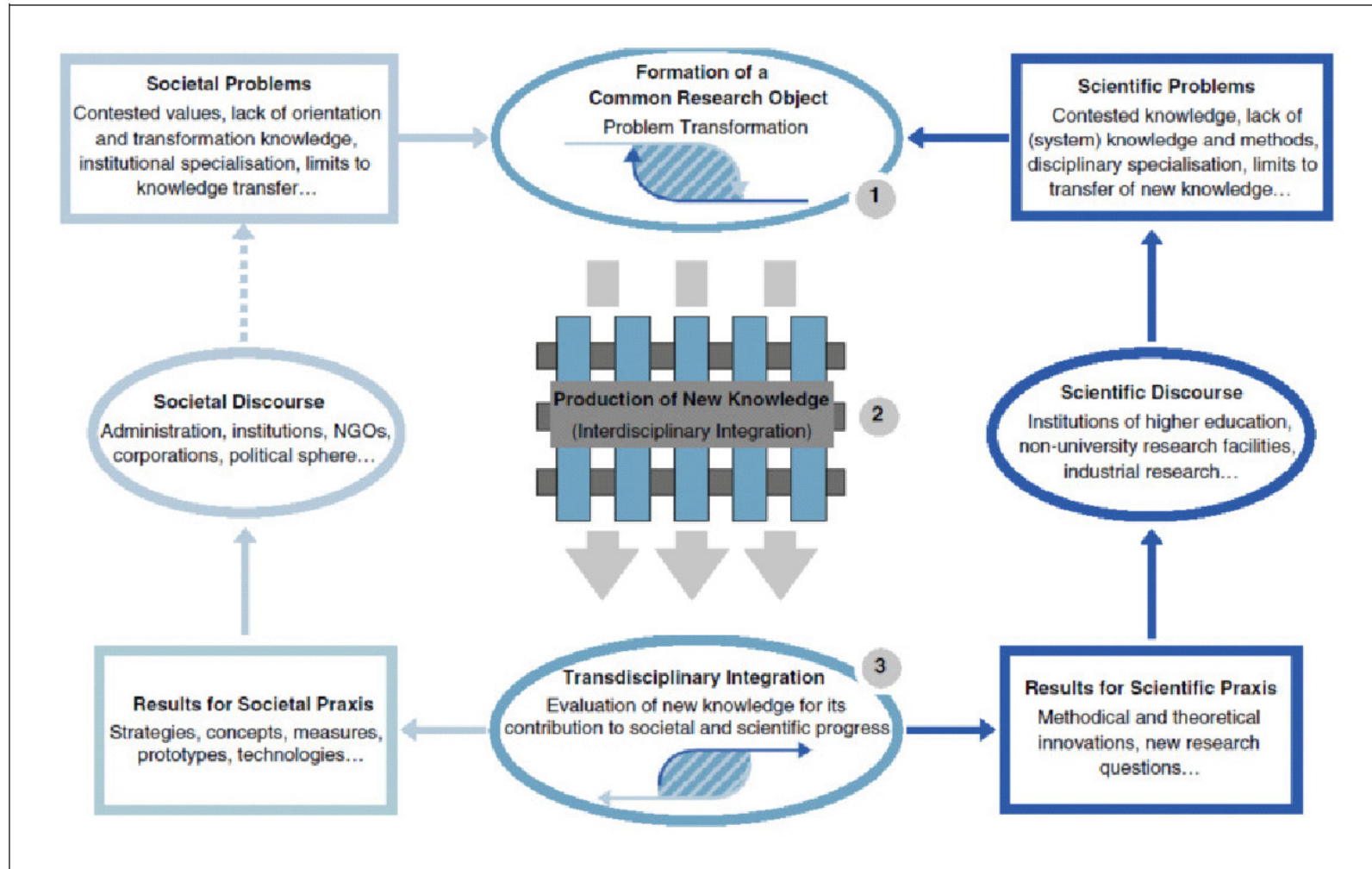
# Stakeholders' answers in the public consultation on ILUC in 2010



# Number of scientific publications on ILUC



# A conceptual model of transdisciplinarity





# A conceptual model of transdisciplinarity

