



Climate policy integration and governing indirect land-use changes—Actors in the EU's biofuel policy-formulation



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ABSTRACT

Indirect land-use changes (iLUC) have challenged the rationale of decarbonising the transport of the European Union (EU) through biofuels. As a contribution to existing literature, I map the groups of actors connected with the EU's biofuel development through a cluster analysis and, further, examine their opinions about how iLUC should be governed. My analysis does not only reveal the heterogeneous interpretations of iLUC and its governance. It also illustrates how the iLUC directive proposal of the European Commission has two challenges related to making successful climate policy integration in a globally operating, multi-scalar assemblage of actors. Firstly, the scientific basis of policy-formulation was called into question when the actors explicated the limitations of the iLUC models by utilising their distinctive situated knowledge of iLUC. Secondly, the instruments that were proposed in the directive do not recognise how iLUC impacts could dampen through developing land-use practices, which was not a majority view within the actors of the European biofuel assemblage. I end this article by suggesting that acknowledging actors' capacity to influence the greenhouse gas (GHG) emissions originating from land-use changes might mitigate the tensions between the EU's climate policy targets and those affected by such policies.

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Introduction

Liquid biofuels offer a renewable substitute for using fossil-fuels in transportation, a sector that is otherwise challenging to decarbonise. The EU was quick to embrace liquid biofuels as a sustainable alternative, but their rapid development raised concerns about their impact on food security, tropical deforestation, and growing GHG emissions from land-use changes (see IPCC, 2011, Chapter 2). This growing contradiction between the aims of EU biofuel policy and the actual consequences of biofuel development has resulted in political debate within the Union about how to balance its competing desires to decarbonise road transportation without impacting efforts to promote food security and environmental conservation. EU biofuel development has been strongly influenced by the Renewable Energy Directive (RED), which set an obligatory 10% renewable-fuel target for 2020, while the Amended Fuel Quality Directive (FQD) requires 6% emission reductions from traffic fuels (EC, 2009a,b). These directives also introduced sustainability criteria to tackle the direct negative environmental and

climatic consequences that result from land-use changes related to producing biofuel feedstock, such as increasing the use of fertilisers or converting pastures into plantations.

Despite these directives, negative land-use impacts resulting indirectly from biofuel activities, such as diverting agricultural food crops to fuel, were not included in the initial sustainability criteria. Therefore, the European Parliament required the Commission to develop policies to assess and alleviate the problem of iLUC. The impacts of iLUC originating from direct land-use changes are mediated around the globe by mechanisms ranging from world oil markets to individual displaced pastoralist communities (Laborde, 2011). Consequently, they are somewhat 'non-local', as Fritsche et al. (2010, p. 3) pinpoint, since the exact locations in which they occur cannot be known. Despite the importance of tackling this detrimental, indirect consequence of fast biofuel development, reaching a political solution in the European Commission was slow and conflicted. To date, final agreements have not been reached concerning the iLUC directive proposal of the Commission (EC, 2012). While the majority of the scientific publications concerning iLUC have examined the scope and the methodologies of assessing the impacts of this indirect phenomenon, there are also detailed analyses of iLUC as an object of policy (e.g. Palmer, 2012, 2014; DiLucia et al., 2012; Wicke et al., 2012; Khanna et al.,

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2011; Humalisto and Joronen, 2013; Levidow, 2013; Ostwald and Henders, 2014).

I examine the iLUC policy-formulation of the EU as a case of climate policy integration (CPI) concerning the governance of biofuels as a contribution to existing literature. Palmer (2012) suggests the governance of iLUC has mainly focused on tackling GHG emissions indirectly caused by land-use changes in versatile locations (also Humalisto and Joronen, 2013). Consequently, the policy-making of iLUC fits the core idea of CPI which, in its simplest form, refers to integrating climate policy targets and legal instruments into other policies operating on different sectors and scales (e.g. Adelle and Russel, 2013; Rietig, 2013). I examine this case of CPI through the wide constellations of actors who are being influenced by the EU's biofuel policy and influencing the policy-making processes themselves. The EU decision-making institutions have versatile official and unofficial association to research institutions, biofuel producers, countries of Global South, environmental non-governmental organisations (NGOs), and many others. The institutional policy-formulation of the EU has multiple relations with the heterogeneous assemblage of actors.

Agency in the biofuel policy-formulation of the EU has been touched by Palmer (2010), Pilgrim and Harvey (2010), and Levidow (2013). Those authors, however, did not fully tackle the scope and heterogeneity of those involved in policy-making. Mapping the network of actors involved in EU biofuel development has empirical value in itself and, moreover, advances further governance analyses concerning the EU's biofuel policy-making by demonstrating the versatile opinions about the suitable instruments suggested for governing iLUC. I elaborate the outcomes of the analysis in two directions. *Firstly*, this examination shows how many of the actors bring forward interpretations about iLUC and its governance that are based on their localised, situated knowledge how their operations cause iLUC impacts or how those impacts could be dampened. Those understandings contradict with the one presented by the European Commission in its directive proposal. The actor-based analysis thus provides greater understanding about the conflicting interests within iLUC policy-formulation of the EU. *Secondly*, I use iLUC as a case to underline some of the challenges of building CPI into a global, multi-scaled assemblage with instruments that do not acknowledge the capacity of those actors involved to mitigate problems they are causing. Through the approach of assemblages, I unfold a way to examine the challenges related to operationalising CPI, which has been considered as an understudied topic by Adelle and Russel (2013).

I begin my analysis by mapping the constellation of actors that have influenced the Commission in constructing the iLUC directive proposal. The point of entry is taken from the public iLUC consultation organised by the Directorate General (DG) of Energy in 2010 to seek 'advice on both the scale and characteristics of the problem, as well as, if the scale of the problem is significant enough, how it should be addressed' (DG Energy, 2010). Altogether, 144 individuals, NGOs, companies and advocacy groups from different fields of operations provided responses to whether the iLUC models were able to verify the presupposed association between EU biofuel development and iLUC (iLUC Consultation Submissions, 2010 a small sample follows). Furthermore, consultants were asked what kind of political instruments should be implemented to reduce the negative consequences of iLUC. An underlying assumption here is derived from the notion of Peck and Theodore (2010, p. 170): political actors form knowledge and practice-based communities (also Wallace, 2010). Rather than following the operations of individual actors, I analyse the grouping of actors by using a quantitative cluster analysis. Prior to examining the actors, however, I shortly describe the conflicted character of preparing iLUC directive in the EU and outline the theoretic commitments underlying this research.

The EU and iLUC policy-formulation through the approach of assemblages

The preparation of iLUC directive began after the European Parliament mandated the Commission to develop methodology for assessing the scope and importance of iLUC after agreeing on the implementation of the RED. The recent discussions about indirect land-use changes caused by EU biofuel development are strongly related to the directive proposal of the European Commission (EC, 2012) that was presented in October 2012 after being delayed for almost two years. The proposed instruments of the Commission for governing iLUC have evolved when being transferred and translated within the EU institutions. Notably, the DGs of Climate Action and Energy of the Commission had distinctive opinions about optimal strategies for mitigating iLUC (e.g. EurActiv, 2012). In the European Parliament, alternative versions of the instruments for governing iLUC were presented, however, the Parliament could not agree on the suitable course of action (for example, compare ENVI, 2013 and ITRE, 2013). Because of that, the Lithuanian presidency prepared its own proposal for an iLUC directive, which was eventually rejected as well (Council, 2013a; see discussions in Council, 2013b). In 2015, it is still unlikely that the Parliament and Council could reach consensus on the instruments for governing iLUC (e.g. Flynn, 2015).

Despite the central role of the institutions of the EU in policy-formulation (see Pollack, 2010), the preparation of the iLUC directive has involved a wide scope of biofuel refiners, individual Member States of the EU, environmental organisations, and other actors associated with EU biofuel development. Clearly, EU Member States do not monopolise the policy-formulation of the Union (Jones and Clark, 2001; Ripoll Servent and Busby, 2013). The Commission functions as an interlocutor between governments, authorities of Member States, and a multitude of interest groups around the globe. In other words, the political and legal instruments of the EU do not only influence multiple scaled and sectorised actors. These actors are also seeking to influence the designing of political and legal instruments in the EU via both official and unofficial routes. Furthermore, as Peck and Theodore (2010) and Wallace (2010) argue, actors do not act alone but they form policy and practice based communities in order to increase their influence on policy-formulation processes.¹ Although this article does not scrutinise the actual interactions between versatile actors and the official decision makers of the Union, the goal is to emphasise that the political and legal initiatives how to govern iLUC do not emerge solely from the EU institutions.

Through assemblages, researchers have conceptualised the combination of discursive and non-discursive elements and human actors that constitute a group of heterogeneous, individual, entities (Braun, 2006; DeLanda, 2006; Li, 2007; Anderson and McFarlane, 2011; Anderson et al., 2012). This approach is well suited for understanding the evolving character of biofuels as their development consists of not only discursive but also physical, biological and technological elements, including the motor vehicle fleet of the EU, the fuel distribution infrastructure, the GHG emissions and the forest biomasses of EU Member States (Mol, 2007; Hollander, 2010; Smith, 2010; Humalisto, 2014a). While acknowledging that political and legal instruments cannot change biophysical factors such as GHG emissions resulting from land-use changes, they can, nonetheless, influence how these factors are treated in

¹ See Humalisto (2014b) how biofuel associated actors have created networks in Finland and Sweden in order to gain influence in municipal, national and EU scale policy-formulation processes.

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