Fragile Legitimacy:
The Rise and Decline of the EU’s ‘Sustainable Biofuels’ Policy

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Introduction

In April 2015, the European Union agreed on a significant change in the field of energy and environmental policy: the winding down of the EU’s promotion of conventional biofuels. This decision was a reversal of the EU’s former long-term commitment to stimulate the use of these alternative fuels in the transport sector, which currently amounts to 6 billion euro per year in subsidies.

I will argue that this reversal was caused by a crisis of legitimation that made preservation of the existing policy socially unsustainable. While the introduction and expansion of subsidies for conventional biofuels in the 2000s were legitimated in the name of advancing sustainable development, starting in 2007 this public perception shifted dramatically. Conventional biofuels came under attack from NGOs, IOs, and scientists that saw the production of these alternative fuels as a cause of environmental degradation and human suffering. While the institutional inertia of the status quo ante and the presence of powerful business interests delayed a rapid termination of the political trajectory, the promotion of conventional biofuels was ultimately scaled down as a means to reestablish the lost legitimacy.

The case of the rise, crisis, and decline of the EU’s policies to promote conventional biofuel is thus not just a case of an unlikely political change undermining the staying power of an existing policy, but also a case of an empirically underexplored phenomenon: normative change. The eruptive and fast-paced character of changes in the public perceptions of what is a legitimate policy and what is an illegitimate policy is especially difficult to subsume under existing theories of the role of social norms in political processes, which conceptualize these as relatively stable social institutions.

Consequently, in order to explain the unlikely political change, I will first of all have to go beyond the conceptualization of legitimation as a stabilizing feature of a political community. I will argue that public perception of legitimate and illegitimate action are not self-evident but need to be strategically and creatively crafted. This crafted legitimacy is not simply stable and path-dependent but also inherently always incomplete, fragile, and thus prone to crisis and change. This is because it is always partly based on certain future expectations, promises, and hopes that are ultimately uncertain. When such a socially constructed future imagination becomes doubted or contradicted, and powerful actors rally this contradiction, the legitimacy is likely to collapse. Such a crisis of legitimation triggers a phase of experimentation through which a new norm equilibrium slowly consolidates.

1 In the following, when I refer to ‘biofuels’ or ‘conventional biofuels’ I always refer to the food-based, first-generation biofuels -- mostly biodiesel and bioethanol -- which make up over 95% of the market of biofuels in the EU. When I refer to a different subset of biofuels, I will make this explicit.

2 International Institute for Sustainable Development 2013.
After having elaborated this conceptual innovation, I will bring it to bear on my case study by highlighting the role of future expectations in the rise, crisis, and decline of the EU’s biofuels policy.

**Crafting Legitimacy, Fragile Legitimacy**

The social norms of a community are usually understood as stable institutions that narrow down agency by deeming some actions legitimate and inhibiting others as illegitimate. Action that is guided by norms is characterized as the execution of “taken-for-granted standards”\(^3\) or “taken-for-granted scripts”\(^4\), doing “what passes for ‘normal’”\(^5\), or accords with the “standards of appropriate and legitimate behavior”\(^6\). Some of these scholars assume that the human animal is an unconscious rule-follower per se, and obeys a logic of appropriateness. Some argue that structural pressures will give competitive advantages to agents that imitate the prevalent ideas of legitimate practices. Others point out how the social costs associated with inappropriate behavior alter the choices of rational agents.\(^7\)

But despite these differences, these approaches all rely on causal processes and mechanisms in which agency is narrowed down by social norms.

While these accounts of norm-guided action can be very useful in explaining the long-term trends and stable differences between political communities, or the strategic use of a normative commitment to shame deviant actors, they are unfit for my research questions that ask how a new normative claim can emerge and change. Following Patrick T. Jackson, this is because “[t]he basic analytical question – how these notions become ‘legitimate’ in the first place – is left aside and without an answer to this question analysts are left in the uncomfortable position of presuming, without demonstrating, the transcendental normative validity of some fairly contentious ethical position”.\(^8\)

To illustrate this point, let’s consider an example from my case study. A legitimating notion that is central to the rise of policies to promote conventional biofuels is the claim that these alternative fuels are promoted in the name of advancing a sustainable development. But the environmental sustainability of biofuels was far from being self-evident or taken-for-granted when the first policy-proposals to promote biofuels were put forward in the early 1990s. Thus, starting from the assumption that a commitment to sustainable development prior to the onset of the policy-trajectory drove the European Union to promote biofuels would be either empirically distorting or at

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\(^{3}\) Meyer 2008, 792; Meyer and Rowan 1977.

\(^{4}\) Goetze and Rittberger 2010.

\(^{5}\) Manners 2006, 253.

\(^{6}\) Gurowitz 1999, 417; March and Olsen 1998.

\(^{7}\) For an instructive summary see Campbell 2002.

\(^{8}\) Jackson 2006, 20. The argument that this family of theories of action are unable to account for emergence and change as the concept of culture and norms is too structural is nearly as old as the discipline of sociology. Harold Garfinkel famously criticized his doctoral-father and originator of a theory of action based on norms, Talcott Parsons, as reducing human beings to ‘cultural dupes’. See also Wedeen 2002, 719, for a similar critique of Geertzian conceptions of culture. See Joas 2000 for a comprehensive discussion of this problem from the perspective of philosophy and social theory.
least omit an important causal processes in the coming about of the policies. In order to make sense of the rise of policies to promote biofuels, one thus needs to ask how the link between the abstract sustainability-norm and the concrete policies to promote conventional biofuels has been crafted to begin with. Rather than asking how an existing set of social norms narrowed down agentic choices, the question is how a new possibility to act in a legitimate way had been crafted.

Following classical constructivist social theory, practices of crafting legitimacy generally aim at weaving new contestable claims into the always already existing social and material fabric of legitimate statements and practices. A non-exhaustive list of these practices and procedures to craft legitimacy includes the procedures of democratic institutions, the use of precedents and analogies in legal trials and political discussions, discursive and deliberative practices in the public sphere, the use scientific knowledge, or the authoritative ignorance of subjugated knowledge or experiences. Importantly, whether an actor joins in the political crafting of legitimacy for a policy because of his or her perceived interests, or whether he or she does so out of a feeling of obligation is of little importance here as both drives have to be channeled through the same practices.

In the first part of my case study, I will thus trace how a variety of economic, political, and environmental actors – despite their diverging interests -- came to embrace the concrete policies to promote biofuels in the name of advancing sustainable development; and how this surprisingly uncontentious agreement was – in this particular case – actively crafted through the creative and strategic production, interpretation, and use of scientific practices and expert knowledge. Problematically, while the notion of crafting legitimacy can help us to illuminate how conventional biofuels came to be publicly perceived as sustainable, and how this widespread agreement subsequently paved the way for the uncontentious introduction of the costly subsidies, it still leaves us clueless about the major puzzle that this paper is concerned with: the emergence of a crisis of legitimation that ruptured the legitimacy of the promotion of conventional biofuels and triggered political change.

In order to make sense of this political change and anomalous mode of norms-change, I need to introduce and develop the central conceptual advance of my essay. And that is, to elaborate the fragile dimension of legitimacy. In my non-exhaustive list of examples of possible practices, procedures, or tools to craft legitimacy, I intentionally left out the one that is crucial to understanding the fragile dimension of legitimation: the strategic use of future expectations, promises, and hopes to craft legitimacy for a political trajectory. I contend that expectations, promises, and hopes make the political crafting of legitimacy possible in the first place, but at the

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9 See Berger and Luckmann 1966, 92–98, 160 on ‘legitimation’ and ‘system maintenance’. Constructivist social theory is of course an enormous body of literature. My approach is closest to and scholars who turned away from a focus on social discourse, but to practice associated for example with the work of Bruno Latour. See, Latour and Woolgar 1986, 82–86 on the ‘the transformation of statement-types’ and the ‘construction of a fact’.


11 The strategic use of future expectations as a means to gain legitimacy and widespread support for emerging trajectories has long been studied in the science studies and the sociology of expectations, see Lente 1993; Brown, Rappert, and Webster 2000; Borup et al. 2006; Moreira and Palladino 2005.
same time, these politics of expectation make it inherently fragile. This is because expectations are inevitably somewhat uncertain and thus always promises that may fail to be realized. In other words, every action in the name of a norm is always to a degree grounded in a legitimacy-debt that must be redeemed in the future. Consequently, when central expectations, promises, or hopes fail, when the uncertainty inherent in predicting or shaping the future manifests as a contradiction between expectations and reality, the debt might fail to be redeemed.\footnote{This description does not coincidentally converge with William James’ argument to understand truth as a credit system, see James 1907, 80. Of course, the phenomena of fragility of norms, ideas, or institution is not exhausted by my focus on the paradoxical role of expectations. More research needs to be done to on what William E. Connolly coined the “fragility of things”, see Connolly 2013.} Events are thus more likely to turn into crisis of legitimation when it directly ruptures the endogenously crafted legitimacy of the political trajectory, as the crafting of legitimacy sows the seeds of its crisis and change.\footnote{Mahoney and Thelen 2010; Streeck and Thelen 2005; Tsai 2006. The paradoxical role of expectations can be understood as one – albeit small scale -- mechanism through which the self-reinforcing qualities of a norm is punctuated, see Greif Laitin 2004, 639, Krasner 1984 240} Thus, I follow recent advances in theories of institutional change that try to move away from the explanation of change to ‘exogenous’ and thus unexplained factors and instead develop endogenous accounts of change. But while these accounts of incremental modes of change that often lead to subterranean and in the short term unnoticed change, I want to focus on a different mode of change: the dynamics of and around critical events.\footnote{On rhetorical entrapment see Rittberger and Schimmelfennig 2006.}

But contradictions between expectations and actual consequences do not necessarily lead to a crisis of legitimation. Most policies do not achieve all their goals or lead to unintended consequences. The dissonances between expectations and reality only become decisive when powerful agents rally them, alert the media, commission further engagement with the issue, call on courts, or lobby their responsive representatives. Such contradictions or initial doubts then challenge the policy-drivers on the turf that they used to craft the legitimacy of the policy. The policy-driver is rhetorically entrapped and committed to the crux of the contradiction through his or her own past crafting.

Furthermore, building on Schmidt’s account of norm change,\footnote{Schmidt 2014.} I contend that such a crisis is followed by a phase of experimentation in which the legitimacy has to be recrafted. In this phase, various actors propose responses that aim at weaving together the encountered contradiction and the old normative trajectory – bringing about lasting change in the practices of crafting, and the public perceptions of legitimate political action that no actor intended at the outset. (Connolly 2013, 75)

\textbf{The Political Craft and Fragile Legitimacy of 'Sustainable Biofuels'}

Following my theoretical argument, in order to understand the emergence and effect of the crisis of legitimation of the EU’s biofuels policy, we need to understand how the legitimacy of this political trajectory was crafted. Such analysis of the crafting of the legitimacy of the biofuels policy will not only help to develop a causal account for the rise of policies to promote the use of biofuels in the
EU. It also allows us to single out the uncertain expectations, promises, and hopes on which the legitimacy of biofuels rested, and thus to identify the fragile spots of the political trajectory, which will become decisive in understanding the emergence and dynamics of its crisis.

*The Emergent Craft of ‘Sustainable Biofuels’*

The European Commission is easily identifiable as one of the main driver of the idea to promote biofuels in the name of sustainable development -- even though there was little evidence to ground this link between the concrete policy and the abstract norm.\(^{16}\) One can find statements of this kind as early as 1992, in a policy paper on the future of the EU’s “sustainable mobility” and a draft-directive that proposed tax exemptions for fuels from agricultural products.\(^{17}\) The crucial argument used to justify the link between biofuels and sustainable development was the expectation that biofuels would limit “harmful emissions”\(^{18}\) in comparison to fossil fuels. To substantiate this expectation the Commission referred to findings that were presented at the symposium “Auto Emission 2000”\(^ {19}\), a conference in which some of the major industrial stakeholders and scientists discussed the future of transport and the role of biofuels in it. But during this symposium, there was little straightforward evidence for the alleged emissions savings that might come with the promotion of biofuels. Rather, there was the opposite. For biodiesel, the biofuels made from mostly rapeseed in Europe that was expected to dominate the European biofuels market and today has a market share of around 80 percent, it is stated that: “In a recent study into the overall environmental effects however, it was concluded that greenhouse gas emissions from the full production cycle of esterified rapeseed oil are no lower and probably higher, than those of the full (fossil) diesel fuel cycle.”\(^ {20}\)

Despite the presence of these uncertainties and pessimistic voices, the Commission did not back down from crafting the idea of ‘sustainable biofuels’. To the contrary, the Commission intensified its efforts to push for evidence that would allow the crafting of a link between the concrete policy and the abstract norm. The most important of such trials was established in 1997, when the Commission ordered their own research and advisory group on the future of transport, the industry-dominated Auto-Oil II project, to investigate the potential GHG-emissions savings that could accompany the substitution of fossil fuels with biofuels. In the year 2000, the Auto-Oil II project presented its findings with a clear and certain statement that “[b]iofuels produce less greenhouse gases” than fossil fuels.\(^ {21}\)

But this ‘scientific fact’ again becomes questionable when one engages in close scrutiny of the study

\(^{16}\) As inevitable for every historical narrative, I have to start at a point in time that is too a degree arbitrary. On the still fragmentary prehistory of the biofuel technology that took off shortly after Oil-Crises in the 1970s, see Bernton, Kovarik, and Sklar 2010. On the history of the notion of a ‘sustainable development’, see Redclift 2005. On the development of the EU’s environmental policy, see Knill and Liefferink 2007.

\(^{17}\) Commission 1992a; 1992b.

\(^{18}\) Commission 1992b, 6.

\(^{19}\) Commission, 1993b, 35.

\(^{20}\) Commission 1993a, 188.

\(^{21}\) Auto-Oil II 2000, 92.
that the Auto-Oil II project used to substantiate it. This study actually highlights the uncertainty around the method and the data used to measure the GHG output of biofuels.\textsuperscript{22} Even after more than a decade of refining the data and models, the so-called life-cycle-analysis is subject to an array of uncertainties and problems that make it difficult to generalize its findings.\textsuperscript{23} Despite these open scientific questions, the Commission quickly spread the ‘new certainty’ of environmentally sustainable biofuels in a series of policy papers.\textsuperscript{24}

But as I argued, legitimacy is not simply a function of convincing use of evidence, but also depends on rallying widespread support from diverse actor groups. In this case, most importantly, the potential recipients of the subsidies, the agricultural industry, and the legitimate ‘guardians’ of environmental sustainability, green-minded interest groups and political parties. Unsurprisingly, the Commission quickly found a partner in the agricultural industry that had strong economic interest in the sustainability and subsequent promotion of biofuels. Especially in a time when subsidies for the agricultural industry became increasingly attacked as illegitimate for environmental and humanitarian reasons.\textsuperscript{25} In contrast, environmental groups were divided over the issue of biofuels. The German Green Party, which helped to install one of the strongest promotional regimes for biofuels in Europe at the time, is an example for a positive evaluation of the sustainability of biofuels.\textsuperscript{26} Other environmental groups argued that a series of environmental problems could arise due to the industrial practices necessary for the large scale production of biofuels such as monocultures. This could lead to “detrimental effects on biodiversity”.\textsuperscript{27} Furthermore, environmentalists questioned the cost-benefit efficiency of biofuels as a means to fight Global Warming.

Despite the discord of the environmental groups over biofuels, the emerging coalition of various interests around the idea of ‘sustainable biofuels’ paved the way for the biofuels-directive of the European Union. In 2003, the Member States agreed upon an indicative target of 5.75%. The indicative target did not stand alone, but was accompanied by a broad governance framework which included the submission of national action plans to achieve the target, a review scheme led by the Commission, and the possibility to reconsider a mandatory target if the indicative target is not

\textsuperscript{22} See, Arcoumanis 2000, 16.

\textsuperscript{23} See e.g. Bessou et al. 2011, 365-366. In a life-cycle analysis, the GHG emissions from all parts of the production, transportation and use of the fuel are estimated. As there are a vast number of variables that can vary, e.g. the crop used, the geographical area, the land-use, the method is in the need of careful modeling and comprehensive data. These problems, especially at this early stage, will become clear when in 2008 the indirect effects of the production of biofuels on the market for arable land will be measured and included in such an analysis for the first time. This will drastically alter the projected GHG emissions associated with biofuels.

\textsuperscript{24} Commission 2000; Commission 2001.

\textsuperscript{25} Verein deutscher Zuckerindustrie 2002.

\textsuperscript{26} Grüne Fraktion in the Bundestag 2002.

\textsuperscript{27} European Environmental Board 2002, 13.
achieved without good reasons.\textsuperscript{28}

One major reason why the Council was not able to agree upon mandatory targets was a discord between the Member States that corresponded to the debate between and within the environmental and agricultural interest. The proponents of mandatory targets consisted of those Member States that were responsive to the agricultural interest or saw biofuels as a means to push for a more environmentally sustainable transport sector. The Member States that opposed such a rigid scheme followed the skeptical environmentalists to question the cost-effectiveness and the uncertain environmental benefits associated with the increased production and use of biofuels. The prime example of this latter group is Denmark, which, despite the agreement, started to deliberately ignore the indicative target and thus entered a collision course with the Commission.\textsuperscript{29} A comprehensive consensus around ‘sustainable biofuels’ that could carry an agreement on mandatory targets was thus still to be crafted.

‘Sustainable Biofuels’ as a Regime of Hope

Until 2003, the notion to promote conventional biofuels in order to advance environmentally sustainable development relied on one central prediction: that the increased use of conventional biofuels in the transport sector will lead to GHG emission savings. But despite strong political efforts to validate this prediction, and some scientific evidence that this might be the case, it was still not accepted and taken-for-granted by all. For example, a controversially received but influential study found that the production of some conventional biofuels actually requires much more energy than they produce.\textsuperscript{30}

In the years following the legislation of the biofuels directive, the Commission thus directly countered the doubts of scientists and environmental NGOs by increasingly grounding the legitimacy of the policy in uncertain future expectations, promises, and lofty hopes. A “regime of hope” was crafted that highlighted the future potential and promises of the alternative fuels, rather than the currently more positively known consequences.\textsuperscript{31}

The first major component of this regime of hope was the highlighting and elaboration of the promise of efficient sustainability criteria. The Commission promised that a set of rules and regulations would guarantee that “only biofuels whose production in the EU and third countries complies with minimum sustainability standards will count towards the targets”.\textsuperscript{32} The promotion of biofuels was thus promised to be accompanied by an effective scheme that channeled the subsidies towards those crops, areas, and types of production that would circumvent potential sources of environmental harm. Sustainability, rather than being a self-evident co-product of the promotion of biofuels, was now promised to be produced through political regulation. It was turned into

\textsuperscript{28} Official Journal of the European Union 2003, 46.

\textsuperscript{29} Hansen 2013.

\textsuperscript{30} Pimentel and Patzek 2005.

\textsuperscript{31} Brown 2005; Moreira and Palladino 2005.

\textsuperscript{32} Commission 2006, 8.
bureaucratic requirement.33

The second major component of the regime of hope was the idea to switch to ‘second generation’ in the medium to long run.34 Second generation biofuels are a subtype of biofuels that have very high GHG saving potential, as they stem from products like agricultural waste or residue.

The increasing reliance on this regime of hope to craft the legitimacy of the promotion of conventional biofuels bore fruit. In a letter sent to the Environment Commissioner, five environmental NGOs argued that “[b]iofuels could deliver significant environmental benefits and play a part in an EU-wide strategy to fight climate change [...] But this potential will only be delivered if the production of biofuels is sustainable in terms of its impact on biodiversity, water and soil, and if genuine emissions savings are made throughout the life-cycle of a product”.35 This conditionality of the NGO’s support of the EU’s biofuel policy already resonated with the Commission’s promise of effective sustainability criteria, and the lofty hope for second generation biofuels.

Against this growing consensus that relied on a host of uncertain future expectations, the greatest critique of the European promotion of biofuels was voiced by a group of NGOs from the Global South that sent an open letter to the European Commission.36 The network stressed the impact of the European promotion of biofuels on the food sovereignty of the Global South. Crops for biofuels and for foodstuffs compete over the same scarce resource: arable land. With the benefit of hindsight, one has to ask why the major policy-actors and the general public in the European Union could ignore these Cassandrian predictions. From a constructivist point of view that I adopt here, two reasons stand out. First of all, the actors from the Global South were neither seen as legitimate actors in the European Union’s policy process, nor did they make use of authoritative scientific practices to validate their argument. Secondly, they did not attack the core ground that was used to legitimate the promotion of biofuels: the alleged environmental sustainability.37 Added to the neglect of the scholars’ uncertainties over the expected GHG emission savings, the neglect of these Southern voices was the second act of deliberate and authoritative ignorance that made the notion of ‘sustainable biofuels’ possible.

The wide-spread agreement on ‘sustainable biofuels’ allowed the Member States to strongly expand the existing promotion of biofuels. In 2007, as part of a broader policy-package aimed at counteracting climate change and increasing energy security, they agreed on 10% mandatory target share for biofuels until 2020. While other parts of the agreement were highly controversial, most notably the 20% target share for renewable energies and a CO2-reduction target of the same height,

33 Lente 1993

34 An idea advocated by the influential and the industry-dominated biofuels research advisory committee, see Biofuel Research Advisory Council 2006.

35 Transport & Environment 2006; see also Transport & Environment et al. 2006; European Environmental Bureau 2005; World Wildlife Fund 2006.

36 Alert Against the Green Desert Network et al. 2007.

37 The NGOs even implicitly acknowledge that biofuels may be a solution to “the problem of climate change” but this solution in the North should not be reached by “creating new problems in our region”, see Alert Against the Green Desert Network et al. 2007.
the environmental ministers agreed on the alternative fuel from agricultural products without a big controversy. This credible commitment by the Member States, with the previous policy to promote biofuels, resulted in a ten-fold increase in the production of biofuels in the EU in and the increase of their market share to 4% of the huge market for transport fuels in the time from between 2002 and 2009.

It is hardly conceivable as a counterfactual that the mandatory target would have been included in this climate action agreement if it was not seen as a means to further the public good, but rather as a mere agricultural subsidy. The importance of this crafted consensus and legitimacy will become obvious when we see the consensus vanish again in the years that followed. But in early 2007, in their responses to the EU’s new climate policies, not even environmental NGOs voiced public concerns about the problems that could arise from the uncertain expectations, questionable promises, and lofty hopes that made the legitimacy of the promotion of conventional biofuels such a fragile craft.

The Crisis of Legitimation and Unmaking of the EU’s ‘Sustainable Biofuels’ Policy

In the first part of the case study, I traced the rise of the EU’s biofuels policy that culminated in the Member States’ uncontroversial commitment in 2007 to establish a 10% mandatory target for the share of biofuels in the market for transport fuel until 2020. This credible commitment by the Member States, with the previous policy to promote biofuels, resulted in a ten-fold increase in the production of biofuels in the EU in and the increase of their market share to 4% of the huge market for transport fuels in the time between 2002 and 2009.

The uncontroversial agreement on ‘sustainable biofuels’ did not simply follow from the commitment of the EU to advance sustainable development as laid out in its treaty of Amsterdam in 1997. Instead, the link between the concrete policy and the abstract norm had to be strategically and creatively crafted over the last fifteen years. This crafting crucially relied on a set of uncertain expectations, promises, and hopes that, on the one hand, made the notion of sustainable biofuels possible, and, on the other hand, deemed it inherently fragile and prone to crisis and change. While I highlighted in the first part of the paper the role of these expectations in crafting legitimacy and support for the policy, I will now turn to the actualization of the latter crisis-potential.

The Intersection of Crisis and Institutional Inertia: Legislating the Renewable Energy Directive

The first major threat to the legitimacy of the EU’s promotion of biofuels was the Global Food Crisis that emerged in 2007. The increasing production of conventional biofuels was identified by many scholars and international organizations as one key cause for deadly spikes in the prices of basic foods. While a range of causal mechanisms connected the production of biofuels with spikes in the

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38 Euractiv 2007a; 2007b; 2007c; see also Council, 2007.
40 Euroobserv’ER, 2009.
prices for foodstuff, the most obvious one stems from the fact that biofuels and foodstuff compete over the same finite market for arable land. A problematic relationship that has already been pointed out by the Southern NGOs that I cited above. But starting from 2007 on, the food-versus-fuel problem was not anymore solely pointed out by Southern NGOs that referred to local knowledge, but by established international organizations and research institutes that made use of legitimate scientific practices such as statistical analysis to ground their claim. Thus, it could no longer be ignored. Not only for international organizations, but also for environmental and humanitarian NGOs and the general public, the food-versus-fuel debate came to be the focal point to criticize the EU’s biofuels policy and to demand a policy-reversal.42

As if the issue of the Global Food Crisis wasn’t enough, two research teams argued in Science that the commonly employed life-cycle analysis to measure the GHG emissions from biofuels omitted or misspecified an important variable: land-use change.43 In order to produce biofuels, farmers might plow valuable lands like rainforests or wetlands. The destruction of the land is not only a loss of biodiversity, but also releases great amounts of GHG into the atmosphere that was previously stored in the plants. Even when farmers do not directly convert carbon sinks into arable land for the production of biofuel crops, and instead divert existing cropland, there are still indirect land use changes (ILUC). This is because “[t]he diversion triggers higher crop prices, and farmers around the world respond by clearing more forest and grassland to replace crops for feed and food”.44

Following my theoretical advances, the issue of ILUC stands out as it directly questioned expectations and promises that were crucial in crafting the legitimacy of biofuels. Besides the obvious contradiction of the expectation that conventional biofuels would lead to considerably lower GHG emissions than fossil fuels, ILUC also called into question the effectiveness of sustainability criteria that merely prohibited conversions of carbon sinks into arable land for biofuel crops. Problematically, accounting for emissions from ILUC within the existing sustainability criteria would result in the exclusion of the dominant, economically viable sources of biofuels from counting towards the 10% target. They would fail to deliver the GHG emissions savings needed for them to be classified as ‘sustainable.’ Second generation biofuels that would profit from this regulation were not yet an economically viable alternative. Consequently, accounting for emissions from ILUC within the existing sustainability scheme would be a huge blow for the agricultural industry which was already invested in the production of cheap, conventional first generation biofuels. And it would be highly problematic for the European Commission as it would deem the 10% target practically impossible to reach. The regime of hope that was crucial to the legitimating notion to promote conventional biofuels in the name of sustainable development was on the brink of collapse, as a potential contradiction between expectations and reality emerged.

Unsurprisingly, when the European institutions came together in order to finally translate the 2007 agreement on biofuels into the Renewable Energy Directive (RED), a fierce debate over the legislation emerged. Especially the European Parliament, the co-legislator with the Council, voiced

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42 See exemplarily, Friends of the Earth 2008a; 2008b; Euobserver 2008a; 2008b; 2008c.


44 Searchinger et al. 2008, 1238
the concerns of the scientists, NGOs, and IOs in the political process. But this growing opposition to the promotion of conventional biofuels was not able to prevent the legislation of the 10% mandatory target. Nevertheless, the European Parliament successfully pushed for the considerable reinforcement of the sustainability criteria in order to cushion and partly account for the increased expected GHG emissions from conventional biofuels. According to the final agreement, by 2018, the GHG savings requirements for biofuels to account towards the target would rise from 35% to 60% over fossil fuels. Furthermore, in order to speed up the introduction of second-generation biofuels, these were further promoted by making them count double towards the 10% target. Lastly, instead of integrating the newly found emissions due to (indirect) land-use change into the calculation of the GHG emissions of biofuels, this issue was postponed to 2010 so that it could be based on the “best available scientific evidence”.

In line with my expectations, and in contrast to the public debate that at the outset focused on the issue of food-versus-fuel, the question of how to deal with this previously omitted variable became the crucial battleground in the inter-institutional debate. It was especially the agreement to postpone the issue of ILUC that secured the agreement. Concerning the negative humanitarian impact of biofuels, the final directive specifies the Commission’s obligation to report every two years on the “social sustainability” of biofuels and their influence on prices of foodstuff. A reporting scheme not endowed with any mechanism that would secure that its findings would influence the policy-process.

As the negotiation of the Renewable Energy Directive was accompanied by strong public criticism, one has to ask why the European institutions did not simply decide to cut the promotion for conventional biofuels completely. Unsurprisingly, the institutional inertia of the 2007 agreement between the Member States, and the powerful influence of business interest. Interviews conducted by Sharman and Holmes and leaked documents analyzed by the news agency Reuters show the agricultural interest and the opaque lobbying effort by the agricultural industry was of crucial importance for the maintenance of the 10% target during these times of public criticism. But not just the agricultural interest, but even green-minded politicians faced the problem that a rejection of the 10% target altogether might invite other Member States to revise the whole agreement of 2007 on the reduction of CO2 emissions, energy efficiency, and renewable energies in general.

In sum, while institutional inertia and business interest guaranteed the maintenance of the expanded promotion of biofuels and the postponement of the issue of ILUC, the quick emergence

47 Euractiv 14.03.2008; Euractiv 04.06.2008
49 A weak regulation partly justified by referring to WTO rules that, while accepting certain environmental standards, deem labor standards of human rights criteria unacceptable, see, http://www.euractiv.com/trade/biofuels-trade-sustainability-linksdossier-188459#group_issues
50 Sharman and Holmes 2010; Reuters 2010.
and significance of ILUC as the central issue of the inter-institutional debate over the future of the EU’s biofuels policy reveals the first cracks in the legitimacy of the policy.

The Emergence of ILUC as a Crisis of Legitimation

In the following years, the issue of ILUC became increasingly important in the public debate around the promotion of biofuels. All policy-actors started to craft experimental proposals that were united by the same aim: reestablishing the legitimacy of the policy in face of the encountered contradiction that deemed the previous legitimation unfeasible.

Especially NGOs and IOs started to rally ILUC in their public campaign as the new weapon against the existing promotion of biofuels, shifting away from their previous focus on the entanglement of biofuels in the Global Food Crisis. This strategic shift can hardly be interpret as a genuine change of mind, in which the NGOs came to realize that the highly technical debate over ILUC was more important than the occurrence of deadly spikes in the prices of foodstuff. The factor that made the focus on ILUC so enticing for the NGOs was that the inclusion of ILUC in the methodology to calculate the GHG emissions of biofuels would simply disqualify the most common types of biofuels. These most common conventional biofuels are the same fuels suspected of doing the most harm in the Global South, as they are predominantly produced from food crops. Consequently, NGOs started a campaign to advocate a ‘technical’ and ‘apolitical’ adjustment of the methodology to calculate emissions from biofuels: the inclusion of emissions from ILUC into the existing sustainability criteria. Mirroring the Commission’s pre-2007 efforts to craft the notion of ‘sustainable biofuels,’ the NGOs not only rallied the available evidence of ILUC, but also produced their own studies to prove the importance of ILUC and thus undermine the sustainability of conventional biofuels.51 Or in the words of their campaign, to “stop bad biofuels.”52 The loudly advocating NGOs were supported by international organizations such as the OECD and the FAO, all of whom called for an end or at least a greater sensitivity to the “unintended adverse environmental consequences”.53

Not only NGOs and IOs, but also the discussion within the European Commission was dominated by the discussion of how to evaluate, interpret, and act upon ILUC. Similar to the case of the NGO, the turn to ILUC can hardly be interpreted as once of deliberative choice. The integration emissions from ILUC into the calculation of expected GHG emissions from different types of biofuels – according to the figures provided by the papers I cited above – would drastically inhibit the possibility to reach the mandatory target and discredit the legislation that the Commission pushed for. Rather, the Commission was rhetorically and legally entrapped to care for the sustainability of biofuels and consequently they could not escape the discussion around ILUC. Even the Energy Commissioner Günther Oettinger, heading the directorate general that proved throughout the process to be most responsive to the business interest, underlined this commitment. He stated that that, “[w]e promote only sustainable biofuels and take the phenomenon of indirect land use very seriously. [...] This is why we have launched several studies on this. If it is confirmed that indeed that [sic!] there is a

51 See, e.g., Action Aid et al. 2010; Friends of the Earth 2010a; 2010b; 2010c.
52 http://www.stopbadbiofuels.org/
53 FAO 2012 cited in Euractiv 2012e; see also Euractiv 2012b.
serious problem related to indirect land use, we may adapt our legislation".  

In line with the provisions in the RED, the Commission ordered a series of studies to establish the 'best scientific evidence' on ILUC. The most important of these studies for the Commission were the two consecutive studies executed by the International Food Policy Research Institute (IFPRI). The second study supported the existing findings that ILUC is a great source of GHG emissions, and concluded that "land use emissions for the entire EU biofuels additional mandate eliminate more than two-thirds of the direct emission savings".  

In the wake of this increasing societal and scientific pressure to change the existing policy in order to account for ILUC, the biofuels industry was the last actor that was pressured into the debate around ILUC. The European Biodiesel Board, for example, ordered studies aimed at undermining the research by the IFPRI scholars.  

Surprisingly, even one study for European Biodiesel Board (EBB) in concluded that the IFPRI model "represents a sophisticated tool to analyze the overall impact of the European biofuels mandate and the direction of changes caused by biofuels policies". Instead of denouncing the issue of ILUC right away, the researchers highlight the uncertainty surrounding some crucial assumptions in the IFPRI model. Because the concrete height of ILUC is so difficult to measure, the researchers proposed "to generally increase the required minimum emission savings with respect to direct land use change for all biofuels crops". In contrast to the differentiated analysis of these scholars, in the EBB press release that referred to this study as evidence, ILUC is portrayed as "highly debatable and unscientific". Instead of accounting for ILUC or raising the general GHG requirements of biofuels, the industry demanded international agreements that control land-use not only in the EU but also in third countries. The interest groups were of course well aware that such an agreement, if at all effective, would delay any change to the current policy. Judging from the discrepancies between the powerful rhetoric in the press release and the problematic evidence to sustain these claims, the position of the industry became more and more difficult to maintain.  

In sum, by 2011, none of the policy-actors were able to escape the crisis of legitimation. How to guarantee the environmental sustainability of the promotion of conventional biofuels in general, and how to deal with ILUC in particular, became the questions that dominated the debate over the future of the policy. Experimental proposals ranged from calls to abruptly halt the subsidies for

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54 Oettinger cited in Reuters 2010.  
55 Laborde 2011, 12, Al-Riffai et al., 2010.  
56 European Biodiesel Board 2011.  
57 Michaels and Monforton 2005.  
58 Delzeit et al. 2011, 21.  
59 Delzeit et al. 2011, 21.  
60 European Biodiesel Board 2011.  
61 Copa-Coegca 2010; Epure 2010, 5.
conventional biofuels, to introducing estimated emissions from ILUC into the methodology to calculate the emissions from biofuels, to toughening the existing regulations while waiting for more scientific evidence, to suggestions to start diplomatic efforts to hinder the destruction of carbon sinks on a global scale. But despite these differences, all proposals aimed at the same goal: re-crafting the ruptured balance between the concrete policy and the abstract norm and ultimately changing the perception of what is a legitimate policy and what is an illegitimate one.

Capping and Phasing Out Conventional Biofuels

In autumn 2012, under heavy pressure by NGOs and IOs, who were joined by about 100 scientists demanding action regarding the environmentally harmful emissions from ILUC, the Commission finally proposed a revision of the promotion of biofuels to make them environmentally sustainable again. In their draft for a new directive, they called for a 5% cap on conventional food-based biofuels that were formerly expected to deliver about 9% of the 10% biofuel target. Keeping in mind that the share of conventional biofuels was already 4.6% in 2012, this meant a complete halt to any increases in the subsidies for conventional biofuels — subsidies that had reached a level of 6 billion euro a year and were expected to be ever increasing. Furthermore, the Commission proposed to introduce the quadruple-counting for second generation biofuels that would effectively lower the 10% target. Thus, the Commission engaged in a significant policy turn, proposing to wind down the subsidies for biofuels that had just been expanded in 2009. Furthermore, the draft introduced the idea that second-generation biofuels count 4 times towards the target, and proposed to increase the minimum GHG savings of biofuels to 60% starting in 2014.

Climate Commissioner Hedegaard gives insights on the reasoning behind these proposed changes, stating that “[e]veryone was aware that there might be such a thing as ILUC, but the science at that time was not very well developed [...] It was not a mistake that it wasn’t done at that time”. The Commission’s proposed policy-package that would grind the promotion of biofuels to a halt, but would also intensify the research and development of second generation biofuels, was necessary because “[e]verything else will be unsustainable”. Nevertheless, although acting upon ILUC, the Commission stopped short of fully integrating ILUC into the biofuels policy. These provisions were intended to create a lifeline for the biofuels industry and allow the Member States to avoid completely failing to reach the mandatory target.

Startled by the policy U-turn of the European Commission that has for the longest time been the greatest driver of the EU’s promotion of biofuels, the agricultural industry initiated a fierce lobbying effort. A lobbyist for the European bioethanol industry can be found stating that “[i]f no-one is going to invest in us anymore, I think we should sue the European Commission for killing an industry”.

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63 Commission 2012a.
64 International Institute for Sustainable Development 2013.
65 Hedegaard cited on Euractiv 2012c.
66 Commission. 2012b.
67 Euractiv 2012d. See also Euractiv 2013a.
Furthermore, biofuel and agricultural industries continued its strategy to put the emerging scientific knowledge of ILUC into question, and, for example, released a joint statement in which they continued to argue that the research on ILUC is “unfounded and immature” and thus cannot be the basis for policy-making.68

Despite these lobbying efforts to maintain the status quo, after a long debate and several failed negotiations, in April 2015, the trilogue between Commission, Council, and Parliament was able to agree to reduce the subsidies for conventional biofuels and to exclude conventional biofuels from a post-2020 energy and climate strategy. The EU policymakers agreed on a 7% cap for the share of conventional biofuels in reaching the 10% target, an indicative target of 0.5% for second-generation biofuels, and the obligation for biofuels producers to estimate the emissions caused by ILUC.69 The initial disagreement among the Member States ran between those countries that highly depend on subsidies for their agricultural sector, such as Poland and Hungary, who argued that even a 7% cap was too high and green leaders such as Denmark, who made the opposite argument and pushed for the inclusion of ILUC emissions in the methodology.70 Although the short-term halt to the subsidies for conventional biofuels was successfully cushioned in comparison to the Commission’s initial proposal — highlighting once again the influence of the agricultural interest and its responsive politicians — importantly, the long term outlook does not indicate any future for conventional biofuels, as they are explicitly dismissed by the post-2020 strategy of the Commission, and not even mentioned by the European Council.71 This policy-shift approximates a new stable relation between the sustainability norm and the concrete biofuels policy of the EU, as it is even “cautiously welcome[d]”72 by environmental groups.

The future vision of a biofuels-based sustainable transport that rose in the 1990s was enacted in the 2000s has been finally laid to a rest --. At least until new technological, economic, or political events and possibilities, incite the future imaginary.

Conclusion

The rise, crisis, and decline of the EU’s policies to promote conventional biofuels allows for a close-up observation of an anomalous and little known phenomenon: eruptive norm change. In a few months in 2007 and 2008, what was considered to be a legitimate and uncontroversial policy became perceived as illegitimate, and after a long and controversial debate centering on a set of proposals of how to reestablish the lost legitimacy, significant changes to an entrenched policy-trajectory were agreed upon.

In order to explain this political and normative change I introduced the notion of fragile legitimacy. I argued that public perceptions of legitimate and illegitimate action are not self-evident but need to be strategically and creatively crafted. This crafted legitimacy is not simply stable and path-

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68 European Biofuel Board et al. 2012.

69 European Parliament 2015.

70 Euractiv 2013b; 2015.

71 European Commission 2012, 3; 2014, 8; European Council 2014.

72 Transport and Environment 2015
dependent but also inherently always incomplete, fragile and thus prone to crisis and change. This is because it is always partly based on certain future expectations, promises, and hopes that are ultimately uncertain. When such a crucial but future imaginary becomes doubted or contradicted, and powerful actors rally this contradiction, the legitimacy is likely to collapse. Such a crisis of legitimation triggers a phase of experimentation through which a norm(al) consolidates.

Reflecting on the rise of the policies to promote conventional biofuels, we can clearly see that no actor was ‘driven’ by their normative commitment to sustainable development—the concrete policies to promote the use of biofuels were simply not ‘implicit’ in the abstract norm. Even the seemingly simplest and most relevant questions regarding the environmental impact of biofuels (do they emit more GHG emissions than fossil fuels? do they encourage deforestation? if yes, how much?) remain to this day uncertain and subject to scientific dispute. The Commission nevertheless granted biofuels a legitimacy-debt that was more venture capital than a secure investment. This investment also turned the Commission into an entrepreneur working to politically craft the notion of ‘sustainable biofuels’ by pushing for scientific evidence, by the performance of certainty, the turn to expectations, promises, and hopes to ground this link between concrete policy and abstract norm. Especially, the shift towards the latter regime of hope for ‘sustainable biofuels,’ turned out to be successful at a crucial moment in 2006 and early 2007 when the need for a common energy and climate policy for the EU became urgent and the promotion of conventional biofuels was drastically expanded. But at the same time, this shift towards a regime of hope made the legitimacy of the policy increasingly fragile.

With this analysis in mind, it becomes clear why the discovery of an omitted variable in the methodology to calculate the emissions from biofuels—ILUC—turned into a crisis of legitimation for the policy: it directly questioned central expectation and promise on which the crafted legitimacy of the biofuels policy relied.

This crisis of legitimation led to a phase of experimentation in which all policy-actors adopted experimental proposals on how to deal with ILUC, all aiming at recrafting the legitimacy of the policy in the face of this encountered contradiction. Ultimately, the EU institutions, rhetorically entrapped by their commitment to ‘sustainable biofuels,’ and under pressure by scientists, International Organizations, and NGOs, had no other choice than to scale down their own policy when the normative change consolidated.

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