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3.4 BIOGAS – POWER – SPACE. ON THE CONSTRUCTION OF ENERGY REGIONS IN BORDER AREAS

Fabian Faller

The use of renewable energy sources has generally come to be recognized as a promising way to tackle some of the greatest social challenges of our time, such as climate change, issues of resource efficiency or aspects of social justice. Decentralized power generation systems are the most effective and most efficient approach to the use of renewable energy. These can be adapted flexibly to regional needs and to the respective context, and enhance regional economies. In addition, plants for generating renewable energy are less complicated and less expensive in terms of investments, planning and maintenance than large infrastructures, such as coal-fired power stations. They also require less professionalism, thereby enabling actor groups from local and regional civil society to become active in the energy sector. These aspects are directly tied to the question of the spatial effects

of such processes: Which regions gain or lose? Who profits where and how from using 'green' energy?

This case study deals with a dimension of the energy debate which lies behind such questions: the processes of regionalization linked to each 'who' and 'where'. It discusses power generation from biomass, in particular biogas generation in small and medium-size plants, as is often practised in agricultural enterprises. The investigation is based on seventeen interviews with plant operators in the Grand Duchy of Luxembourg and western Rhineland-Palatinate.

Regionalization here is understood, following Benno Werlen (1999; 2007; 2010a; 2010b) and Anssi Paasi (2004 und 2011), as processes of constitution of societies and their geographies.⁴¹ These processes include various practices of (re)productions and transformations of the 'situation' (occurrences, behaviour patterns, historical events)⁴², the drawing of new borders and new cross-border relationships and thus processes of continuous, performative *borderings* (see chapter 2.1). The situation in the energy sector results from those social practices directly related to the generation and use of power. The case study therefore focuses on practices of the energy transition and how these (re)produce something 'social', whatever form it may take. This brings questions of power into view: which normalizations and territorial policies are embedded in the regionalization processes of the energy transition and how do they take effect? This question, that is how the dimensions of sovereignty and discipline relate to governmentality, is answered from a power-analytical perspective on regionalizations (see chapter 3.1).

The aim of the following analysis is to understand the creation of so-called 'energy regions' as a construct of social negotiation. Juridical forms of power and normalizations of various actors are examined, as well as how these affect the practices of the operators of biogas plants; how sovereignty and discipline are reflected in the practices of the biogas industry, how they are governmentally embodied, how energy regions are affirmatively (re)produced. In addition, energy regions will be considered as individual perceptions and bases for action, which are articulated by economic and political actors and take effect in everyday practices. In this way, normalizing patterns of the energy transition can be revealed and examined in the sense of security dispositifs (Foucault 1977) and how they constitute and reproduce themselves as a phenomenon of 'circulation' within the biogas industry.

41 | These geographies are the result of, and precondition for, individual as well as collective actions and interpretations, negotiation processes and practices.

42 | On the concept of 'situation', see chapter 2.1, which refers to Goffman (1974).

3.4.1 Spatial Policies and Normalizations of the Energy Transition in the Border Area of Luxembourg and Rhineland-Palatinate

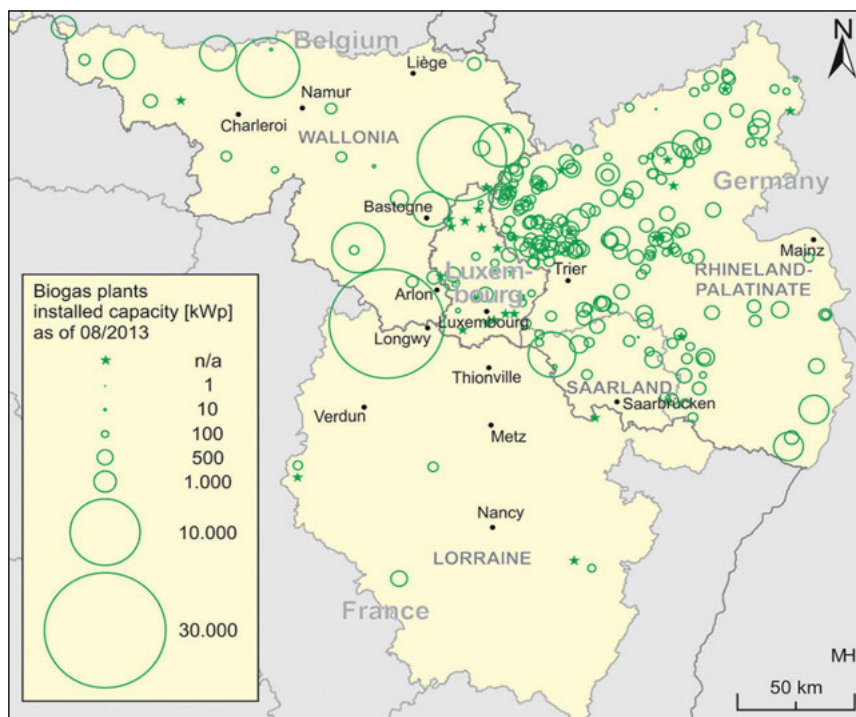


Figure 1: Locations of biogas plants in the Greater Region
(design: Fabian Faller, realization: Malte Helfer)

The territorial point of departure for the case study's research context is the so-called Greater Region.⁴³ In September 2013, there were 266 biogas plants in this area with a generating capacity of roughly 420 MW_{el}.^{44,45} Plants in Wallonia and Lorraine generate

43 | The Greater Region has been in existence since 1998 and its objective is the collaboration of institutional actors in Saarland, Rhineland-Palatinate, Luxembourg, Lorraine and Wallonia (see <http://www.granderegion.net>, accessed 19.09.2013; Wille 2012: 106ff.).

44 | As of 19.09.2013, data: Länderarbeitskreis Energiebilanzen RLP (2013); Statistisches Landesamt Rhineland-Pfalz (2013); Institut national de la statistique et des études économiques du Grand-Duché du Luxembourg (STATEC) (2013); Institut wallon de l'évaluation, de la prospective et de la statistique (IWEPS) (2013); Institut national de la statistique et des études économiques (INSEE) (2013).

45 | By way of comparison, the nuclear power plant in Cattenom (the third largest in France): 5,448 MW; the pumped storage hydro power station in Vianden (the third largest in the EU): 1,096 MW, the Wörrstadt wind farm (the largest in Rhineland-Palatinate): 55.5 MW.

about one-third of the power, roughly 20 % comes from Rhineland-Palatinate, 6 % from Luxembourg and 1 % from Saarland, although these figures do not by any means correspond to the number of installed plants. More than two-thirds of the plants are located in Rhineland-Palatinate, slightly more than 10 % each in Luxembourg and Wallonia, 6 % in Saarland and 2 % in Lorraine. This discrepancy between generating capacity and installed plants is primarily explained by the fact that a large proportion of the plants in Rhineland-Palatinate and Luxembourg only generate up to 500 kW_{el}. A look at the locations of the plants furthermore shows a concentration in western Rhineland-Palatinate and in Luxembourg, whereas the plants in Lorraine, as well as Wallonia, are widely spread (see Fig. 1). The goal of the following analysis is to explain which processes have led to this concentration in Luxembourg and western Rhineland-Palatinate. Special attention will be paid to the operator side of various territorial policies and normalizations in relation to governmentality.

Setting Standards and Normalization through State Policies in Reference to Biogas

“It cannot be too strongly emphasized that controlling energy is a condition for the exercise of power. [...] Each segment of the energy sector is intensely interrelated with politics”⁴⁶ (Brücher 2009: 33).

The energy sector is strongly marked by political control. As a consequence of the liberalization of the European energy market since 1996, both the European Union as well as the individual member states have been working constantly on controlling it politically. Currently there are ten different regulations, guidelines and laws governing the biogas segment in the EU and in Luxembourg, and in Germany as many as 31. Added to these are other state frameworks, such as zoning or tax laws, obligations of use or investment grants. The national states and the EU are obviously ‘sovereigns of energy’, which also constantly comes up in the interviews:

“This whole biogas affair is political. If it no longer suits the government, then they just change the general framework so it becomes uninteresting or gets either funded or penalized somewhere”⁴⁷ (male, German, Rhineland-Palatinate).

Here we clearly see the juridical exercise of power and normalization of (supra) state actors, who enact laws to build up a regulative structure which follows the

46 | Personal translation of: “Dass Macht die Kontrolle der Energie voraussetzt, kann nicht oft genug wiederholt werden. [...] Jeder Bereich der Energiewirtschaft steht in intensiver Wechselbeziehung mit der Politik.”

47 | Personal translation of: “Die ganze Biogasgeschichte ist ein Politikum. Wenn das der Politik nicht mehr passt, dann werden die Rahmenbedingungen so verändert, dass es uninteressant wird oder dass es irgendwo entweder gefördert wird oder dass es bestraft wird.”

binary coding of allowed/prohibited and places sanctions on unauthorized practices. Establishing norms in such ways are practices with which actors purposely set up, distinguish, and categorize energy regions, organize them into hierarchies and put them into relation with one another. However, it cannot be assumed that these norms are followed *per se*, or that the biogas producers necessarily embrace the normalized energy region in the sense of technologies of the self. It is worth examining how the normalizations show up in practices or feed back into one another and thus initiate everyday regionalizations. Since the policies mentioned refer primarily to nation states, they are of little use when it comes to explaining local processes in border areas. We will therefore first proceed to compare these more or less obvious ways of exercising power through normalization with governmental processes, which constitute energy regions in a local, cross-border context.

On the Relationship between Sovereignty and Governmentality in the Context of Biogas Production

The relationship between sovereignty and governmentality in the context of biogas production is especially reflected in the structurally affirmative practices of the biogas producers: how do they deal with ‘the law’ and how does this enable an energy region to constitute itself? This process of negotiation between juridical power and self-conduct is examined by asking the following questions:

- Which laws and regulations are mentioned/perceived by the biogas producers as crucial?
- How is that which is allowed and not allowed perceived and how are decisions/actions taken accordingly?
- Which laws and regulations are presented as impossible to circumvent?

Initial insights into the relationship between sovereignty and governmentality can be gained from the interviewees’ statements on the significance of setting standards. In Rhineland-Palatinate, they particularly emphasize the importance of the law for giving priority to renewable sources of energy (Renewable Energies Act, in German: *Erneuerbare-Energien-Gesetz* or EEG). Some of the interviewees mentioned that the EEG encouraged them to decide in favour of the plant:

“The plans were already almost finished. Then when the new EEG came along in 2004 we decided straight off to get into the biogas business because that just seemed to us to make good business sense”⁴⁸ (male, German, Rhineland-Palatinate).

48 | Personal translation of: “Die Pläne waren schon soweit geschaffen. Als dann 2004 das neue EEG kam haben wir uns direkt entschieden doch in die Biogasbranche einzusteigen, weil es sich da für uns einfach wirtschaftlich dargestellt hat.”

“We liked the idea of the twenty-year fixed feed-in tariff. And the plant did not make for too much work, and that’s what led to our decision”⁴⁹ (male, German, Rhineland-Palatinate).

For others, the EEG, in conjunction with its auxiliary regulations, was or is in fact a necessary condition for a cost-efficient operation of a biogas plant.

“Without this funding through the EEG, biogas would not be profitable, you might say. This applies to all renewables, you know, it’s exactly the same for photovoltaics and wind”⁵⁰ (male, German, Rhineland-Palatinate).

“Without the manure bonus I’d have to say it would be pretty tight. We’d lose around about 60,000 €. And the whole cost calculations, including the cowshed, it’s based in the end on the payout we’re getting at present. My income is fixed, you know”⁵¹ (male, German, Rhineland-Palatinate).

The EEG created incentives to build plants that changed the socio-material situation in the territory under study. Plants are built, networks between operators form, there is ‘space’ for exchanging experiences and discussion (see below). Besides discussing market incentive programmes, the interviewees often broached the issue of approval procedures. These are seen by the operators as being restrictive and obligatory, which puts the power logic of sovereignty above that of self-regulation:

“It’s harder to get a permit for a petrol station here than if you want to build Cattenom [nuclear power plant nearby in France]”⁵² (male, Luxembourger, Luxembourg).

“The approval procedures are simply impossible. You submit something and then you’re kept waiting. Then you ring them up and some time later you get a paper saying: ‘You still have to submit this, you have to explain that and the like.’ [...] By the time you get all this together weeks have passed. Then you send it in, and again nothing happens. [...] And the

49 | Personal translation of: “Das hat uns gut gefallen mit dieser festen Einspeisevergütung über 20 Jahre hinweg. Und der Arbeitsaufwand, den die Anlage macht, ist auch übersichtlich gewesen und dadurch kam der Entschluss.”

50 | Personal translation of: “Ohne diese Förderung durch das EEG wäre ja Biogas nicht wirtschaftlich, sagen wir mal so. Das gilt ja nun für alle Erneuerbaren, das gilt für Photovoltaik und für Wind ja genauso.”

51 | Personal translation of: “Ohne Güllebonus muss ich sagen, das wäre schon sehr eng. Wir verlieren dann gleich mal so um die 60,000 €. Und die ganze Betriebskalkulation auch mit dem Kuhstall, alles basiert letztendlich auf den Auszahlungspreisen wie wir sie momentan haben. Meine Einnahme ist ja fest.”

52 | Personal translation of: “Wenn du für eine Gastankstelle hier eine Genehmigung willst, das ist schlimmer, als wenn du Cattenom [Kernkraftwerk im nahegelegenen Frankreich] errichten willst.”

requirements are so high and there are more and more of them, more are constantly being added. [...] If at some point I don't just say to the contractor: 'C'm on, let's get started!', I don't get anything done. Again and again, people come by who stand there and say 'You have to do something for me, as well! And then you have to do this here and what are you doing?' But if you submit an application... you hear nothing. That's the biggest problem, it's bigger than not being able to pay back the investment. It's really awful"⁵³ (male, Luxembourger, Luxembourg).

"But what's been going on lately with all these requirements for water pollution control, requirements for the materials used, requirements related to TÜV [Technical Control Board] issues. We'd already started construction when the first biogas plant blew up and that got it all going: completely different requirements for fire prevention, structural conditions, then the Liability Insurance Association, explosion protection. Every week something went wrong somewhere in the country and every time new things came up. A lot of it makes sense, I must say, but some of it is totally exaggerated. Every construction material needs some sort of permit from this Berlin testing authority for materials, but they don't approve everything, and if not, you get no permit"⁵⁴ (male, German, Rhineland-Palatinate).

Thus the topic here is actually the relationship between sovereignty and governmentality: the distinction between what is allowed or not, the practices derived from this distinction and the regionalization processes resulting from

53 | Personal translation of: "Die Genehmigungsverfahren sind halt unmöglich. Dann reicht man das ein und dann kommt nichts. Dann ruft man an und irgendwann kommt dann ein Papier, da steht drauf: 'Das musst du noch nachreichen, das musst du erklären und so.' [...] Bis das wieder zusammengestellt ist: wieder so viel Wochen weg. Dann geht das rein, dann wieder nichts. [...] Und die Auflagen sind so hoch, es wird immer mehr, es kommt immer hinzu. [...] Wenn ich nicht einfach irgendwann sage zu dem Bauunternehmer: 'So, jetzt legen wir los!', dann mache ich nichts. Da kommen immer wieder Leute, die stehen auf und sagen: 'Bei mir musst du auch noch! Und dann musst du noch hier und was machst du da?' Aber wenn man dann einen Antrag einreicht... Stille. Das ist das größte Problem, das ist größer, als dass ich das *Invest* nicht zurückbezahlen kann. Das ist wirklich ganz schlimm."

54 | Personal translation of: "Aber was sich in der Zeit entwickelt hat, mittlerweile an Auflagen für Gewässerschutz, an Auflagen für die eingesetzten Materialien, an Auflagen, was den TÜV [Technischer Überwachungsverein] anbelangt. Wir waren am Bauen und dann ging die erste Biogasanlage mal hoch und schon ging das los: ganz andere Anforderungen an Brandschutz, an bauliche Gegebenheiten, dann Berufsgenossenschaft, Explosionsschutz. Jede Woche ging ja irgendwas irgendwo in der Republik schief und jedes Mal kamen dann neue Dinger. Vieles ist sinnvoll, muss man einfach sagen, aber manches ist dann auch vollkommen überzogen. Da muss jedes Baumaterial irgendwie 'ne Zulassung von dieser Berliner Prüfstelle für Materialien haben, die es nicht gibt für alles, sonst kriegt man keine Genehmigungen."

it. On the one hand, this relationship is based in the governmental regulatory framework, and on the other is also reflected in non-governmental normalizations or political expressions of intent.

“We produce milk here. We are going to carry on producing milk. And I’m glad that I’ve found an alternative in biogas. As things now stand, what is politically intended, we will further expand this second mainstay”⁵⁵ (male, German, Rhineland-Palatinate).

Here it becomes clear that the interviewee feels that his individual business policy is the normal state of affairs, but which at the same time depends on governmental policy; sovereignty and self-conduct are juxtaposed as a matter of course. This can also be seen in the context of projects, when an individual plant is embedded in a larger joint project and thus assigned to a larger strategic concept. This constitutes a specific situation and introduces limitations which, however, the operator himself does not see as problematic:

“We don’t have to at the moment, nor can we change a lot with this project. Now we first have to wait until it’s finished to see how it goes, but then we can take action again”⁵⁶ (male, German, Rhineland-Palatinate).

Comparable patterns of argumentation can also be found in various interviews with regard to other aspects. For instance, the argument of regional production is used in almost all discussions of raw materials transport, in order to depict a normal state of affairs which is followed and justified by practical logic:

“- It’s a regional issue if only because it’s to do with acreage. I can’t make a biogas plant that would farm land within a radius of 100 kilometres. That won’t work simply because it would be too expensive and that’s not what it’s all about.

- But then there’s that still if you somehow don’t find anything here?

- I mean then you just have to look for an alternative, I can’t let the biogas plant run idle. That won’t work. Because, well, the problem as I see it is that if I don’t keep feeding enough, then I fall down on performance first and then again there’s also, say, after two or three weeks, I finally get enough substrate, then I’ll need another four weeks before I get it back

55 | Personal translation of: “Wir machen hier Milch. Wir werden auch weiterhin Milch erzeugen. Und ich bin froh, dass ich über den Weg Biogas eine Alternative gefunden habe. So wie jetzt der Stand der Dinge ist, wie es politisch gewollt ist, werden wir dieses zweite Standbein weiter ausbauen.”

56 | Personal translation of: “Wir müssen jetzt momentan nicht, wir können auch durch das Projekt nichts Großes ändern. Jetzt müssen wir erstmals den Ablauf abwarten, bis es abgeschlossen ist, aber dann können wir noch mal tätig werden.”

up there. That's not worth it. That one time I got substrate from farther away, that was an emergency, that was really an emergency"⁵⁷ (male, Luxembourger, Luxembourg).

What is already intimated here is the significance of social norms for the practices of the plant operators ("what it's all about" as a common construct). The following interview segment shows how social norms and neighbours' expectations cause plant operators to choose a different location from the one originally preferred:

"We didn't have any citizens' action group here that protested, either. We had enough acreage to build the plant right on the farm. But I didn't want that for several reasons. Everything we need for the plant would then have to be taken through the village and up to the plant. All the manure up the same way. That would be a huge strain on the village high street. Up there you practically don't need to worry at all about the smell, either, due to the wind direction alone. So that was clear to everyone here in the village right from the outset and that's why it wasn't a problem"⁵⁸ (male, German, Rhineland-Palatinate).

The last aspect of the relationship between sovereignty and governmentality we will look at here deals with the affirmative acceptance of normalization. Various laws, regulations or standards are all referred to as inescapable, and the energy region is thus reproduced. This relationship is often reflected in the interviews, especially with regard to the manure bonus and the official requirement to own a gas flare in Germany:

57 | Personal translation of: " - Allein von der Flächenabhängigkeit ist es ja eine regionale Sache. Ich kann keine Biogasanlage machen, die 100 Kilometer im Umkreis Flächen bewirtschaftet. Das geht nicht, weil es einfach zu teuer wird und das ist auch nicht Sinn der Sache. - Aber das gibt es dann trotzdem, wenn Sie hier irgendwie nichts finden? - Ich meine dann muss man eben Alternativen suchen, ich kann nicht die Biogasanlage leerlaufen lassen. Das geht nicht. Weil, ich sehe leider das Problem, wenn ich die nicht genug füttere, dann falle ich erst mit der Leistung runter und dann brauche ich auch nochmal, nehmen wir mal an ich bekomme dann nach zwei bis drei Wochen, bekomme ich dann mal genug Substrat, dann brauche ich auch nochmal vier Wochen, bevor ich sie wieder da hab'. Das bringt nichts. Das eine Mal Substrate von weiter weg, das war ein Notfall, das war wirklich ein Notfall."

58 | Personal translation of: "Wir hatten hier auch keine Bürgerinitiative, die protestiert hat. Wir hätten Fläche genug gehabt um die Anlage direkt am Hof zu realisieren. Nur aus mehreren Gründen wollte ich das nicht haben. Alles, was wir für die Anlage brauchen, muss dann hier durch das Dorf durch und zu der Anlage geschleppt werden. Die gesamte Gülle denselben Weg hoch. Das wäre für die Dorfstraße eine enorme Verkehrsbelastung geworden. Auch eventuelle Geruchsbelästigungen sind da oben zu fast 100 % ausgeschlossen, schon allein von der Windrichtung her. So, das war auch jedem hier im Dorf ganz klar von Anfang an und deswegen war das gar kein Problem."

"About this 30 % manure with the substrate. Well, we'd also already spoken to an environmental consultant: - 'What happens if at some point a technical problem crops up and I can't put anything into it that day?' - 'That just can't be allowed to happen,' he said. [I can't say:] 'Put twice as much in the next day and then it's all OK.' No, it has to be more than 30 % every day. These laws are there and they have to be observed"⁵⁹ (male, German, Rhineland-Palatinate).

"Now we have to put in a gas flare, we just bought one. I personally don't think that's the most sensible thing, because we don't need one, but the law says we have to have it starting on 1st January 2014"⁶⁰ (male, German, Rhineland-Palatinate).

"And we were under pressure. We had to have the motor running by 31st December because we weren't allowed to use any more heating oil after 1st January 2007 or we'd have lost our status"⁶¹ (male, German, Rhineland-Palatinate).

It becomes apparent that the normalizations discussed at the beginning circulate effectively in practice and encourage selective obedience. They are observed "because that's just how it is", or because otherwise sanctions are expected. The fact that the normalization seems to be accepted as a matter of course in the technologies of the self can be interpreted as optimized control of a territory. This applies both to political and social parameters. Deciding to invest in a biogas plant and choosing a location thus reflect various negotiation processes on the part of the actors. The interview segments last quoted, however, also point to another aspect: the issue of discipline and its relationship to governmentality.

On the Relationship between Discipline and Governmentality in the Context of Biogas Production

The aims of discipline are control and surveillance, actions taken to moralize and improve; it concentrates, focuses and encloses. It strives to regulate every detail

59 | Personal translation of: "Mit diesen 30 % Gülle beim Substrat. Also da hatten wir auch schon mit dem Umweltgutachter gesprochen: 'Wie sieht das denn aus, wenn da irgendwann ein technisches Problem ist und ich kann dann heute nichts da reintun?' - 'Das darf einfach nicht sein', sagte er. [Ich kann nicht sagen:] 'Tust du halt am nächsten Tag das Doppelte rein und dann ist das auch okay'. Ne. Nein, das muss jeden Tag über 30 %. Diese Gesetze bestehen und die müssen dann eingehalten werden."

60 | Personal translation of: "Wir müssen jetzt, das haben wir jetzt gekauft, eine Gasfackel nachbauen. Das halte ich zwar nicht unbedingt für die sinnvollste Sache, weil wir sie nicht brauchen, wir müssen sie vom Gesetzgeber her ab 1.1.2014 haben."

61 | Personal translation of: "Und wir hatten ja den Druck. Zum 31.12. mussten wir den Motor am Laufen haben, weil nach dem 1.1.2007 durften wir kein Heizöl mehr einsetzen, da hätten wir den Status verloren."

(see Foucault 2007 [2004]: 67 ff.). Governmentality (technologies of the self or apparatuses of security), by contrast, is oriented towards averages or normal distributions of social rule, towards normalization or *laissez faire*, in order to promote the desirable and limit the undesirable (the phenomenon of circulation, see *ibid.*). How do these apparently contrasting dimensions come together?

The relationship between discipline and governmentality in the context of biogas production is reflected particularly in the subversive constitutions the biogas producers accomplish: instead of (re)producing the energy region affirmatively, we are here dealing with transformations of the situation, of negotiations between discipline and *governmentality*. Their analysis aims at finding answers to the following questions:

- How do biogas producers perceive control, how do they judge it?
- What courses of action are seen as 'normal'?
- What sort of 'circumventions' take place?

As shown in chapter 2.1, transitions can also be understood as ambiguities, blurring or levelling differences. The resulting no-man's land of uncertainty enables the actors to become creative, for example, by developing alternative technologies of the self in relation to discipline or individual interpretations of legal frameworks. Such in-between areas are necessary to mediate between the adjoining categories of 'discipline' and 'governmentality'.

The interviewees mention various dimensions of control:

"And the surveillance, even far worse than in agriculture!"⁶² (male, German, Rhineland-Palatinate).

"I recently said to my wife: 'We're going to have to get another file cabinet, one simply isn't enough for everything.' Nothing can be done without paperwork any more. And I say, paperwork is only good for keeping you under control, that's what I always say, right?"⁶³ (male, German, Rhineland-Palatinate).

Control is seen as restrictive, thus fulfilling its goal of normalization. But by the same token, it stimulates responses and technologies of the self of governance that are just as specific and play a part in commercial relationships. Without exception, the interviewees all reported that contractual certainty is necessary

62 | Personal translation of: "Und die Überwachung, noch viel schlimmer wie in der Landwirtschaft!"

63 | Personal translation of: "Ich habe letztes zu meiner Frau gesagt: 'Wir müssen unbedingt noch mal einen zweiten Aktenschrank kaufen, in den einen passt einfach nicht mehr alles rein.' Ohne Papierkram läuft nichts mehr. Und ich sage, der Papierkram ist ja nur dafür gut, dass man kontrolliert werden kann, sage ich dann immer, nicht?"

when collaborating with large companies, although this is often an unaccustomed experience for the farmers:

“We also noticed, whenever we [had dealings] with the companies, the ones coming down from up there [...] With us, it was still the case that we didn’t need to write everything down: no sooner said than done. A promise is a promise. That’s not the case with them, though. Not generally. ‘Where does it say that? Where is that written down? If it’s not set down in writing, we don’t need to do anything’”⁶⁴ (male, German, Rhineland-Palatinate).

This quote reflects forms of control in the self-guidance and external control of the operators. Companies use contracts to establish certainty and include or exclude one’s own actions; they serve companies which are not locally based (“from up there”) as instruments of mediation between discipline and governmentality. In addition, they enable an effective circulation of practices and thus the spread of technologies and knowledge (socio-technical regionalization). The distinction to “those up there” helps establish identity. The “we” emphasized in the quote can in this case be evaluated as an important criterion for the density of biogas plants in the territory: the social networks in Luxembourg or in Rhineland-Palatinate are developed to such a degree that a common identity is represented linguistically – as the following arguments will show. A professional, regionally based identity can therefore help develop and stabilize the industry *in situ*. In such a situation, however, contracts are unsuitable instruments of control:

“Written contracts among farmers is always difficult. I mean, if it doesn’t work on the basis of trust, then you might as well forget it altogether. We already had contracts here, we had supply contracts, but we never insisted that we fulfil them. No point in that. So if someone here in the village tries to enforce contracts, that’s a problem, it won’t work”⁶⁵ (male, Luxembourg, Luxembourg).

Rather, instruments of discipline and *laissez faire* encounter each other in such a way that specific practices and forms of control and security become necessary for joint economic activity.

64 | Personal translation of: “Wir haben auch festgestellt, wenn wir mit den Firmen, die da von oben runterkommen... Bei uns war es immer noch so, wir brauchten nicht alles aufzuschreiben: Gesagt, getan. Ein Mann, ein Wort. Bei denen stimmt das alles nicht. Generell nicht. ‘Wo steht das? Wo steht das geschrieben? Wenn das nirgends steht, brauchen wir nichts zu machen.’”

65 | Personal translation of: “Schriftliche Verträge unter Landwirten ist immer schwierig. Ich meine, wenn das nicht auf Vertrauensbasis geht, dann kann man das sowieso vergessen. Wir hatten hier schon Verträge, wir hatten Lieferverträge gehabt, da haben wir auch nie darauf bestanden, dass wir die erfüllen können. Das bringt auch nichts. Also wenn man hier im Dorf versucht, Verträge durchzusetzen, dann hat man ein Problem, das geht nicht.”

“The farmers, the others, have to know you’re not dependent on them. If you make yourself dependent, in a way you make it easy for them to put the squeeze on you. So if you always go to the limit, there are people already starting to look round in May, like ‘Where can you still sell some maize?!’ And when the others get wind of it, then in the autumn maize is already up by 100 € per hectare”⁶⁶ (male, German, Rhineland-Palatinate).

Knowledge of a situation enables the actors to respond accordingly to the control mechanism in their own practices. This process of negotiation of one’s own situation contains an element of transformation, which aims at the perceived individual options for action. Personal experiences and options for action become relevant to the relationship of discipline and governmentality. We can observe something similar in the following segment referring to financing the plant. Here it becomes clear that the image the operator entertains of himself does not agree with the attribution of the refinancing institute, and that, as a result, the house bank refuses to finance the plant and thus another institution takes over this role:

“The house bank desperately wanted, that is, desperately wanted to. Only then they were tripped up by their refinancing office. They had reservations: ‘Plants of this size only with farmers ... mmh ... are you sure, farmer XY? Can you really run it, are you sure of what you are doing there?’ I had this good man from the refinancing office on the telephone for two hours and had to listen to him ask me, a farmer, whether I knew what I had to do there on my field. At some point then I said to him: ‘OK, people. You know what you do in your bank, we know what we do on our field. We’ll just drop it, then.’ There’s no point, it just doesn’t make any sense”⁶⁷ (male, German, Rhineland-Palatinate).

The social *bordering* taking place here indicates a withdrawal from the familiar environment and at the same time a circumvention through which the plant operator constitutes his apparatuses of security. The presumed control

66 | Personal translation of: “Die Bauern, die anderen, müssen wissen, du bist nicht von denen abhängig. Wenn man sich abhängig macht, und schon ist man in einer gewissen Weise erpressbar. Also, wenn Sie immer auf Rille fahren, es gibt welche, die fangen dann irgendwann an im Mai schon zu gucken: ‘Wo ist noch Mais zu verkaufen?!’ Und wenn die anderen das mitbekommen, dann ist der Mais im Herbst schon von vorneherein 100 € im Hektar teurer.”

67 | Personal translation of: “Die Hausbank wollte unbedingt, also wollte unbedingt. Nur die sind dann wieder über ihren Rückfinanzierer gestolpert. Die hatten Bedenken: ‘Anlagen in dieser Größe nur bei Landwirten ... Mmh ... bist du sicher, Landwirt XY? Kannst du die auch wirklich betreiben, bist du dir sicher, was du da machst?’ Ich hatte diesen guten Mann von dem Rückfinanzierer zwei Stunden am Telefon und musste mir tatsächlich als Landwirt sagen lassen, ob ich weiß, was ich da betreiben muss auf meinem Acker. Irgendwann habe ich zu dem gesagt: ‘Ist gut, Leute. Ihr wisst, was Ihr in Eurer Bank macht, wir wissen, was wir auf unserem Acker machen. Wir lassen es dann sein.’ Es hat keinen Sinn, es macht keinen Sinn so was.”

mechanisms of the financial sector are contrasted with bodies of knowledge and self-image, producing a 'normal' image of one's own profession. In this way, the role of the refinancing office transforms itself for the operator from an authority into a marginal figure – in the end the financing was ensured by another bank. At the same time, this case is also an example of the differing interpretations of banks' security demands. Ultimately, the farmer managed to secure the desired financing. Experiences such as these and their propagation in social networks help create a more relaxed attitude towards control mechanisms. This behaviour can also be observed with regard to statutory provisions. A regulative framework is clearly identified while its legitimacy is questioned. In other cases, its non-observance is taken entirely for granted and even expressly emphasized. Possible consequences are neither mentioned, nor presumably feared:

"And then we also manipulated, don't worry, you can leave that in [in the interview report] with the acreage because they otherwise don't get approved. But then again that was still sort of illegal: the approval was for 180 kW. But then starting that year, starting in November 2005, we officially went up to 180, but as far as capacity was concerned, we could go up to 250 kW"⁶⁸ (male, German, Rhineland-Palatinate).

"We have, I'd say, the approval is on hand for 400 kW. These 400 kW are also realized in the construction. The idea behind it, though, is that because we have two times 400 kW in block-type thermal power stations, we also have the approval from RWE [power company] up to two times 400. When we're finished with the construction phase, we'll subsequently submit a BImSch [approval in accordance with the Federal Control of Pollution Act] and can then run the 800 kW without any illegal operations"⁶⁹ (male, German, Rhineland-Palatinate).

This non-observance is also reflected in the interviews with regard to social aspects. The interviewee still sees himself as a farmer and not primarily as an energy producer (for example, he holds a high-level function with the farmers' association), yet the biogas plant is an instrument to safeguard him against social changes. In the process, the way he deals with his own product also changes:

68 | Personal translation of: "Und dann haben wir auch manipuliert, das können Sie auch ruhig drin lassen [im Interviewprotokoll], mit der Fläche, weil sie kriegen ja sonst keine Genehmigung. Aber das war dann auch noch halb illegal: die Genehmigung war für 180 kW. Aber wir sind dann ab dem Jahr, ab November 2005 sind wir halt eben offiziell mit 180, aber von der Leistung her konnten wir bis 250 kW hochgehen."

69 | Personal translation of: "Wir haben das, ich sag mal, die Genehmigung liegt mit 400 kW vor. Diese 400 kW werden bautechnisch auch umgesetzt. Der Hintergedanke ist aber der: Weil wir zweimal 400 kW an Blockheizkraftwerken haben, die Genehmigung von RWE [Energieversorgungskonzern] auch auf die zwei Mal 400 haben. Wenn wir fertig mit der Bauphase sind, werden wir eine BImSch [Genehmigung nach Bundesimmissionsschutzgesetz] nachreichen und können dann halt eben auch ohne illegalen Betrieb die 800 kW fahren."

“If people here are not willing to pay at least a reasonably decent price for our products, if they’re not willing to pay us enough so that we can make a proper living from it, or at least an acceptable living, then the stuff goes into the biogas plant”⁷⁰ (male, German, Rhineland-Palatinate).

This justification, which almost comes across as a threat, also shows how social standards can be circumvented through technologies (of the self), how supposed conflict potentials – depending on the angle of vision – can be exacerbated or attenuated, and one’s own practices optimized. The following quote illustrates in particular the positive aspects of these possibilities for self-guidance, although the interviewee provides no proof for the thesis of improvement.

“Back then we already had the idea to ferment the [slurry]. When the [substrates] are properly fermented you can normally drive right up past the walls of the houses, so there’s really no problem [with neighbours bothered by the smell]”⁷¹ (male, German, Rhineland-Palatinate).

To summarize, we can say that the relationship between discipline and governmentality operates at various levels and usually manifests itself in subtle and implicit perceptions (instruments of control and discipline; technologies of the self of (1) governance, of (2) negotiating one’s own situation and ensuring and representing one’s own ability to act, of (3) the constitution of the apparatuses of security, of (4) non-compliance with norms and of (5) self-guidance). The transformative potential resides in the everyday nature of the technologies of the self (governmentality) in dealing with the situation, while tensions are clearly revealed in regard of the instruments of disciplinary action.

3.4.2 Conclusion

The use of biomass to generate power is tied to various spatial policies and normalizations. Actors try to assert their goals and control other actors. This case study examined interviews with biogas producers in Luxembourg and western Rhineland-Palatinate to discover how they develop their practices in the tangled web of politics, civil society, business and the environment, how they deal with their situation and create technologies of the self to achieve their goals and in this

70 | Personal translation of: “Wenn die Menschen hier nicht bereit sind, zumindest einen einigermaßen anständigen Preis für unsere Waren zu zahlen, wenn die nicht bereit sind, uns dann auch das dafür zu bezahlen, dass wir gut davon leben können, oder vernünftigt davon leben können, dann geht es bei uns in die Biogasanlage.”

71 | Personal translation of: “Damals war das schon die Idee, dass die [Gülle] vergärt wird. Wenn die [Substrate] richtig vergoren sind, da kannst du die normalerweise an die Häuserwand fahren, also da hast du kein Problem [mit Geruchsbelästigung der Anrainer].”

way constitute the 'local' energy sector. It becomes clear that tensions, conflicts and trade-offs are important aspects of these regionalizations. At the same time, they reflect the relationship between governmentality and sovereignty which, as shown, helps stabilize energy regions and (re)produce the situation. In contrast to this, the relationship between governmentality and discipline seems to run harmoniously, which encourages the circumvention of the situation.

The continuous *bordering* on which the triangular relationship between governmentality, discipline and sovereignty is based seems to play a decisive part in the concentration of the plants in the area under study. The differentiation of social groups, of what is allowed and what is not, of the possible and the impossible or of supporting and prohibiting factors, runs like a logic through the technologies of the self of the biogas plant producers in dealing with the situation. The continuous change of affirmative and subversive crossing of boundaries clearly shows that the complex practices of setting and crossing boundaries are mutually dependent, creating situation-dependent regionalizations. Although national laws naturally play a part in this, other aspects are at least equally important, such as:

- Social networks and the related exchange of knowledge and experience;
- The self-conception of plant operators and the related patterns of interpretation;
- The respective perceptions and evaluations of various practices in the biogas sector and related courses of action.

The first and third aspects seem to be particularly specific and of greater importance in the border area, since different situations come together here. These produce multiple networks and practices that in turn can again reproduce or transform the situations. Thus setting and crossing boundaries are as much a part of the everyday practice of biogas producers in the border region as continuous, performative *bordering*. This clearly shows that regionalizations are crucially dependent on the actors involved and their relationships in social as well as spatial contexts.