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Master Thesis

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Addax Bioenergy Sierra Leone

Analysis of the implementation process of a
large scale land acquisition project from the
perspective of assemblage theory

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Abstract

This thesis presents an analysis of the implementation process of the Addax Bioenergy project in Sierra Leone from the perspective of assemblage theory. It seeks to contribute to an ongoing debate about Large Scale Land acquisition in countries of the Global South. The case study addresses research questions about the preconditions, the concrete implementation and occurring counteracting processes of such a project. The findings are based on a set of qualitative methods applied during a 4 months field stay in Sierra Leone from August until December 2013.

Five important elements are identified that enabled the coming into being of the Addax Bioenergy project: The mother company AOG, the Biofuel Complex, the European Union, Development Finance Institutions and Sierra Leone as the place of operation.

They were linked together by a social network of people with the right skills, connections or positions in a complex process that took place over several years. A range of factors that were working against the formation of the project are examined: NGO critics, high staff turnover, corruption, labour issues, thefts, lack of local support, as well as problems with contractors, land disputes and the Ebola epidemic.

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1. Introduction

In recent years, a new phenomenon of global scale has been debated by the scientific community policy makers around the world. Since the beginning of the millennium, a growing interest of nation states and private corporations in agricultural land in the Global South was observed. Large quantities of agricultural land were leased in Africa, Asia and South America to grow food and fuel crops in order to meet the rising demand of industrialised and emerging economies (e.g. Borras et al. 2011, De Schutter 2011, Deininger 2011). The phenomenon was perceived very differently based on the scholars' disciplines and world views. On the one hand, labelled as *Foreign Direct Investments on land* by adherents of neoliberal theories, it is seen as a great opportunity for the least favoured countries to develop their agricultural system and catch up with the global economy (e.g. Deininger and Byerlee, 2011). On the other, it is perceived as a threat for the poorest of the poor, that would risk losing their livelihoods for the profits of international corporations, and it was thus named *Land Grabbing* (e.g. De Schutter, 2011).

In a Master seminary about this thematic held in 2012 at the University of Bern it was found, that the existing literature was rather focusing on the scale and outcomes of the phenomena than on the concrete processes involved. In the following, two research gaps were identified: First, it became apparent that there was little knowledge about the concrete implementation process of such an agricultural project. And second, no research was found that elucidates the perspectives of the affected local population. A joint research group was established between the Institute of Social Anthropology and the Institute of Geography of the University of Bern with the aim to contribute to the these findings. In the following, several cases were identified inter alia in India, Kenya and Peru, and teams, comprising of geographers and social anthropologists, went out to the field to undertake middle-term investigations.

Among these was the Addax Bioenergy project in Northern Sierra Leone, which is analysed in this thesis. Established in 2008, Addax Bioenergy Sierra Leone (ABSL) was one of the few biofuel companies in Africa that persisted in the global financial crisis of the following years. It leased an area of 57.000 hectares to grow sugar cane and to set up an ethanol factory. The ABSL project was of particular interest since it intended to become a benchmark for agricultural development in Africa. The company was obligated to

transparency by their lenders and by their own values. Further, background information about the project, in form of NGO and news media reports, was available.

My role as the geographer of the team was to detect the specific processes that led to the land acquisition. The work was about to find out how the project came into being and why it is appearing the way it is now.

To tackle this task, a theoretical framework was chosen that allows empathising on formation processes — processes of assemblage — the *assemblage theory*. This theory, which is better described as ontology, enables me to keep a broad scope, to focus on the many heterogeneous elements that were necessary for the project to come into being. It provides an own terminology and proposes a specification of the research problem.

Three main research questions were thereby formulated:

- 1) What elements had to be in place in order to allow the emergence of the Addax Bioenergy project?
- 2) How did it concretely come into being? What processes were present to bring the essential elements together?
- 3) What processes were working against the formation of the Addax Bioenergy project?

The theoretical framework and the setting of an explorative case study impose the application of a qualitative methodological approach. Any quantification would be too difficult to conduct and bring an only limited added value.

The access to the field was established through contact to a local NGO. In parallel, connections to the ABSL management in Switzerland could be set up. The field work took place from August to December 2013. I was operating mainly from Makeni, the provincial capital around which the project is located. At the beginning, I was living for two weeks within a village in the project area, where my research partner was investigating the local perception of the ABSL project (see Käser, 2014). I thereby got unique insights in the lives of the affected people. Back in Makeni I went along with the local NGO that let me take part in their operations and provided me with background information about the project. Later on, I had a local research assistant that helped me to further widen my field of interactions. Finally I got integrated in the Makeni expatriates community that further served as a source of valuable information about the project. I met with other researchers operating in the country for a much longer period which helped me to better understand the complex local context. During the time of the field stay, I attended many conferences about the project, organised by NGOs and media or by ABSL, and conducted a large number interviews with the representatives of the most important stakeholders (see

appendix: a list with more formal interviews and discussions). This includes inter alia the company's senior management, that was met on various occasions, representatives of national and international NGOs and civil society organisations, local authorities and government officials as well as the representatives of the University of Makeni, that acted as a mediator.

The thesis is structured as follows: First, in a theoretical framework the fundamentals of the assemblage theory are illustrated and their adaptability to the research setting is discussed. In a second part, the methodological approach is examined. In the principal third part, the project is analysed in accordance with the three research questions. The fourth part then summarises the central findings.

2. Theoretical Framework

This thesis uses Manuel DeLanda's *assemblage theory* (2006) as a theoretical framework. The author aims to introduce in his 2006 published book *A New Philosophy of Society: Assemblage Theory and Social Complexity* a new way of thinking. He is therein developing the approach of assemblages, rooted in the work of the french philosopher Gilles Deleuze and his co-writer Félix Guattari (2006: 1,3).

In what he calls a *realist social ontology* DeLanda takes a stance of a mind-independent reality. Hence, an ontology that assumes the autonomy of social entities from the conceptions we have of them. Such an approach is therefore diametrically opposed to social constructivism, where reality is created solely through language. In assemblage theory language is just one of many components of a whole. As DeLanda puts it: 'the realist social ontology [...] is all about objective processes of assembly: a wide range of social entities, from persons to nation-states, will be treated as assemblages constructed through very specific historical processes, processes in which language plays an important but not a constitutive role.' (2006: 3). DeLanda's ontology goes beyond the social. He argues that 'entities ranging from atoms and molecules to biological organisms, species and ecosystems may be usefully treated as assemblages' (2006: 3). Every *thing* is seen as an agglomerate of many heterogenous components that came together through a set of evolutionary, historical processes. Crucial hereby is the so called exteriority of relations that assemblages are defined by. It implies that every part of an assemblage is self-subsistent. Hence it does not lose its identity when being disconnected to the whole. It can be detached and plugged into another assemblage where it interacts in a different way (2006: 7,10-11). Components of assemblages are characterised by their properties and by their capacities. Properties define an entity. They consist of attributes like density, colour or position in space. They are given and are denumerable on a closed list. Capacities on the other hand are the ability of an entity to interact with others. They are potentially unlimited and depend on the other parts that form an assemblage. The aggregate of all executed capacities defines the very assemblage (2006: 10-11). A good example may be made of water. Water itself represents an assemblage of molecules consisting of oxygen and hydrogen atoms in a ratio of 1/2. O and H have, at normal pressure level among others, the property to be gaseous. Merged together into water they change their properties as well as their capacities. With the property of being liquid, H₂O has, in contrast to H and O

alone, for example the capacity to extinguish fire. A whole is therefore a synthesis of its properties, not reducible to its parts (European Graduate School Video Lectures, 2009).

DeLanda strongly empathises on the distinction between relations of exteriority and relations of interiority. The latter are inherent in Hegelian dialectics and stem from a much older concept about relations of parts from a whole. In opposition to Deleuzian assemblages, Hegelian totalities are defined as seamless unities, where component parts are constituted by the very relations they have to other parts in the whole. They can not be disconnected, otherwise they will cease to be what they are. DeLanda calls this an *organismic metaphor*. It describes wholes (such as *society*) that 'possess an inextricable unity in which there is a strict reciprocal determination between parts' (2006: 9). The biological organism is thereby often used as a prime example. Explaining an organism from an assemblage point of view might cause some problems at first sight. In order to do so DeLanda uses Deleuze's metaphor of the wasp and the orchid. In this example we have two self-subsistent components that are connected through relations of exteriority that became obligatory in the course of coevolution. The wasp and the orchid changed reciprocally over time — always triggered by the development of their vis-à-vis — to the point that they are depending on each other. This metaphor can further be taken as an analogy to more complex biological assemblages. As DeLanda concludes: 'Conceiving an organism as an assemblage implies that despite the tight integration between its component organs, the relations between them are not logically necessary but only contingently obligatory: a historical result of their close coevolution. In this way assemblage theory deprives organismic theories of their most cherished exemplar' (2006: 11-12).

DeLanda describes different *roles* that can be played by components of a whole. The concept of assemblage can thereby be defined along two dimensions, two axes. First a distinction is made between a more *material* and a more *expressive* role. The image of an axis is introduced due to the fact, that a component's role is not necessarily exclusive. It can range from a purely *material* role at one extreme of the axis, to a purely *expressive* role at the other extreme. These roles are variable and may occur in mixtures.

In a social assemblage the material role is primarily played by human organisms but also by other components like food, tools, complex machines as well as buildings and neighbourhoods serving as their physical locales. Expressive elements are mainly represented by symbols and language, but are not limited to these. Further they include

body language as well as group dynamic expression such as solidarity or hierarchical legitimation.

The second dimension, as DeLanda puts it, 'defines variable processes in which components become involved and that either stabilize the identity of an assemblage, by increasing its degree of internal homogeneity or the degree of sharpness of *its* boundaries, or destabilize it. The former are referred to as processes of *territorialization* and the latter as processes of *deterritorialization*' (2006: 12). These processes are reflected either in a geographical sense, simply by enforcing or contesting clear territorial boundaries, or in a purely non-spatial way, by urging component parts to a closer assemblage or, in contrast, pulling them apart. A good example for deterritorialization is hereby the effect that emerging information and communication technologies have on interpersonal networks. Ranging from a reliable postal service to internet based video conferences, these technologies blur spatial boundaries by allowing conversations to take place independent from physical distance. Social relations can therefore be formed, or at least be preserved, irrespective of whether or not physical co-presence is happening on a regular basis. Further de-/territorialisation processes also occur in a more abstract way, such as a sorting processes that exclude a certain category of people from membership of an organisation or racial segregation processes leading to ethnically separated, homogenous neighbourhoods (2006: 13).

Additionally DeLanda introduces a third dimension that is complementing the second one: the axis of *coding* and *decoding*. These processes consist of specialised expressive entities that produce and maintain, or, on the other hand, disturb and disrupt, the identity of an assemblage. There are two kinds of components identified that are able to perform such a role. First there are *genes*, linear sequences of nucleotides and component parts of chromosomes. They are codes, they express an ideal form of a biological organism. Genes do not solely determine the generation of plants or animals. But they are, along with many others, an important part of an assemblages' formation. The second coding entity is *language*. It emerged later in evolutionary history and consists of words that are made of linear sequences of phonetic sounds or written letters, that are the component parts of sentences. Both coding elements are treated as assemblages themselves. Some of its components play a material role, such as amino acids and specialised enzymes in genes, or highly complex neuronal events in the human brain, together with the functioning of the larynx, tongue and lip movement in language. Material components allow a coding element, in a set of specific mechanisms, to express its information, like a certain protein

for a gene or a range of meanings for language. The essence of coding in the words of DeLanda: 'While territorialization provides a first articulation of the components, the coding performed by genes or words supplies a second articulation, consolidating the effects of the first and further stabilizing the identity of assemblages. Biological organisms are examples of assemblages synthesized through both territorialization and coding, but so are many social entities, such as hierarchical organizations. The coding process in the latter will vary depending on whether the source of legitimate authority in these hierarchies is traditional or rational-legal as in modern bureaucracies' (2006: 15). The role of coding in social assemblages is therefore played by shared meanings like narratives of divine origin of a leader (traditional) or a materialised set of rules as in modern constitutions (rational legal). Any process that enables components to evade these coding elements can be seen as decoding. In the case of an organism, decoding can be performed by an animal that starts learning out of experience. By doing so it goes beyond the passive expression of its genetic information, it starts interacting with its environment and starts generating identity by the use of new means. In a social assemblage decoding happens for example in informal conversations between friends. The set of regulations that governs conversations, such as the rules of turn-taking, can be weakened by the factor of familiarity of the participants (2006: 15-16).

To understand the functioning of social assemblages it is crucial to further elaborate DeLanda's notion of a human individual. Building on Deleuze's adaptation of David Hume's work, DeLanda presents an empiricist model to conceptualise subjective experience. Essential thereby is, that every generation of meaning is based on *distinct and separable* sense impressions, not only of visual, aural, olfactory and tactile nature but also including the plurality of passions, from pride and humiliation to love and hatred. In the process of association of ideas these impressions are brought into a certain unity whereby meaning is generated. This happens through three specific processes that turn a loose collection of individual ideas into a whole with emergent properties: 1. habitual grouping of ideas through relations of contiguity (in space or time), 2. habitual comparison through relations of resemblance, and 3. habitual pairing of causes and effects by their perceived constant conjunction. These properties are species-wide, every human being has thus the ability to match means to an end. Combined with personal motives that result from individual experiences of positive and negative nature, an assemblage of a *pragmatic subject* emerges (2006: 47-49). Material components are hereby identified in the bodily mechanisms behind the production of sense impressions and the associative operators

merging them into meaning. The expressive role is played by both linguistic and non-linguistic elements. The best example for the latter is the formation process of sensual/passionate impressions into ideas itself, the components expressions are assembled to ideas, without any influence of language at all. The main process that keeps such an assemblage in a stable form is *habitual repetition*. Habit is considered as an even more territorialising factor than conscious reflection. As DeLanda interprets Hume: 'personal identity is stable only to the extent that habitual or routine associations are constantly maintained' (2006: 50). Hence, everything that breaks a subject's routine can be regarded as a deterritorialising element. Furthermore, biophysical phenomena such as madness, high fever or intoxication lead to the same effect. In addition, also the acquisition of new skills can lead to deterritorialisation. New skills increase the capacities of a subject to encounter more heterogeneous sensual impressions, such as a kid that learns how to use a bike (2006: 50). In the same sense it was the emergence of language that transformed human subjectivity in a crucial way. As already discussed, language is not determining the human ability to match means to ends (there is a long evolutionary history without language), but it leads to a much greater *combinatorial productivity*. It expands the processes of association and allows the formation of complex ideas through 'a finite number of words, a set of grammatical rules [that] can produce an infinite number of well-formed sentences' (2006: 51). Such language-based ideas like for example *belief* are considered real. They play a constitutive role in the production of a subject.

Another dimension is added to the subject through social encounters like conversations. As short-lived assemblages they allow the subject to express itself and thus to consolidate its identity.

Repetitive social encounters tend to lead to the emergence of interpersonal networks, longer-lasting social assemblages. They are defined, not through the attributes of its participants, but as a *pattern of recurring* links between them. The links properties are thereby fundamental. The frequency of interaction among the persons occupying given positions (*strength*) and the emotional content of the relation are thereby the most important. Further *density*, the extent of interlinkage between the members, and *stability*, the homogeneity of shared attitudes, are significant properties of the overall network. The two of them also endow the network with a certain degree of *solidarity*, a strong territorialising property. The most powerful centripetal force is thereby the existence of a conflict with another community. *Shared stories and concepts*, derived from the narrative of 'us vs. them', rigidify as codes the identity of a group and construct boundaries to

outsiders. Processes such as social mobility or secularisation on the other hand act as centrifugal forces. They break up close communities while allowing its members to access other identities and other networks (2006: 58-59).

In a historical process of grouping and regrouping, interpersonal networks have taken various forms and sizes, ranging from more diffuse justice movements and social classes to hierarchic organisations such as governments. The latter are defined through an emerged authority structure that enables them to coordinate social action. Material components are identified in everything that is involved in the enforcement of obedience. They occur as weapons, corporate logos, military uniforms and so on. The expressive role is played by elements that express the *legitimacy* of the authority. According to Max Weber there are three kinds of authority structures that can be differentiated. First there is a system of a perfectly organised bureaucracy. It is strictly hierarchical and legitimised through a legal framework, every position's competences follow written regulations. In a second type of organisations continuously reinterpreted traditional sacred narratives are serving to legitimise authority. This is the case in religion or in monarchic governments. Finally, a third kind of legitimacy is represented by the virtue and the personal charisma of a leader. An organisation consists always of a mixture of these three kinds. Though it can be stated that the rational-legal generation of legitimacy is dominating nowadays (2006: 68-70).

Finally there is a last dimension of assemblage theory that is crucial for the analysis of this case study. Even though DeLanda does not emphasise the role of these elements, as it derives from deterministic linguistic theories — the very concepts the assemblage approach seeks to overcome — I still consider it important and, in any case, compatible with assemblage theory. I am talking about the role of *discourses*. DeLanda refers to it as '*group beliefs*', that have 'convergence into some kind of consensus' as an emerging property. Further, 'coherence of group beliefs may be increased [...] if some specialized members of an organization (doctors, teachers, lawyers) routinely engage in arguments and discussions, and produce analyses and classifications, that transform a relatively loose set of beliefs into a more systematic entity' (2006: 74-75). He is thereby integrating the work of Michel Foucault in assemblage theory (largely in the manner of Deleuze). There is a large variety of definitions for the term *discourse*, even in Foucault's own work. Generally a discourse is about the historical processes that generate truths within systems of thought — it is about the structuring of collective human thinking. In Foucault's later writing discourses appear as part of a whole, the so called *dispositif*, among other

elements such as institutions, laws, administrative practices, scientific propositions and so on (Ruoff, 2009: 91-100, 101-104). In this thesis I will use the term *discursive assemblage*. It defines a discourse as a loose, diffuse assemblage that has the capacity to shape social practices of all kinds. It predominately performs an expressive role. It expresses (hidden or transparent) meanings, categories, notions of good and bad as well as all kinds of narratives. The material role is thereby played by a wide range of elements including people, words, newspaper, webpages, scientific conferences, institutions and interpersonal networks. Territorialising factors are identified in repetitive recitation of similar statements as well as the involvement of people with a certain status and/or a high media presence such as scientists or politicians. Deterritorialising elements can be located in the translation of a discussion into another language or the articulation of differentiating opinions. De/territorialization appears hereby mostly in the form of de/coding. Discursive assemblages are highly unstable, given to the fact that they underlie constant interactive processes of shaping human thinking and being shaped by the resulting social practices. Nevertheless they remain observable and traceable.

I argue, that with regard to the analysis of the coming into being of a large scale land acquisition projects, the assemblage theory allows a more comprehensive view on the complex processes involved than a social constructivist theory. The case of the ABSL project reveals the importance of non-human, material elements, that are not necessarily dependent on perception, such as climate, soils, infrastructure, interpersonal networks, organisational structures etc. Assemblage theory at the same time permits to integrate elements of social constructivism, inter alia to explain social assemblages. Further, the dimensions of *space* can be better represented — not determined to a pure relational, nor a mere euclidian model. This allows to integrate geometrical maps and distances as well as individual perceptions of space.

The assemblage theory is used as a framework to empathise emergence, multiplicity and indeterminacy of the Addax Bioenergy project. It is not easily adaptable since it seeks to blur clear divisions of social/material, near/far and structure/agency. It tries to avoid an a priori reduction of socio-spatial relations and processes to any fixed form or set of fixed forms in general. Assemblage theory is not aiming at a reduction of complexity by providing explanations for certain processes, but instead describes the mere nature of these. It thereby proposes a set of distinct termini that are used in the following.

The concept of assemblage is relatively new in the field of geography but is used increasingly often. It is thereby deployed in heterogenous ways, while providing little clear guidance (See Anderson and McFarlane, 2011).

However, the adaption of the assemblage theory in this thesis led to the formulation of the three research questions. They are derived from three core aspects of the theory: *composition, emergence and disintegration*.

- a) What does the ABSL project consist of? By what essential elements is it composed?
- b) How did it come into being? What territorialising processes can be identified?
- c) What processes were working against its formation? What forces of deterritorialisation are acting on the project?

3. Methodology

This thesis adopts a deductive approach to analyse the case study of the Addax Bioenergy project in Sierra Leone. The application of the assemblage theory requires a qualitative methodology. Three principal tools were thereby used: literature research, interviews and participatory observation.

1) Extensive literature research was used as a preparation of the field work and as a follow up. Scientific publications were applied to understand the macro assemblages such as the biofuel complex, development discourses or the condition of the Republic of Sierra Leone. NGO publications, media reports (including audio and visual media), press releases of the company as well monitoring reports and impact assessments were used to get a picture of the project, served as a base for interviews or were consulted to put statements into context. Most sources were accessed via the internet, pre- and post-field stay. Others were obtained by stakeholders during the time spent in Sierra Leone.

2) Interviews were conducted to find out about processes that were not covered by the source material or to put them into context. The nature of the interviews held varied considerably. Depending on the setting, the relationship to the interviewee, the language barrier and the presence or absence of a recording device, interviews turned out to be more or less formal. Generally, the 23 more formal interviews were conducted in a semi-structured way. A questionnaire was thereby prepared before every meeting. Some basic questions were posed to any stakeholder in a discussion. These involve a general question about the project: what their personal perception is, how their involvement began, what they knew about the process of implementation and — to determine their stance within the development discourse — what their vision was for the future of Sierra Leone.

3) Participatory observation was performed in different settings. Close interactions with stakeholders such as the local NGO or with workers and farmers at the time spent in the village were part of every day live. To keep track of these findings, a research diary was kept that was updated daily (if there was electricity).

In general, it was of special importance to always bear in mind the role a particular stakeholder is playing, when interactions took place. It was obvious that I as a researcher was myself part of the controversy formed around the ABSL project.

To organise the collected data the qualitative data analysis software TAMS Analyzer was used. It allowed to gather the collected data that was of heterogenous form (transcribed

interviews, web-videos, reports, the research diary) and apply codes. In such a way veracity of statements could be triangulated or repetitive perceptions generalised.

4. The Five Pillars

In this part, the preconditions for the coming into being of the Addax Bioenergy project in Northern Sierra Leone are analysed according to assemblage theory. Five important elements are thereby identified that enabled ABSL to develop the necessary capacities to start its project.

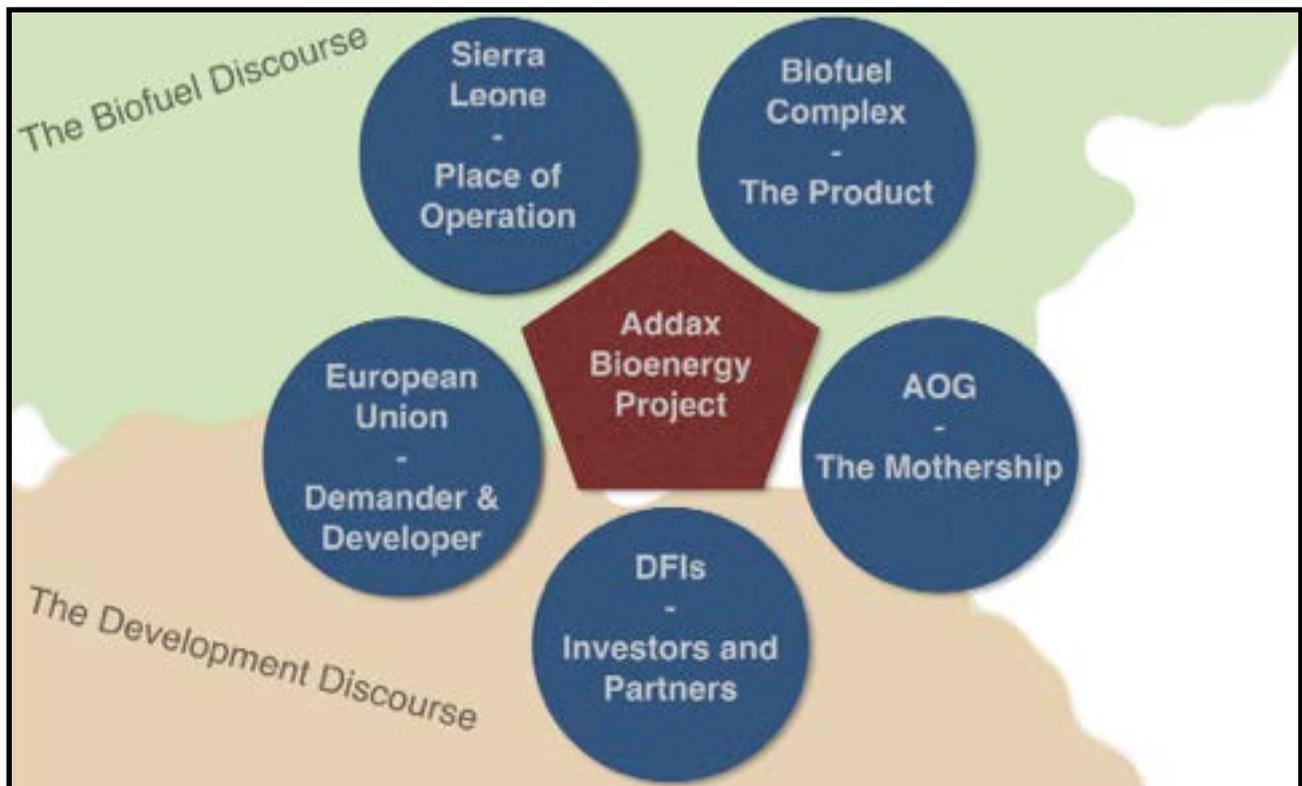


Figure 1: The Five Pillars of the Addax Bioenergy project. The figure shows schematically the five principal elements identified in section 4. The two major discursive assemblages are shown as cloudy fields that underly and interact these elements.

4.1 Addax and Oryx Group – The Mother Ship

One principal element that was essential for the emergence of the Addax Bioenergy project was the existence of the Addax and Oryx Group Limited. Today known as AOG, the company was founded 1987 as Addax Trading in Geneva as an oil and gas trading business with a focus on Sub-Saharan Africa. In 1989, with the purchase of an oil terminal in Dakar, it started expanding into the downstream business. Under thereby name of Oryx Oil and Gas it began storing and distributing petrol products in today more than 15 Subsaharan countries (Davis, 2013: 42). Later, in 1994, with the creation of Addax

Petroleum, AOG extended its operations and invested in the upstream oil sector. It began to explore and produce in Africa and in the Middle East. Eventually, in 2008 AOG founded Addax Bioenergy as a whole owned subsidiary with the unique purpose to set up a biofuel and energy project in Northern Sierra Leone (AOG, *The story of AOG*).

Seen as an assemblage, AOG consists first of all of an extended interpersonal network. One that is composed of a personnel with various skills and is organised through coding contracts of employment, a set of internal values and a shared vision. It is defined through rather strong links due to habitual interaction and a certain density. Material components are represented by office buildings, food and salaries, but also by oil terminals, super tankers, licences and contracts, capital resources, bank accounts, communication technology and so on.

The emergence of the AOG-assemblage is closely related to the career of Jean Claude Gandur, chairman and co-funder of Addax and Oryx Group and of its entire subsidiary.

Born in France in 1949, grown up in Egypt and educated in Switzerland and France, Gandur started as an oil trader. He worked at Philips Brothers, a major commodity trader between 1976 and 1983, where he was responsible for the African/Latin American division. After another few years gaining experience in former rival companies, he started, together with three partners, his own business, Addax Trading.

The AOG served as a point of departure and as a safe haven for Addax Bioenergy. It provided essential elements that enabled ABSL to develop the capacities to start its biofuel project.

a) First of all, AOG transferred its *mode of business* to its subsidiary. ABSL's internal structure follows the same principles, the same rules, the same code of behaviour. The AOG business culture is closely related to its experience in Africa. From the beginning Jean Claude Gandur emphasises the importance of close relationship with national as well as local authorities in his operational field. He sees the key for his success in Africa in the *investment in maintaining relationships*. Gandur is quoted: 'If you want successes there [Africa], you must create friendships, they must like you' (in Reguly, 2008). Trustful relations with pivotal stakeholders allow to venture business in rather unstable countries. AOG has great experience in dealing with political uncertainty. The company has the strategy and human capital to persist where others pull out (Helman, 2007). According to an investment analyst: 'Addax has taken on more political risk than other oil companies, but less geological risk' (in Reguly, 2008). Risk is traditionally always high in the oil business. Huge investments have to be taken and often last a long time without return.

The strategy of AOG is to utilise its strength in dealing with high risks in difficult political environments to seek unique business opportunities. As a part of the Addax and Oryx family, ABSL is applying the same formula of doing business. AOG provided a mode of functioning, the capacity to operate as a company in an African context.

b) Second, the AOG's *reputation* was transmitted to ABSL. Being a subsidiary of AOG helped ABSL to get taken seriously. As AOG was in business for more than twenty years at the time, earning a good name in terms of reliability and as never failing to succeed. This reputation was convincing the Development Financing Institutions (DFIs) as lenders and equity shareholders as well as the political leaders of Sierra Leone. Even in the formation process of the EU biofuel policies, ABSL was enabled to take part.¹

Jean Claude Gandur as a charismatic self-made billionaire is thereby of importance. He has been dubbed Commander of the National Order in Benin, has a diplomatic passport from Senegal and was for ten years the honorary consul for the Republic of Congo in Geneva (Helman, 2007). Reputation is thereby a property of an established, successful company. It further contributes the capacity to engage in business more easily.

c) Third, the AOG's *mode of business* and *reputation* are essential elements that are defining, coding, its *identity*. The identity is represented by the expression of the AOG personnel's self-understanding, as members of the company. Identity is also something that is managed in big corporations. Although an important aspect of a company's public relations, it serves initially to assemble people in sharing a common vision, playing a territorialising role. The AOG's official values are shared among all AOG subsidiaries (ABSL, *Values*). They are a product of its identity management. They contain three core aspects: 1st, *Alert*: 'We thrive on a challenge and are known for taking bold, yet carefully calculated, risks. Not surprisingly, we avoid unnecessary bureaucracy and do not let institutional dogma slow us down'; 2nd, *Principled*, underlines the AOG's ethical codex: 'We are shrewd operators, but we never compromise our principles, which are based on strong ethics and mutual respect. We are fair, honest, direct and transparent in our dealings and do not tolerate prejudice, discrimination or dishonesty' and 3rd, *Adaptable*: 'We have a talent for developing new areas of business, and we are at ease in diverse and changing environments and cultures. Our ability to adapt is vital to our business success and enables us to integrate locally, without compromising our principles, our global outlook and long-term vision.' These elements developed and consolidated along with the

¹ In 2008 an ABSL manager was invited as an expert to a workshop of the European Commission about the sustainability of biofuel production in sub-/tropical countries (See EC, 2008).

emergence of the AOG. The more operations succeeded, the more the risk-taking culture could stabilise, the more relations were established, the more its whole mode of business could establish itself. ABSL managers repeatedly took reference of this set of values. They strongly empathised the pioneering role of their enterprise. They view their project as a result of this business identity: setting up a flourishing project, in close collaboration with the local population, according to an ethical framework for the benefit of everybody. Identity is hereby a coding element that represents a territorialising force. It keeps a social network together by providing it meaning.

d) Fourth, AOG acted as a *point of access* for ABSL. AOG was doing business in Sierra Leone with the Sierra Leonean National Petroleum Company (NP). NP was originally owned by British Petroleum (BP) but was sold to the Sierra Leonean Government in 1984. In 1996 it was privatised, with Leone Oil operating as its biggest equity holder. Even though being wholly owned by indigenous companies, the name NP is still regarded as a government institution (NP, *Our Story*). According to interviews made with the ABSL management, the business partnership between NP and AOGs downstream branch Oryx Energies dates back to the 1980s. However, in 2003, a joint venture of Leone Oil and OE, named Petrol Leone, was established to handle liquid storage facilities at the Freetown Kissy port (Davies, 2013). Its main purpose is to manage the supply of the country with petrol products. A result of this long term partnership with the major local petrol company were valuable connections that led, over the years, to a vast network of Sierra Leonean business and government aristocracy. Relations up to the president's office were established. Hereby was also the *Addax and Oryx Foundation* of importance. Created in 1996 by AOG employees and officially registered in 2007, it is since providing funding for education and health projects mainly in Africa and in the Middle East (Addax & Oryx Foundation, *Our History*). In 2006, the former Sierra Leonean President Ahmad Tejan Kabbah officially opened a hospital that was established with the help of the A&O Foundation and NP (see speech of 23 May 2006). In the case of Sierra Leone the role of the AOGs philanthropy branch is part of the AOG mode of business. It is not just a public relation instrument, but also an *investment in relationships*. Hence, the Addax Bioenergy project would not have been possible without the social network established by its mother company.

e) Fifth, the AOG enables ABSL to *bring its product to the market*. In Sierra Leone, a country with very limited infrastructure services, a product, designated for the European market, is not easily transported to its destination. Modern port facilities are thereby

crucial. Even though the Freetown port is one of the largest natural ports in Africa, it is not up date. Oryx Energies is currently completing a new state of the art jetty at the Kissy oil terminal. It makes import and export for petrol products more efficient. It strengthens OE's downstream activities in Sierra Leone. It is of strategic value, as a next logical step after the investment in storage facilities in 2003 (Davies, 2013). It further allows OE to pursue its aim to generate a strong market for LPG (OE, *Liquefied Petroleum Gas*) in Africa. The new jetty is the result of a public private partnership agreement (PPP) between OE's affiliate, Petrojetty Company Limited, and the Sierra Leonean government. According to this, OE has the right to build the jetty and operate it for 21 years before the facilities will revert to the Sierra Leone's Port Authority (Eversheds, 2014). As for the negotiations, as well for the construction, OE hired contractors with experience in the field. The engineering joint venture engaged was lately building a port facility for a big mining company in Sierra Leone (Kolver, 2014). The investment of OE is coordinated with the development of the ABSL project. Apart from the new export facilities, inter alia designed for the treatment of biofuels, OE built additional storage tank capacity (15'000m³), exclusively for bioethanol and independently from Leone Oil (Davies, 2013).

f) Finally, AOG provided essential financing. While setting up ABSL as a fully owned subsidiary, AOG funded the project all by its own until the end of 2011 (ABSL, *History*). DFIs, acting as lenders and equity shareholders, only came on board shortly after the ground breaking of the ethanol factory in November 2011 (ABSL, *Development partners*). AOG, as the mother company, transferred its mode of business, its formula of how to organise and how to do things. AOG's reputation was transmitted to ABSL, enabling it to get taken seriously. The common set of values and visions has built up a strong identity, supporting internal coherence and triggering ambitions. More fundamentally, AOG opened up Sierra Leone as a place of production, providing ABSL with an access to the local key stakeholders, decision makers, consultants and business partners. ABSL's sister branch, Oryx Energies, takes charge of bringing the product to the market. AOG is ABSL's mother ship, a safe haven that provides the recourse and from which explorations can be carried out.

4.2 The Biofuel Complex – The Product

Another essential element for the emergence of the Addax Bioenergy project was the existence of the biofuel complex. It provided a proven business model that was adaptable to the specific environment ABSL sought to operate.

The use of bioenergy is as old as modern men. Energy sources such as wood served mainly for heating and cooking reasons. In the 17th and 18th century whale oil was used by early industrialised societies in a large quantity, primarily as lamp oil. As it became more and more scarce, it was continuously replaced by a mixture of ethanol and turpentine in the late 1830s (Songstad, 2009). However, with the development of the automobile in the end of the 19th century, ethanol had to compete with gasoline, generated from newly exploited petroleum. Even though ethanol was the fuel of choice for early combustion engines, gasoline prevailed in the end. While technically both energy sources were suitable, the decisive reason was the price. In the US, Ethanol was subject to much higher taxation and its feedstock (mainly maize) remained expensive at the time. Furthermore, it was rather uncertain if bioethanol could meet the fast rising fuel demand. As a result, the technical features of the engines as well as the distribution system were adapted to gasoline. Biofuels were less and less compatible and their use declined rapidly. However, in other parts of the world — for example Germany, where the government actively prioritised ethanol — blending of fuels was explored and applied in various degrees (See Carolyn and Effland, 2007). Also in Brazil, where sugar cane has been grown since the Portuguese colonisation and spirit distilling is a widespread tradition, the government encouraged research on ethanol use and later mandated minimum blending proportions (Basso et al., 2011). In other words, where gasoline was rather scarce and bioethanol easily available, blending was an often applied method. In the time of the first and second world war many governments around the world were setting up highly subsidised programs to limit dependency on often imported, scarce and rationed petrol products. A whole range of different fuel types with various feedstocks was thereby explored, always within specific circumstances. After 1945 oil began flowing as it never has before and the urge for alternatives was swept away by rapidly declining fossil fuel prices. Drastic rise of petrol prices after the first oil crisis in 1973 lead, among other factors, to a revival of biofuels. In most industrialised countries explorations for possible replacement strategies were revived (Mousdale, 2008: 4-11). Although reacting to the same threat, the overwhelming dependency on petrol import as a precondition for economic prosperity,

many different approaches were followed. These were depending on various factors such as the share of energy import, the state of industry and the agricultural system and the specific experiences in the past. As available fossil fuel alternatives still could not compete with gasoline nor meet the demand, government policies were of particular importance.

The most successful example is clearly the Brazilian ethanol program. In Brazil, ethanol as a fuel was never completely abandoned. A 1931 law, determining a minimum 5% ethanol blending, was still active. The oil crisis hit the country particularly hard, nearly tripling its petrol expenses. In addition, world sugar prices declined sharply after a period of steady growth. Under these circumstances the government launched the *National Alcohol Program* in 1975. In the following, gasoline prices were regulated to give ethanol a competitive advantage, product acquisition was guaranteed, low-interest loans were offered for new refineries and the state owned oil company began building up a distribution infrastructure. Research in ethanol processing and engine adaptability was further pushed (Basso et al., 2011). A strong sugar cane ethanol industry could develop. Production rose steadily while its costs fell. In 1999 the sectors pricing system was deregulated, leading to more competition (Moraes, 2006). Until the mid-2000s, Brazil was the world's largest alcohol producer, before the USA took over.

Similarly, in the USA, a mix of legislations and economic initiatives was required to engender a large-scale bioprocessing industry. From the 1970s on, environmental regulations were encouraging the blending of gasoline with ethanol, thus allowing a traditional corn-based alcohol industry to gradually enter the fuel market. While in the 1990s the federal government slowly started to promote biofuels as gasoline replacement, a 2002 law pushed the industry considerably. It banned the fuel oxygenate MTBE, that could be substituted with ethanol. Later, instruments such as a mandatory minimum consumption of renewable fuels, different funding mechanisms for biofuel projects or tax incentives for biofuel infrastructure expansion pushed the industry even further. (See Mousdale, 2008: 11-17). Since the turn of the millennium the US biofuel production increased rapidly, even outrunning Brazil in 2005. On a global scale, the USA and Brazil are by far the biggest players in the biofuel business (Crago et al., 2010).

In Europe the biofuel complex developed in its own way. First of all, it varied widely from one country to another. For example in Sweden, sensitised through a severe fuel shortage during the second world war, the government continued to support the production of alternative fuels in the after war period. Particularly the generation of ethanol from waste products of the paper industry was thereby heavily subsidised. As in the rest of the world,

the oil crisis led to increased public interest in biofuels. Public authorities, in coalition with the automotive industry and/or the agribusiness started different initiatives, based on different technology approaches. Different types of protection measures supported the biofuel industry in a way that several niche markets could develop. In comparison, the introduction of biofuels in the Netherlands was much more hesitant. In contrast to Sweden, the country was not as isolated during the cold war and its energy supply was relatively safe, due to own natural gas fields and its strategic location as a pivotal point in the flow of global feedstocks, including oil. It was not until the early 90s that first ethanol and biodiesel explorations started. Opposition against further promotion of the production of fuels out of agricultural feedstocks was strong. The Netherlands obliged rather reluctantly to the EU 2003 directive and elaborated a plan to increase its renewable fuel shares, mainly by assigning the task to the oil industry (See Ulmanen *et al.*, 2009).

On a global scale, biofuel production increased significantly after the turn of the millennium. From 2000 until 2007 global biofuel production tripled.

Seen from an Assemblage Theory approach the biofuel complex in its core consists of an agro-industrial sector that is highly interlinked with the energy and automotive industry. Its emergence is greatly dependant on the development of technology, always creating a variety of new opportunities. As biofuels tend not to prevail on a free market, the involvement of policy makers is crucial. Lobby organisations, politicians, scientist and media are hosting a biofuel discourse, a key element of the biofuel complex (see digression 1). With its properties of a discursive assemblage, as a global network of arguments about different aspects of biofuels, it creates a specific set of capacities within a local context.

The biofuel complex was in many ways essential for the coming into being of the Addax Bioenergy project:

a) First of all, the biofuel complex provided a *proven operational model for bioethanol production* that was adaptable for the conditions in Sierra Leone: the Brazilian sugar cane based ethanol production system. In Brazil, research efforts since the beginning of the 20th century and the heavy government support since the 1970s resulted in an elaborate method of production. In one region in Brazil, the yields rose by 33% from 1975 to 2000, ethanol production per unit of sucrose by 14% and the productivity of the fermentation process by 130% in the same interval. The results were declining prices by an annual average of 3.8 percent from 1980 to 1985 and 5.7 percent from 1985 to 2005 (Moreira, 2006). Continuously dropping prices for Brazilian ethanol were facing rising global

gasoline prices. The efficiency of the ethanol production increased steadily (Goldemberg et al., 2004). At the time the ABSL project was in its preliminary phase, an elaborate system of production was already established. All components for the processing of the sugar cane feedstock were available on the market: fermentation and distillation units, highly efficient yeast strains etc. (See Basso et al., 2011). Know-how about large scale sugar cane cultivation was generated and the appropriate machinery, from irrigation systems to harvesters, designed and available. Further, a rather recent technology, the more efficient use of the by-product *bagasse* (basically sugar cane fibre) to generate excess electricity that can be sold to the national grid, was already applicable (See Granville et al., 2007 and Ramjeawon, 2008).

b) Second, the biofuel complex *generated a market for bioethanol*. It is the key condition that led the initiators of the ABSL project into making their plans. The biofuel discourse (see digression 1) encouraged the policy makers around the world to introduce consumption mandates. As the price of bioethanol in general still can't compete with gasoline, legislations dictating a certain blending ratio, or a minimum amount to be consumed, created a steady demand for bioethanol, independent from the current petrol prices. For the ABSL project the EU renewable energy directives (RED) created such a market (See 4.3).

c) Third, the biofuel complex *prepared the ground for ABSL in Africa*. The production of bioethanol in Africa dates back to the early 80s. As one of the first countries, Malawi began mandating ethanol consumption as a fuel substitute in 1982. As a landlocked State Malawi suffered from high import prices and its vast sugar industry produced a lot of molasses, a widely available by-product that could easily be converted into ethanol. Under these specific conditions, domestic biofuel production was much cheaper than imported gasoline. Even after adjusting the energy content, ethanol was still roughly half the cost of gasoline (See Mitchel, 2011: xxii, 140). The Malawi example proofed the feasibility of efficient ethanol production with sugar cane as a feedstock. However, relatively low petrol prices hindered other African States and private sector operators to initiate similar programs until the 1990s/2000s. On one hand, big gasoline importers sought to reduce their weight-gaining burden. On the other, countries with suitable agricultural land adopted large scale biofuel production as a mean to achieve an export-lead or rural-based development strategy (Molony and Smith, 2010). Still, relatively few African governments began implementing substantial policies to evoke a domestic biofuel industry (Jumbe et al., 2009). The AOG was one of the first investor to react to this new business opportunity.

The ABSL project fitted into the plans of the Sierra Leonean government to exploit the potential of the country's agricultural sector,² even though Sierra Leone was not running a specific biofuel program. The potential of biofuels was widely discussed in West Africa at the time (See Hagan, 2007). It further increased the acceptance of a biofuel project among Sierra Leonean authorities.

d) Fourth, the biofuel complex provided the ABSL entrepreneurs with a proven business model that enabled them to *achieve funding* for their project. Initially it was necessary to convince the AGO of their idea. As a member of the ABSL management declared in an interview, nobody would have invested in their project if there hadn't been already a successful bioethanol industry with proven production processes. The manager stated, that they followed a so called 'Brazilian checklist', an approach that builds on the success of the Brazilian bioethanol industry. This backed up their business plan and enabled them to bring the Development Finance Institutions on board. Banks have to assess the risk of an investment. The risk of failing would have been too high if the project couldn't have relied on a safe and dependable production process.

The biofuel complex is a key element of the Addax Bioenergy assemblage. It gave ABSL the capacities to venture its project by providing a proven operational model for bioethanol, by generating a market for bioethanol, by preparing biofuel business in Africa and facilitating the achievement of funding.

Digression 1: The Biofuel Discourse

The Biofuel discourse roots back to the 17th century, but much of its current form is connected with the development of combustion engines and the evolution of the automobile. It is led by a variety of stakeholders, ranging from the oil and automotive industry, the agricultural sector, the scientific community, policy makers, to lobbying groups and environmental activist. It is predominantly displayed by political debates, media coverage and scientific publications. Depending on different environments (on a national

² In the post-war period under president Tejan Kabbah the rebuilding of the agriculture system was crucial. Aiming primarily at restoring food security but also regarding it as a possible source of foreign exchange income (See Bolton, 2009). Kabbah's successor Ernest Bai Koroma further increased these efforts (MAFFS, 2009).

scale) it takes individual shapes. However, there seems to be a general global biofuel discourse, where all the different arguments are represented (See Ulmanen *et al.*, 2009). The biofuel discourse is arranged around several poles, around several families of arguments. From the beginning of the use of biofuels, technological arguments were of importance, mainly in the debate about the suitability of its use as an energy source (See Songstad, 2009). (Biofuels do/do not have the properties to serve as an engine fuel. Current engines are/are not adaptable to alternative fuels.) Early on, the question about the *security of fuel supply* rose. At first, arguments concluded that biofuels cannot be produced in quantities that meet the demand. Later, from the 70s on, with regard to discussions on import-dependencies and shrinking crude oil reserves, biofuel appeared as a solution for a sustainable fuel supply. National security and prosperity was at stake (biofuels can diminish/terminate our dependency on crude oil). Further, environmental issues were of importance. Biofuels were seen as a solution for pollution reduction, a problem that was given more weight since the 70s when individual mobility rose markedly (biofuels are a clean alternative to fossil fuels with no negative effect to human health and the environment). Since the late 80s, the emerging climate change discourse had a substantial influence on the biofuel discourse. Biofuels were treated as a climate neutral alternative to gasoline, hence, as an important weapon to fight climate change. Simultaneously, biofuels were seen as a new opportunity for the troubled agricultural sector in industrialised States (See Ulmanen *et al.*, 2009). Especially in the Global South, biofuel production appeared as a miraculous mean to reach development: reduce dependency, renew agricultural production, increase revenues, create employment and rural development (See Mitchel, 2011). The biofuel discourse was thereby integrated in the development discourse (See digression 2). But in recent years, criticism increased. The environmental discourse shifted towards negative effects of biofuel production (see Kesicki and Tomei, 2013). (Biofuel production is unsustainable and leads to land degradation. Ineffective farming methods and land clearings undermine its GHG benefits.) Further, the economic profitability of biofuel production is challenged (See Kleiner, 2008). (Biofuel production is depending on public subsidies and can't stand on its own.) A heated debate emerged from combination of the biofuel discourse with the critical development discourse (See Borrás *et al.*, 2010). (Biofuel production is leading to land grabbing in development countries, depriving local people from their livelihoods. The use of food crops as biofuel feedstock increases world hunger.)

4.3 The European Union – Demander and Developer

The European Union was another essential element for the coming into being of the Addax Bioenergy project. It essentially provided a stable market with a continuous demand for biofuels and prepared the ground for investment projects in Sierra Leone through its development policy.

The EU is a complex supranational entity, covering 28 member states on the European continent. It is the result of a gradual integration process after the Second World War. The European integration represented an alternative to the extreme forms of nationalism that had led to mankind's most devastating conflict. The cornerstone of this development was thereby the 1950 initiated European Coal and Steel Community, an international organisation with the purpose to commonly manage resources indispensable for warfare — hence, prohibiting future wars between its members. A key element was the reconciliation of the arch enemies France and Germany, the today most important members of the EU. Further, external forces such as the increased tensions between an US-led alliance and the Soviet Union, urged Western European countries to close ranks. Commonalities were empathised, such as a shared Christian heritage, also displayed in strong conservative Christian peoples' parties in all member states. Over the years the partnership was intensified, despite many setbacks. In 1957 a custom union was established by the creation of the European Economic Community (EEC) together with the nuclear energy development agency Euratom. New members joined the now called European Communities since the 1970s. Towards the end of the 1980s integration dynamics, that have been on hold for quite some time, gained more momentum. Finally, in 1992, after the collapse of the Soviet Union and reunification of Germany, the European Union was founded in the Maastricht Treaty. The Economic and Monetary Union was established, leading to the introduction of the Euro in 1999. Further, common foreign and security politics were intensified. In 2004 and 2007 the union enlarged to the East. The last big step taken by the EU is the implementation of the Treaty of Lisbon, the Reform Treaty of 2007. It redesigned the institutions of the EU, giving it the today's structure. The EU consists now of seven institutions: the European Parliament, the Council of the European Union, the European Commission (EC), the European Council, the European Central Bank, the Court of Justice of the European Union and the European Court of Auditors. Competencies in scrutinising and amending legislation are divided between the European Parliament and the Council of the European Union while executive tasks are carried out

mainly by the European Commission and to a limited extent by the European Council. The EU is not considered a federal state but a supranational entity. The EU is limited to the competences its members are delegating to it. The distribution of power between the member states and the union is complex. While both have exclusive competences over certain fields, many are shared, with a varying degree of influence.³

The European Union, seen as an assemblage, consists of a set of different material and expressive elements. It is a territorialising force that creates a European entity, while at the same time deterritorialising the cohesion of its member state, blurring its borders by the creation of a common market or a shared citizenship. At a material level, it is composed of government building (such as a parliament, a court or embassies), elected politicians, financial means and so far. It is still experienced as an agglomerate of individual states with their own territories, governments, jurisdictions, armed forces, etc.

As both, a supranational body and as the sum of its member states, the European Union plays a substantial role in the assemblage of the Addax Bioenergy project. In a first role, the EU policy on renewable energies, reflecting the biofuel discourse, created a business opportunity.

a) The EU with its demand for bioethanol acts as the *designated market for ABSL's product*. The Addax Bioenergy project is designed to primarily meet this market's demands. The EU policies regarding renewable energy created a steady need for biofuels, regardless of the current gasoline price. It all started in the 1990s, when policies started to shift, from only supporting research and development, to specific market deployment. A group of member states, including Denmark, Germany and the UK, acted as a spearhead. (Klessmann, 2012: 4-5). The actions taken are thereby a product of the biofuel discourse merging with the reality of European politics. In 1997, the European Commission presented a White Paper, urging all its members to develop strategies to increase their share of renewable energy sources, including biofuels, from the 5.4% at the time up to 12% in 2010 (EC, 1997). In the following, in 2001 and 2003, the Renewable Electricity Directive and the Biofuels Directive were passed, obligating the member states to define concrete policies to meet the defined targets (5.75% share of biofuels in transport, and 21% in electricity consumption until 2010). As a reaction, many European countries introduced tax incentives and quota obligations for biofuels. While some were about to meet the objectives, others were not. Between 2007 and 2009 the focus of the EC shifted towards binding targets for the year 2020. In June 2009 the RES Directive 2009/28/EC

³ This section is based on Herz and Jetzlsperger, 2008 as well as Bergmann, 2012.

(RED) entered into force, obligating members to achieve a share of renewable energy sources of 20%, including a 10% target in the final consumption of transport energy (not from biofuel substitution alone, but predominantly) (Kleissmann, 2012: 6). Even though the EC stated, that it would be technically possible for the Union to produce enough domestic biofuels to meet the targets, it is expected that until 2nd generation⁴, non food crops based, biofuel technology is widely available, a significant proportion would be imported. For that purpose, energy partnership with countries from the Global South should be improved (EC, 2007). Further, in the context of a biofuel discourse that started empathising more on negative effects of large scale biofuel production, especially environmental and GHG saving concerns, the EU began promoting sustainability criteria that have to be met by potential suppliers. It was elaborated in the 2009 RED (EC, 2009).

Hence, in 2007, when the preparation for the ABSL project started, the outcome of the EU policies was already predictable. The implementation of binding biofuel mandates was very likely. Much less clear were the requirements regarding sustainability. The discussion was not about to be ending soon and the resulting guidelines remained fairly uncertain. Therefore, much effort was put in to carefully following the policy making process. To some little extent ABSL affected the policy making process itself.⁵ In an interview an ABSL manager declared, that they were closely observing the process in Bruxelles and adapted their operation accordingly (see also Englund et al., 2011: x, 90). But he also mentioned, that they considered continuing with the project even if it was not possible to access the European market, as they thought being able to compete with (at the time relatively high) global petrol prices. Nevertheless, the EU as a predicted customer was greatly influencing the project's design, if not determining its existence.

b) Another aspect of the EU policies regarding renewable energy is the *creation of a market for carbon emission savings*, so called *carbon credits*. The EU was one of the first to implement the GHG-emission saving instruments in 2005. It is a mechanism introduced by the Kyoto Protocol of which the EU was one of the driving forces. The Union established a carbon trading scheme that obligates industries to pay for emitting GHGs. Simultaneously, GHG savings (compared to a predetermined average) are awarded by

⁴ 2nd generation biofuels are generated from biomass other than sugars and vegetable oils, such as lignocellulose, that require more complex technology (See Basso et al., 2011).

⁵ In June 2008 an ABSL manager attended a workshop of the EU parliament about the potential of sustainable biofuel production in sub-/tropical countries as a consultant. He emphasised on the importance of a secure market and the lack of clear guidelines (ENVI, 2008).

carbon credits (Bergmann, 2012: 138-139). It also introduced the so called Clean Development Mechanism (CDM) that allows industrialised countries to receive carbon credits by financing projects for reducing greenhouse gas emissions in developing countries (Capoor and Ambrosi, 2009: 2, 69). At the time the ABSL project took form, it was rather uncertain if it would be qualified for carbon credits. Even a few years later, biofuel projects were granted credits only under very limited conditions. The market had not yet fully developed and a change in practice of biofuel projects was possible (Mitchell, 2011: xxix, 36). However, in late 2013, ABSL managed to become registered as a CDM project. Not for the GHG savings of its primary product, bioethanol, but for the green electricity generation in the factory's own bagasse power plant. Due to the fact that it replaces very dirty energy generated by inefficient diesel generators, ABSL earns now 56,000 credits per year⁶ that will be traded in the European Carbon market (ABSL, 2013). In a second role, the European Union facilitated through its Development Policies the emergence of the ABSL project in different ways. In line with the dominating development discourse (See digression 2) the EU follows a 2005 signed agreement, the European Consensus on Development (European Parliament, European Council and European Commission, 2006). Development cooperation is set as a shared competence between the European Community and its member states. The EU, both at the level of individual members and as a community, provides more than half of the world's aid and acts as an important trade and economic partner (ibidem). The EU has a long history of relations to the countries of the Global South, many of which are former colonies of its member states. During the process of decolonisation, European states sought to maintain close economic relations in a new international order. As a result, in 1975 the Lomé Convention established a formal partnership between the European Community and a group of African, Caribbean and Pacific states (ACP). It included agreements about duty free access to the EC market for ACP countries and a large assistance package consisting of aid and investments by the EC. The partnership was renewed in the 2000 signed much more all-encompassing Cotonou Agreement (See Ravenhill, 2002). Further, many ACP states, including Sierra Leone, benefit from the EU Everything but Arms (EBA) initiative of 2001. It allows the Least Developed Countries (a classification of the United Nations) the

⁶ The carbon price on the European market is considerably lower than expected at the markets creation. The EU set a maximal price level of \$41/tCO₂e in 2009. However, in 2013 the price was around \$5.5/tCO₂e (See, WB, 2014: 71), generating an additional income for ABSL of around \$300,000.

quota and duty free export to the EU, with the exception of armaments (See Brenton 2003).

c) Hence, the *absence of customs barriers strengthened the competitive position* of the ABSL project. In contrast to its probably biggest competitor, the Brazilian ethanol sector, ABSL does not have to pay a tariff of 0.192 € per litre (Mitchel, 2011: 31).

d) A crucial aspect of EU Development Policies is the role they were playing building up the political and economic structure of the Republic of Sierra Leone after the end of the civil war in 2002. Acting as development partner, the EC and the UK's Department for International Development (DFID) *helped founding a basis for foreign direct investment (FDI) in Sierra Leone*. Both, EC and DFID, have been active in Sierra Leone for a long time and their engagement is ongoing. They aim at a common target, working in collaborations with civil societies and other multilaterals, including the World Bank (WB), African Development Bank (AfDB) and the UN system: 'The overall goal of development cooperation is to reduce poverty and inequality in line with the government's policies and targets, focusing on delivery of the Millennium Development Goals (MDGs)' (GoSL and EC, 2007: 2). EC and DFID supported the efforts of the Sierra Leonean government in improving governance and institutions on one hand and in the rehabilitation of basic infrastructure on the other. Together with the WB and the AfDB they form a Donor Support Group, providing essential budget support for Sierra Leone to reach its targets (MoU, 2006). Keeping in mind the situation in Sierra Leone in 2002, with its paralysed economy, collapsed public services, destroyed infrastructure, incapacitated government institutions and up to two million (half of the country's population) displaced people, international development aid was essential to rebuilt the country. EC and DFID are thereby the two largest donors, making up 42% of external donor funding, an amount of about \$600 million until 2007. A few other member states of the EU are involved with a lower budget such as Germany (\$52 million) and Ireland (\$27 million) (GoSL and EC, 2007: 25, 48). In order to improve the country's economy, the attraction of FDIs was promoted as a key element. In particular the DFID in collaboration with the WB were pushing in that direction, helping the GoSL improving the country's investment climate. In the focus were programs aiming at reducing procedural barriers, updating and/or drafting laws and introducing fiscal and sector reforms (UNCTAD, 2010). In 2007 the Sierra Leone Investment and Export Promotion Agency (SLIEPA) was established, following the 2004 initiated Sierra Leone Export Development and Investment Corporation. Its purpose is to provide personalised services and information to investors and exporters, with a special focus on agriculture and

marine resources (UNCTAD, 2007: 29). However, when ABSL entered the field, this specific service was not yet fully functional. But already taken restructuring measures were apparently sufficient.

ABSL could benefit from many European funded/led programs. Some were rather indirect, for example projects aiming at improving security, achieving reconciliation, enhancing political participation, reforming government structures or promoting public health and education issues (See EC and GoSL, 2009b). Others were very concrete, such as the support of the Sierra Leone Road Authority (SLRA). The EC financed the renewal and expansion of the Masiaka-Makeni highway, an essential road section (Ibidem: 12) that facilitated the access to the project area and made the transport of ethanol even possible. 'Without the road we would not be here', declared an ABSL manager in an interview.

To summarise, the EU provides on the one hand *a market for bioethanol, as well as for carbon credits*. On the other it is/was an important actor in rebuilding Sierra Leone, an *investor friendly institutional framework and basic infrastructure*.

Digression 2: The Development Discourse

The line of arguments of the development discourse can be tracked back to the Age of Antiquity, but the origins of its current form can be located in the post-war period.

The inaugural speech of the then US president Harry S. Truman in 1949 is thereby often seen as the birth of development politics. He therein promised to improve the lives of millions of people living in the poorer countries of the world by providing capital investment and technical know-how. He thus articulated the crucial narrative of the development discourse: the notion of the developed nations with their ideal societies (modern, productive, secular, democratic) helping the less privileged, underdeveloped ones to catch up. In the context of the ongoing decolonisation, he shifted the discourse from 'civilised nations bringing civilisation' to 'developed nations bringing development', while maintaining a distinct continuity. Even though the development discourse appears as a complex heterogeneous field, consensus on this dichotomy was largely shared, at least until the 1980s (See Ziai, 2010). Nevertheless, two adverse approaches about the nature of development have to be empathised. At first, the modernisation theory dominated.

It led the discourse in the 50s and 60s and shaped the early development policies. It understands development as a progressive transition from a traditional to a modern

society. The theory focuses on internal factors, attempts to identify the key variables resulting in social evolution. The modernisation theory holds the notion that any society, with a little support, is able to achieve the status of a developed nation. As a fundamental criticism, the dependency theory emerged in the 1960s and dominated throughout the 70s. It empathises on external factors that determine a country's state of development. It detects the reason for underdevelopment in the colonial structures that forced the countries of the Global South into a peripheral role in its economic system and thus depriving them the chance to evolve. In the discourse history these two positions often occurred side by side and even merged in various ways. The complexity of development and the plurality of measures taken by donor countries make clear separation difficult if not impossible (Ihne and Wilhelm, 2013: 13-17).

Leading voices in the development discourse are national agencies — in the North and even more in the South – multilateral organisations, import and export industries, various NGOs. An important role is thereby played by the Breton Woods institutions: International Monetary Fund (IMF) and the World Bank group (WB). Initially founded in 1944 for the purpose to finance the reconstruction of war-torn Europe in the background of the looming cold war, it quickly grew more important. Its main tasks were financial aid, technical support and consulting. This included the promotion of structural adjustment programmes, the support of the private sector in developing countries as well as the assurance of foreign investment initiatives (Stockmann et al., 2010: 364-365). Its often inconsiderately restructuring and market-liberalising actions are to some extent to blame for the declared failure of the development politic in the 60s. Within the United Nations framework, developing countries began to organise themselves, pushing for a new economic system. They achieved certain success in the domain of trading agreements and the cooperation in the field of agricultural production. The global economic decline linked to oil crisis in the late 70s hit developing efforts hard. Suffering from rising debts, developing countries were facing more aggressive restructuring programs imposed by the WB and the IMF (Ihne and Wilhelm, 2013: 13-15). Things changed with the end of the cold war. The political dimension of development politics was strengthened and new concepts appeared. The focus was adjusted to the improvement of general conditions in developing countries, highlighting human rights, democratisation, Good Governance etc. International agreements were signed, such as the agenda 21 or the Millennium Development Goals (MDGs), backing up these changes. Simultaneously, the powerful *sustainable development paradigm* emerged. Introduced to the global political sphere by the 1987

Brundtland Report, its requests for ecological, economical and social sustainability have to be considered in any policy making since it became dominant during the 1990s. Further, the 2001 attacks on the World Trade Centers also affected the development discourse. Now, terrorism is seen as a result of failed or mislead development politics (Ibidem: 15-16). Moreover, in the context of omnipresent globalisation, critics about increased influence of an idealised US capitalism since the collapse of the Soviet Union are rising. IMF, WB and also the World Trade Organisation (WTO) as powerful actors are thereby blamed for the increasing global inequality and further marginalisation of the nations of the South.(Ibidem: 469-471).

4.4 Development Finance Institutions – Investors and Partners

Development Finance Institutions were one more necessary component of the Addax Bioenergy project. DFIs provided essential funding that other, for-profit financial institutions, would not have made available. Further, their activities in Sierra Leone improved, to a certain extent, the investment climate.

DFIs were established in the beginning of development politics. At first, multilateral International Finance Institutions emerged, notably the Breton Woods institutions. Their task was primarily to provide financial services to nation states. In 1956 the International Finance Corporation was founded as a World Bank branch. It broadened the scope by aiming directly at the fragile economies in developing countries. In the 60s and 70s, a large number of bilateral, owned by a single state, DFIs proliferated around the industrialised world. They are a product of the emerging development discourse at the time. Set up with the intention to fight poverty and unemployment by providing financial services (grant loans, guarantees, equity investment) to the private sector in developing countries, where economies often encountered a scarcity of capital, the public mistrusted in banking and fraud was a frequent issue. As an instrument of states' or international bodies' development politics, they were able to take more risks and give out loans for lower interest rates and longer terms. Until the 80s, DFIs were considered a key element when criticism increased. Their overall performance was estimated poor in terms of efficiency, profitability, and achievement of their social objectives. In a neoliberal reasoning, it was seen a better solution to subsidise for-profit FIs for the task than maintaining state owned ineffective DFIs. As a result, at least 250 DFIs were privatised

between 1987 and 2003, many were liquidated or cut resources. At same time, supervision was reinforced (Francisco et al., 2008: 2-8). Today, many DFIs are still owned by the public sector or in a mixed public and private ownership structure. They are often specialised on certain forms of financial services (rather loan than equity instruments). Private sector support by DFIs has grown rapidly in the 2000s, increasing from about 15 billion in 2003 to 33 billion in 2009, while the extension of technical assistance services was particularly noticeable (Te Velde, 2011). DFIs still operate relatively autonomous from direct government control, but are still obliged to take action within the framework of the current development politics. The Association of the European Development Finance Institutions (EDFI), representing 15 bilateral DFIs of EU member states, is thereby mandated by the donor governments to foster growth by developing and reforming economies according to the MDGs and the sustainability principles. A special Interact Climate Change Facility (ICCF) was created to invest in climate change and energy efficiency projects in developing countries (EDFI: *Fact Sheet*).

From an assemblage theory perspective the DFI sphere consists of a central development discourse, produced by (mainly Northern) governments, international organisations merged with climate change and energy discourses, a global financial complex, transnational cooperations, vulnerable economic systems and the public in donor — as well as in receiver states.

a) With regard to the Addax Bioenergy project, the DFI assemblage provided *essential financial support*. To acquire financial means is an especially difficult task for long-term agricultural investments in weak states with difficult economic environments. Thus, the role of DFIs is significant (Klessmann, 2012: 75-77). ABSL managed to bring a diverse group of DFIs on board, as a consequence of its careful alignment with the institutions agendas. One European Development Bank, Swedfund, has been connected to the project since the scoping phase (See ENVI, 2008) and ended up joining the ABSL as an equity shareholder. Through the special purpose vehicle, the European Financing Partners (EFP), an EDFI co-investment facility, other European DFIs joined Swedfund. Within a group including the Belgian BIO and the German DEG as lenders, the Dutch FMO joined Swedfund as equity shareholder and adapted the role of a lead arranger (See BIO: *Addax*). In the EFP framework, EDFI members can delegate their competences to one party that represents the groups' through negotiation harmonised standards. This facilitates processes and allows to share risks (EDFI, 2011: 30). The ABSL project fitted the European DFIs' mission. Its climate change and sustainability focus was met, since

ABSL produced CO₂-effective energy for the Sierra Leonean grid and bioethanol was an important aspect of European energy politics⁷. At the same time, considerable development effects were expected. The Addax Bioenergy project was widely supported by local and national authorities as well as by international political agencies. Further, the company followed a number of guidelines and standards covering the social, economic and environmental domain (See *Ibidem*: 21-22). This was not a coincidence. Negotiations between the European DFIs and the company took place over a longer period of time about a common set of guidelines that had to be met in order to get the fundings. They were looking to find the least common denominator and could finally agree on the World Bank's IFC performance standards in combination with the Equator Principles⁸ and the EU Renewable Energy Directive (RED). Later on, another DFI, the African Development Bank (AfDB) decided to invest in the project as well. Therefore, the set of guidelines already adapted had to be extended for the AfDB Standards. An ABSL manager interpreted the negotiations as a competition between the different DFIs. The dominance of a bank's guidelines expresses thereby its political influence.

Together with the support of three more DFIs, the ABSL project reached financial close in December 2011. The South African Industrial Development Corporation (IDC) and the Cordiant-managed ICF Debt Pool joined the group due to the fact that the project met their focus: on industrial development on the one hand, and on infrastructure extension on the other (See Cordiant, 2014, and IDC, *About IDC*). Further, the public private partnership UK based Emerging Africa Infrastructure Fund (EAIF) provided significant means. The EAIF and the FMO acted as co-lead arrangers for a debt financing of around €142 million of the at the time estimated €267 million project (FMO, 2011).

b) The DFIs *helped building up infrastructure and the overall economic system*, enabling foreign investment projects such as the one of ABSL to come into being. The DFI exposure, the share of DFI investment compared to the value of the Gross fixed capital formation, is particularly high in Sierra Leone. In a 2011 evaluation, the country ranked 5th of all African states (te Velde, 2011: 22-25). The big multilateral DFIs are thereby the most important. They are part of the strategy of the global development agencies. They often bypass governments and directly invest in the private sector, but also support the

⁷ See for example the FMO's strong commitment to tackle climate change that lead the DFI to adapt a climate neutral operating model in 2004 (FMO, 2004).

⁸ Equator Principles define a binding framework for it's members. At least the Dutch FMO was a member at the time of the lease arrangement (EPFIs, 2013).

development of infrastructure as an essential parameter for a country's economic growth. In connection with the ABSL project, the investment of the AfDB in the Bumbuna Hydroelectric Power Station was vital. The AfDB started supporting the power plant project previous to the war in 1989 and continued to remain part of it until its commissioning in 2009. It provided a total of \$103 million funding (see power-technology.com). The Bumbuna plant is thereby not crucial in its initial purpose, the provision of electricity. Due to the insufficiency and instability of the overall Sierra Leonean electricity supply system ABSL relied on electric generators until its own power plant started operating (UNDP, 2012). The Bumbuna dam is located upstream the Rokel River, the main water source of ABSL in the dry season, and guarantees a sufficient minimal runoff all over the year. Further, it is by far the most important electricity generator in the country that also regulates the grid, facilitating the feeding into the grid of ABSL's excess power.

c) Finally, the involvement of a number of DFIs *enhances Addax Bioenergy's reputation*. Achieving the support of so many development banks also means being in compliance with a large range of standards and guidelines, which suggest that ABSL assumes social and environmental responsibility. Further, ABSL is benefitting from the status of the FMO and Swedfund as equity partners. They share not just profits but also eventual losses and are thus heavily promoting the project. This support was very useful when Addax Bioenergy became the subject of widespread criticism, finding itself in the center of a large land grabbing debate. They make up partially for a perceived lack of conventional public relations. A good example therefore is the production of a costly and time-consuming promotional film by Swedfund in 2013 (See Swedfund: *Sierra Leone Climbing out of Poverty*). This short clip expresses pointedly the underlining narrative of the ABSL project and represents largely the views of the ABSL management expressed in interviews. It shows a picture of a courageous and responsible enterprise that found a way to bring development to one of the poorest countries on earth with an unique business idea. The impact of such measurements remains thereby difficult to estimate.

The DFI involvement is a key element of the ABSL project. By *providing the necessary financial means* Development Finance Institutions created the capacities for ABSL to venture its project. Further they were also involved in the *building up of the Sierra Leonean economy, infrastructure and political frameworks* as a part of a complex of national and international development institutions. Finally DFIs as partners are supporting the public relations of ABSL and enhancing its *reputation*.

4.5 Sierra Leone – Place of Operation

Finally, the fifth pillar of the Addax Bioenergy project is its place of operation. The Region around Makeni provided all the essential elements that enabled ABSL to locate their operations there.

The Republic of Sierra Leone is a West African coastal State bordering Guinea and Liberia. It has an extent of 71,740 km² and is inhabited by around 6 million people. The biggest city is Freetown, with an estimated population of around 1.2 million. It is the country's capital, as well as the economical, political and cultural center. Sierra Leone is today one of the world's poorest nations. Popular development indicators paint a bleak picture of its situation. With a HDI of 0.374 it is ranking 180th out of 187 countries. It has a per capita income of \$580, a life expectancy of 48 years and an adult literacy of 41%. Youth un/underemployment is severe (around 70%) and also a reason for an overall poverty rate of 60% (UNPD, *About Sierra Leone*).

These figures have to be put in context with Sierra Leone's history. Archeological evidences suggest that today's Sierra Leone has been inhabited for more than 2500 years. Yet the period before the first arrival of Europeans remains not well known. Different tribes inhabited the area and frequent migration flows occurred. Before the arrival of the Portuguese in the late 15th century, the Themne tribe had established a range of kingdoms in today central Sierra Leone. When the Europeans started founding trading posts, slave trade began. In the 16th century an invasion of the Mane took place, a warrior people originating from the Mali empire. Their presence had a big influence on local customs and culture. While the Themne predominately preserved their culture, others began to merge with the invaders, resulting in the present-day Mende and the Loko tribes. In the 17th century the British replaced the Portuguese and transatlantic slave trade expanded just until 1807, when it was outlawed. With founding of the Province of Freetown in 1787 a new era started. Philanthropists brought a number of freed slaves, the so called *Black poor*,

that stranded in London to the cost of the Western Peninsula. While this first settlement was a disaster and most of its population died in the first year, the Sierra Leone Company began establishing the Freetown Colony in 1792. It experienced difficulties as it grew rapidly, since the British started freeing slaves from captured slave ships in town. The emergence of a new tribe, the so called Krio was the result. In 1808 the Freetown peninsula became an official crown colony. In the late 19th century, the interior, dominated

by Themne in the North and Mende in the South, was annexed as a protectorate in the context of the growing imperialism among European powers. Still today, the former colony and protectorate don't follow the same political system. Until independence, the influence of the elite of the protectorate grew, breaking the dominance of the Krio. In the aftermath of the Second World War and the end of colonial empires, Sierra Leone gained independence in 1961 in a peaceful process. After promising first years, lack of accountability and corruption began to run its course. The two party system (SLPP in power and APC in opposition) turned into a one party state in 1968. In more than 30 years the centralised State more and more disintegrated until in 1991, when war swept over from neighbouring Liberia in the form of the Revolutionary United Front (RUF). An 11 year lasting civil war began. In the course of the conflict many different groups were fighting each other over power and access to resources such as diamonds. The population suffered terribly, around 50'000 were killed and 2 million, half of the countries inhabitants, were displaced. When the civilians were gone and the fields left fallow, the war began to run out. Interventions from outside, from Nigeria-led ECOMOG, UN-peacekeepers and the British Army, finally put an end to it. In 2002, elections were held and a Truth and Reconciliation Commission as well as a Special Court began operating. Until today, Sierra Leone is slowly recovering, still being way behind of the pre-war state.⁹

In an assemblage theory view, the Republic of Sierra Leone is as a whole composed of many heterogeneous entities. First of all, it contains a defined territory, a landscape with a relief, with soils and vegetation. Within this, a population of 6 million individual human beings is organised in more or less stable/dense networks such as families, friends or political parties. It is kept together through a political system of overlapping power structures with rather little formal coding. Sierra Leone is part of a political, economic world system, where many connections are established to international development organisations, fewer through importing and exporting activities. It has developed a specific identity, based on the interpretation of historic events and evolved tradition.

Sierra Leone is a key element in the Addax Bioenergy assemblage since most of its activities take place within its territory, climate, organisational structures, cultural codes etc.

a) First of all, the Makeni region as a place of production *met the biophysical requirements* to produce ethanol from a sugar cane feedstock. Sierra Leone has a tropical climate with

⁹ This section is based on Alie 1990; Bah, 1998; Keen, 2005 and Fyle 2011 (note, that this author explicitly intends to write a new nationalist history and thus shaping Sierra Leone's identity).

distinct wet (May to November) and dry season (December to April), lying mostly between latitudes 7° and 10°N. The region around Makeni, where the project is located, is characterised as interior lowlands with a maximal elevation of no more than 100m above sea level. The area is covered by swamp and riverain grassland, very fertile, easily flooded Boli and Baatsi lands, and savannah vegetation, a mixture of grassland and trees. Makeni, though located in the inlands, receives a substantial amount of precipitation, over 2500mm on an annual basis (*Sierra Leone Social Studies Atlas*, 2009: 10,12). This climate is estimated favourable by ABSL. Sugar cane needs high rainfalls, hot temperatures and high insolation. The suitability of the region to grow sugar cane was already proven (See Larbi, 2012). The long dry season allows an extended harvesting period, but requires supplementary irrigation. The Rokel River, that limits the area in the south and in the west, is thereby used as a water source. It is regulated upstream by the Bumbuna power plant and it is estimated, that it provides a continuous water flow in the dry season. Further, soil fertility and topography were seen as suitable (ABSL, Q&A).

The basis to produce sugar cane ethanol was available.

b) Second, Sierra Leone's *strategical position* is ideal for exporting to the European Union. In an interview, an ABSL manger emphasised the importance of the shipping distance to the EU. From Freetown to Las Palmas, where ABSL's sister company Oryx Energies recently invested in a fuel and gas oil terminal (OE, *Canary Islands*), it takes just a few hours compared to other locations they checked, such as Mozambique. Further, Freetown provides one of the biggest natural deepwater ports, where again, Oryx Energies developed strategical storage and shipping facilities (Davies, 2013).

c) Third, the *political framework in Sierra Leone was beneficial for an investment project based on land*. When the civil war ended, Sierra Leone was in a bad state. It was (and still is) heavily aid dependent. Especially in the direct after war period humanitarian aid was considerable. In 2007, Aid provided approximately 18% of the country's GDP (GoSL, 2009a: 3). Sierra Leone had little choice when accepting the support and entering a close partnership with its donors. In September 2002 Sierra Leone and its supporters agreed on a National Recovery Strategy that provided a 'framework for peace, recovery and development' (GoSL, 2002). It can be stated that Sierra Leone adapted the international development discourse at the time and implemented the policies suggested by the big agencies in the Field: WB, AfDB, EC, DFID IMF, UN-organisations. One of the key elements of the reconstruction strategies was the attraction of foreign investment. Since 2000 Sierra Leone takes efforts in this direction, reforming its legal framework, setting up

agencies etc. Addax Bioenergy could benefit inter alia from a set of tax incentives, guaranties and permits for expatriates, imports, contractors and so far (see MoU, 2010). Further, an overall political support including the president himself (see Swedfund: 2013) helps facilitating ABSLs operation.

d) Fourth, Sierra Leone as one of the group of the Least Developed Countries benefits from *special trade conditions*. Under the EU's Everything But Arms Agreement, Sierra Leone benefits from an *import tax exemption* for the European Market (Mitchel, 2011: 31). ABSL can therefore export bioethanol to the EU without additional taxes. This competitive advantage allows ABSL to keep up with Brazilian ethanol industry.

e) Fifth, *Sierra Leone's infrastructure meets the basic demands of the ABSL project*. Though it was heavily damaged during the war and is still nowhere near ideal, it was still considered sufficient for ABSL to launch its investment. As already mentioned, the main power line of the country traverses the project area and allows an access to the national grid for the generated electricity. The highway to the port facilities was thought to be sufficiently expanded for the transport of the ethanol. At the port itself, ABSL sister company established storage and shipping facilities. Basic access to global transport was guaranteed and ICT infrastructure was improving (IMF, 2008: 19-20). It was part of the project design that a significant effort had to be made to provide the necessary infrastructure, as no functioning road network or power supply in the area existed.

f) Sixth, *price level in Sierra Leone is low*. Rent for rural land is comparable to other African countries. In a 2009 cabinet resolution the government recommends a price of \$12 per hectare (GoSL, 2009a). An ABSL manager stated in an interview, that initially they were offered a price below \$12 but easily adapted to the new proposal. ABSL now pays \$12.35 per hectare per year (English and Sandström, 2014: 20). Similarly, the overall wage level is very low. However, a scarcity of skilled personnel requires to hire more expensive expatriates, minimising the advantage.

g) Finally, in Sierra Leone Addax Bioenergy had access to a *network of politically influential persons that provided a necessary link to the land, the local population and the political authorities*. ABSL could acquire contacts from its mother company that was present in the country for many years. Links from the petrol business to the local elite of Makeni led ABSL to the location where the project is implemented today. The network not only acted as a consultant but also consisted of decision-makers that had the necessary legitimacy to promote the investment. This key element will be further elaborated in the following chapter.

Sierra Leone as a place of operation is the fifth pillar of the Addax Bioenergy project. As a nation state it grants ABSL benefits through its investment friendly political framework. Due to its position as a Least Developed Country and its strategic geographic location it provides a favourable access to the designated European market. As a country in reconstruction its infrastructure is basic but yet sufficient. The overall price level is low. A local network of influential persons provided access to a territory that meets all the biophysical requirements to produce sugar cane fed bioethanol.

4.6 Conclusion

Five important elements were identified that enabled the coming into being of the Addax Bioenergy project. The mother company AOG, the Biofuel Complex, the European Union, Development Finance Institutions and the region around Makeni in Northern Sierra Leone consisted five main pillars on which the ABSL project was established. On these five assemblages the entrepreneurs could build. They provided the essential assemblage capacities to start their operation. The AOG was the mother ship. ABSL adapted its mode of business and the cornerstones of its identity framework. It benefited from its reputation and its network. It provided a starting credit and provided essential infrastructure through another subsidiary. The Biofuel Complex created a business model. It offered a proven way to produce bioethanol in Africa and generated a demand for it. The EU acted as a demander and prepared the ground in Sierra Leone. Its energy and development policies created an accessible market for biofuel and carbon credits. Its development partnership helped building up the country for private investment. So did the DFIs. Additionally, they acted as the bank, provided affordable capital and took a share of the risk. They supported ABSL in a discursive struggle about the legitimacy of its project. Finally, Sierra Leone as the host country for ABSL's operation offered cheap, accessible agricultural land with optimal properties. It welcomed ABSL with an investor friendly political framework and basic infrastructural services at a geographically ideal location.

5. The Emergence of the Addax Bioenergy Project

In this part, the emergence of the Addax Bioenergy project is reconstructed. The evolution from the initial business idea to the start of production of ethanol and energy is described. The focus is on presenting the territorialising processes that bring the essential elements of the project together.

5.1 The Business Plan

The initial concept for the ABSL project evolved around 2006/2007. A group of people with a similar idea came together and gradually developed a plan for a biofuel project in Africa. They formed a network that combined the capacities each one of them brought in, enabling them to connect the elements represented by the five pillars.¹⁰

One of them was working with AOG for ten years as an oil trader. In 2006 he attended an Executive MBA course at a prestigious private business and management institution, the IMB business school in Lausanne, that further prepared him for the ABSL task. At that time, within the Addax and Oryx Group, as well as in any other petrol company, discussions about the potential of biofuels were held. In contrast to others, AOG has not only seen them as a threat of their business, but — being an entrepreneurial company — also as a new opportunity. As an employee for more than a decade, he had built stable connections to key persons within the company and earned their trust. He knew about the functioning of the Group, the capacities it had and the criteria its business decisions were based on. His management education specifically prepared him for the case of persuading supporters for a project and taking responsibility. With the potential support of a strong partner, the future founders of the ABSL project further pursued their target.

Another member of the circle was a diplomat. He had served in eleven different countries at the time, with many years of experience with development politics. He closely worked with Development Finance Institutions and knew how they work. He knew what guidelines they are following, what practice they have, when and how they are willing to get involved

¹⁰ This section is for the most part based on an extended interview conducted on 29 September 2013 with an ABSL manager who was part of the project from the beginning. A further source, IMD (n.a.), was consulted as well.

in a project. The group needed the DFIs, because they provide cheap and save financing and act as consultants and strong supporters. They were part of the project design. The deal with DFIs is, that in order to get access to their services, one has to adapt to their principles. Hence the capacity to get in contact with DFIs and to keep on track with the development of their demands was crucial. Since DFIs are state owned and their purpose is defined by national politicians engaged in (European) development politics, it was necessary to follow closely the discourse lead on an international level. As a diplomat he was familiar with political processes and could rely on insider information.

At the time, the interest in biofuels was rising, but so were its criticisms. Their sustainability and ability to persist without huge subsidies were questioned. It was thereby of utmost importance to bet on the right fuel, crop and method of production for large scale biofuel generation. According to an ABSL manager, most first generation biofuels (usually generated in a rather simple process from common food crops) were not adaptable for their project because of the following three reasons: 1. they are too expensive to produce, 2. not CO₂ effective (too much energy is used for the cultivation/processing) or 3., generally not sustainable (are for example associated with large scale clearings or the like). The ABSL founders were thereby convinced, that ethanol gained from sugar cane was the only solution that met all the criteria. It is easy to cultivate and a much higher yield per area is obtained compared to others. An important feature, since the feedstock is the most expensive part for biofuel production. Further, the processing from cane sugar to ethanol can be achieved through a simple fermentation and distillation process without prior treatment (as it is the case for maize and other starch rich crops). The CO₂ efficiency is satisfying, not only because of energy extensive feedstock production, but mainly because of the use of the by-product *bagasse*, sugar cane fibre, that keeps an ethanol factory energy self-sufficient and can even generate renewable electricity for the national grid. The overall sustainability is seen as granted, since a comparably small surface is needed and the crop is relatively undemanding. Further, other by-products can be used to reduce fertiliser intake. Sugar cane ethanol was thought to be the only first generation biofuel that can compete heads on with oil, the ABSL manager estimated the cost of their product to be about \$40 a barrel. Hence the group started analysing the existing bioethanol industries and took a closer look at Brazil. The country is the origin of large scale sugar cane ethanol production. It is the place where competition is the toughest and the industry the most established. It is the perfect benchmark. The Brazilian industry not only provides the know-how and the technology for large scale bioethanol production,

including the latest state of the art processing elements, but the industries experience also defined a common approach, a recipe about how to get a biofuel project started. The ABSL entrepreneurs drew from that and created a checklist, containing all the essential elements, the criteria that have to be met at a certain location. With that catalogue in their pockets, they started screening the African continent for a suitable location.

At the time, many developing countries were seeking to attract foreign investment more than ever. The ABSL entrepreneurs were not alone with their idea, drafts for biofuel projects in Africa were plentiful. They were taking a closer look at several sub-Saharan countries, where the conditions for sugar cane cultivations were given. Locations like Mozambique were failing their tests, even though they were offering favourable conditions. Shipping distance was of importance: time consuming and cost intensive. In other places, the basic infrastructural needs could not be met. In the Democratic Republic of the Congo for example, a country of more than 2 million km², a basic road network just did not exist. How would a biofuel project be set up without a proper access to the site? Further possible locations like Ghana were dropped because of reasons that could not be determined precisely. Finally, they were introduced to the region around Makeni in Northern Sierra Leone.

From an assemblage point of view, this initial network can be seen as a territorialising force that put the basic elements of the Addax Bioenergy assemblage together. It was still very fragile but the capacities were generated to attract new elements and to finally solidify the project with the implementation.

5.2 The designated project site

At that time, Sierra Leone was still suffering from the aftermath of the civil war. The Northern region, especially the surroundings of the town of Makeni, where the Addax Bioenergy project is now located, was hit particularly hard. Makeni itself was used by the Revolutionary United Front (RUF) as an operating base at the end of the war and was therefore not completely destroyed (as it was the destiny of many others), when rebels invaded the town in 1998. However, the population suffered terribly during the three years of occupation. The economy and the market came to a standstill. Many fled from hunger, lootings and atrocities committed by undisciplined soldiers to internal refugee camps or to neighbouring Guinea (See Bolton, 2009). Only occasional food deliveries by the Catholic

mission kept Makeni alive. The surrounding villages were often targets of attacks from rebel squads. Looting and murdering, they were at the same time forcing the people to continue farming in order to keep a supply for their headquarter in Makeni (See Kaeser, 2014: 62). Still, the bulk of the rural population had evacuated their villages at least for a certain time, leaving their tools behind and their land fallow. When they came back, they had to start out of nothing, with their land overgrown, their tools destroyed or missing and their seed rice consumed in times of need or stolen by soldiers. In a country where the majority of people are engaged in subsistence farming, reconstruction of the agricultural sector was the number one problem after the war (according to the UNDP in 2007, still 75% of employment was in agriculture, 65% in low paid subsistence farming). The national government aligned its programs with the international development discourse in order to get support for the reconstruction of the country. International NGOs came to Sierra Leone in a great number, implementing programs to tackle the various post-war needs such as reconciliation, reintegration of ex-combatants or the reconstruction of the agricultural sector. According to Bolton (2009), the initiatives of the government and NGOs often failed to meet the actual demand of the population and visions for the future as such were differing considerably. While international NGOs were aiming at a reestablishment of the pre-war subsistence farming, the rural population was seeking to escape that same system. The governments agenda was focussing on the adaption of the international development paradigm and in some occasions endangered the improvement in food production and rural development. Bolton (2009) points out the effects the prohibition of child labour had in a system where they are an important and integral part of the production.

Many of Sierra Leone's problems today are reflecting the situation before the war. Widespread dissatisfaction in an overall failed system resulted in a civil war where the rebel invasion was rather a trigger than a cause (See Shearer, 1997 and Reno, 1995 in Millar, 2011). Many see the reasons of the war in a corrupted centralised state that since the 70s more and more retreated from the provinces, resulting in a disintegration of the health and educational services as well as the decline of the formal economy. In combination with an escalating generational conflict between a small ruling class of elder males and a vast youth population with little perspective to achieve social status, this lead to only minimal resistance to external armed forces and rather fostered revolutionary tendencies all over the country. Semi educated youths gathered in rural centres, unwilling to engage in a farming system where they were degraded as pure working force, and were

easily seduced to take part in an armed power struggle. The lack of workforce further destabilised the agricultural production and the overall food security.

Digression 3: Governance System and Land Tenure in the Makeni Region

Digression 3: Governance System and Land Tenure in the Makeni region

Governance – the system of regulation of a society, the norms, the rights and obligations, the organisational power structure (See Bevir, 2012) — in the Makeni region, as in most parts of Sierra Leone and many other countries of the South, is very complex. In the perspective of assemblage theory, governance is understood as a set of interlinked structures of organisations that consist of social networks, means, competences, a source of legitimation etc. They can be more or less formal — more or less coded — rooted in written law or in institutionalised traditions of (secret) societies. Usually being rather stable assemblages, there are always shifting processes of capacities and power going on. In the Sierra Leonean Provinces, this organisation is characterised by a duality of two basic systems: a ‘traditional’ one, based on an older form of organisation that has developed in the area, and a colonial, European one, consisting of legislation and formal institutions. The British Empire annexed the Sierra Leonean provinces in 1896. British colonial governing added up, partially replaced and, above all, merged with the traditional organisational structure. As the local colonial administration didn’t see much value in the Sierra Leonean inlands, they adopted a system of indirect rule, a form of colonialism on the cheap. The exercise of local government functions was delegated to indigenous chiefs. Traditional authorities were thereby modified and assigned with executive power. They were made responsible for recruitment of labour (mainly for infrastructure development) and tax collection (UNDP, 2007). In Northern Sierra Leone this system was building mainly on the traditional organisation of the Temne.

The Temne tribe is Sierra Leone’s largest, making up more than a third of the population. It is dominant in the Makeni area. Its traditional political organisation is constituted of chiefdoms, consisting of several sections with a number of villages with representative town heads. Each chiefdom is ruled by sort of an elected monarch, a *bai*, that is always a member of one of the patrician families. These are the land owning families, historical/ mythological patrilineal ancestors of the first settlers in the area. Historically, relations

between chiefs and aristocracy took various forms. There were chiefs ruling in an authoritarian manner and others that were mere representatives. Chiefly kin groups were thereby of importance. They consist of networks of elders such as heads of larger households or villages, sub-chiefs, wealthy farmers, traders, religious authorities, secret society officials, etc. and act as advisors of the acting chief. They are the dignitaries that hold the overall authority within a Temne society. They link the heterogenous institutions of social control (See Howard, 1979). In its core, this traditional system exists until today.

The British rule however had its influence. In the 1920s, the role of the institutionalised chiefdoms, the so called *paramount chiefdoms*, was widened. They were now responsible for agriculture, infrastructure, education and a small range of health services. In 1937, a *Native Administration* system was introduced, adding an administration to each paramount chiefdom and granting them tax authority. A little later it became evident, that this system was not functioning efficiently and couldn't adapt adequately to new challenges. Therefore, in 1946 the colonial administration introduced a second tier of local government and created Councils on district level (the colonial administrative unit). They were meant to replace the unrepresentative Native Administrations, but couldn't prevail. They were later granted certain executive powers, but remained in a state of co-existence with the chiefdoms. A fierce competition was the result, despite the paramount chiefs dominating the councils being member themselves. In the course of Sierra Leone's independence in 1961, the system didn't change fundamentally. The 1964 Tribal Authority Act rather renamed tribal institutions than transforming them. It redesigned chiefdom institutions as Chiefdom Councils with elected councillors, governing under tribal law, while the competences remained in the hands of the paramount chief. However, the change of the government to a centralised one-party system in 1968 had a big impact and lead to the abolishment of District Councils and their replacement with the presidents appointees. In the following, state services in the provinces degraded steadily until the war. In the aftermath, the new Sierra Leonean government began carrying out a decentralisation program. It was heavily promoted by its international donors and aligns with a current development dogma: decentralisation as a mean for promoting good governance. It is aiming at consolidating peace and reducing poverty by increasing the participation in the decision making process and allowing local government to better formulate and implement policies. The process started in 2004 with the adoption of the Local Government Act and is still not entirely consolidated. Decentralisation is reviving the role of Local Councils (District and City Councils), but a number of issues were preventing them to adequately meet their

designated role (See UNDP, 2007: 52-74). In 2013, still a lot of confusion about the distribution of competences and resources between government, district and paramount chiefdoms was experienced.

This complex governance situation is also reflected by the evolution of the land tenure system. In Sierra Leone's provinces a legal dualism is practiced. *Customary Law* is developed in local communities and is embedded within their tradition. It is applied on chiefdom level. Additionally, the *General Law* derived from English law during colonisation is valid in the Western Area and on district level. Land tenure in the provinces is primarily regulated in customary law (Renner-Thomas, 2010: 16-23). In the Temne dominated Makeni region, customary land tenure is based on family ownership. The paramount chief is regarded as a custodian over the land. He has limited direct rights, such as over commonly used land, and is responsible for non-natives living in the area (Ibidem: 170-73). The traditional concept of the leasing of land in Temne law is very different from the one in English law. People with no land titles would be allowed to 'beg' for land from the owning families. Thereby rent was of little importance, the arrangement rather consisted in a moral agreement. Land leases to strangers (basically anybody from outside the village context) were handled under similar conditions, but with the intention of a stranger's integration into the community (See Ibidem, 145-158, and Tuboku-Metzger, and Van Der Laan, 1981). This led to difficulties when in the late 19th and the early 20th century European and American non-natives began to come to the protectorate. In their role as christian missions and mining companies, they were not comparable to local strangers, but were treated in the same way. Frequent changes in their personnel and the absence of the intention of a profound integration in the local community (e.g. by means of intermarriage) caused problems in land leases. Early on, they therefore started to introduce written agreements that were though not enforceable. With the beginning of colonisation, their value was rising, as agreements could be registered in the Decree Book of the District Commissioner. In 1927, the Protectorate Land Ordinance was introduced. It had the purpose to facilitate land lease of non-natives and was a mean of centralisation. Renamed to the Provincial Land Act after independence, it is still valid until today. Land lease Agreements were now accepted as prima facie evidence and registered in Freetown and thus enforceable. They consist of a contract between a lessee and the Chiefdom Council. Landowning families are not part of the agreement, but have to be involved in accordance with the undefined local customary law. The colonial District Commissioner (the later District Officer) has to give his approval to the contract and is responsible for the registration (Tuboku-Metzger, and Van

Der Laan, 1981). The Chiefdom Council is therefore in charge of negotiation, while the District serves as a legal instance. The central government has the right to define a land lease framework.

5.3 Access to the land

How the Biofuel entrepreneurs got access to their land is not clear in all details.¹¹ However, it can be stated that they relied heavily on local supporters. Probably the most important local partner was a retired business man who — after a long career — attempted to develop businesses in his hometown. As a son of a paramount chief of one of the chiefdoms where the Addax Bioenergy project is situated now, he is a ‘son of the soil’¹². He left his village as a young boy to attend the St. Francis Secondary School in Makeni, an institution of the Catholic Mission since 1958 (See Kamara, 2013). He was one of the few to enjoy free scholarship and was enabled to study abroad. He received further education in business and management in Italy and in the USA. After he came back he started a career in the petrol business, where he spent many successful years, working with AGIP and BP in other West African Countries and in Italy. As a Board Chairman of National Petroleum and Chairman of Leonoil, he entered a business partnership with AOG. Long before, he became friends with Jean Claude Gandur whom he got to know in the late 1980s, when Gandur started his oil trading business. Somehow out of this relationship a steady link could be established that was activated when the group of entrepreneurs started to screen the continent for a project location. This business man was extraordinarily well connected, as a result of his various engagements, including government mandates, as a Dean of the Diplomatic corps, as a Consul for Italy and so on. After he retired from his career in the petrol business around the turn of millennium, he started getting involved in a variety of other businesses, focussing on his hometown. He thereby adapted a discourse of development through private investment, with a strong notion on giving-back to the people that enabled him to become successful (See The African Channel, n.a.). One of his first projects in 2004 was to build the Wusum Hotel, an

¹¹ This section is a reconstruction of the earliest stage of the project, based mainly on interviews held with the company’s management, with the paramount chief of Bombali Shebora, local NGO representatives and informal conversations with other researchers and local students.

¹² An expression usually used for descendants of the first settler families in a particular area.

unusually luxurious hotel in Makeni. Contrary to the initial intention to build up eco-tourism, it is today mainly used by business people. In 2007, he took part in the establishment of a branch of a national financial institution in Makeni. In 2009, he further engaged in a mining company (Bloomberg Business, n.a.).

One time in 2007, this businessman was contacted via the AOG network with the idea of the biofuel project. He thereby saw an opportunity to push the economic development of his hometown, to further stimulate his other businesses and, after all, to become engaged in a promising venture. Thus he started looking for a suitable location for the project. He first went to the place he was born, to the Makari Gbanti chiefdom, a flat, relatively sparsely inhabited, savanna dominated, political unit, divided by the central Freetown-Makeni Highway. There he could count on strong support, as a son of the soil, as a member of one of the most important families. Later, he went beyond his homeland and began to seek support for the project in the neighbouring Bombali Shebora Chiefdom, where also the city of Makeni is located, the political center of the Bombali District and the Northern Region. It wasn't difficult for him to convince the there acting paramount chief of the idea. He was an old friend of his, somebody he grew up with, and someone who was equally eager to bring development to the still war-torn region. A few years back, he helped him with the acquisition of the land for the Wusum Hotel. A valuable service, since, even for natives, actual land purchase remains a difficult task. Finally, the targeted project area was also expanded in the south, by getting the support of another paramount chief, the one of the Malal Mara Chiefdom in the Tonkolili District.

During that process, the biofuel entrepreneurs began to investigate the location's suitability. With the permission of the paramount chiefs they scoped the area, took a first look at soils, vegetation and land use and engaged with the landowners. They compared their checklist with the designated area and it seemed to match. First of all, the political environment was favourable. The government aimed in the right directions and beneficial treatment could be expected. Thereby an event has to be mentioned that was not unimportant for the future of the project: Sierra Leone's 2007 National Elections. In the course of two months, from August to September, peaceful and largely transparent elections were held. The result was favourable for the biofuel entrepreneurs: The All People's Congress (APC), the political party representing the northern, Temne dominated, regions gained the most parliamentary seats and Ernest Bai Koroma – an old friend of

their local supporter¹³ – became president (See Wollack and Fomunyoh, 2008). This outcome pushed the biofuel project further. The change of power in the two-party system meant that more means would flow to the Northern Provinces, infrastructural challenges were now more likely to be tackled. But above all, stronger political support was expectable since a direct access to the new decision-makers was established.

Further, favourable trading agreements with the EU existed and the shipping distance to Europe was short. Also apart from the national framework, the designated area met the criteria. Situated on a large, gently undulating plain, the soil seemed to be suitable for sugar cane plantations. The long dry season could be easily bridged by the use of the Seli and the Rokel River as an irrigation source. The area was only sparsely inhabited and the most of the land was left fallow in a slash and burn agricultural system. There was no precious primary forest or the like that would be affected. The original vegetation was cleared long ago and more recent tobacco plantations left the area degraded with a low biodiversity (See CES, 2009a: 2). Another sugar cane project close to the site could be used as a benchmark. The Magbass Sugar Company was the result of a Chinese aid project of the 1970s/80s (See Brautigam, 2009, in: Babatunde 2013). It proved that large scale sugar cane plantations were possible. Additionally, their land lease payments served as a comparison. According to various sources (including, but not exclusively the company management), Magbass pays a very low lease of less than \$1 per acre. Moreover, Magbass confirmed a low wage level, unqualified labourers are willing to work for \$1.62 a day (See *ibidem*). Finally, the company's basic infrastructural needs were met. The Makeni Freetown highway, that was splitting the then designated project area, was in good condition, allowing import of goods needed for construction and operation of the project as well as the export of the product. Addax's sister Company Oryx was operating the storage terminals of the Freetown port and would guarantee the shipping of the ethanol (See CES, 2009a: 37-42). The main line of the *West Area* power grid, delivering electric power from the Bumbuna hydroelectric power plant to Makeni and Freetown, crosses the project area and therefore allowed the feeding in of the produced electricity (See CDM EB, 2011). Further, the Bumbuna dam guaranteed a steady flow of the Rokel River, even in the dry season.

¹³ They are said to have founded the Rotary Club in Sierra Leone together. They both grew up in Makeni and are linked together in a kin group. Further, another member of this group, the already mentioned paramount chief of the Bombali Shebora Chiefdom, was in the following elected HonoHonourablerable as a District representative (NDI, 2008: 46).

All the essential elements seemed to be in place. The decision was taken to select Sierra Leone as a place of operation for the planned biofuel project.

Hence, another very complex part joined the Addax Bioenergy assemblage. As a consequence, its properties and its capacities changed. The elements for an implementation of the project were now in place. The interpersonal networks of the biofuel entrepreneurs and the local kinship group merged and acted as a joint.

5.4 The feasibility phase

The feasibility phase was the next step that was taken after the location of the Makeni region was assessed promising and the access to the land seemed to be given. In December 2007, the biofuel entrepreneurs presented their project in front of the Addax board and were granted a full project feasibility (IMD, n.a.). This was the moment when the project officially started. Now the means were available to plan properly. A whole range of issues had to be tackled to bring the various constituting elements closer together. The result was a number of processes that took place simultaneously.

First of all, in early 2008 Addax Bioenergy was formally founded, registered and incorporated in Sierra Leone as Addax Bioenergy (SL) Limited (ABSL) (See CES, 2009b)¹⁴. An operational base was established: an office in the capital as well as one in reach of the project area (in Malanko) were put in place. A formal organisational structure was set up that united the biofuel entrepreneurs and their local partners. Next to the already mentioned agent in the project area, another equally important individual became part of the team. As an agriculturalist and long-time government official, he had a lot of expertise and crucial contacts, which were beneficial for the negotiations with the government. He had further conducted consultancy assignments for the EU, FAO and DFID and was therefore up-to-date with the trends in international agricultural and development politics. He became the responsible local project manager.

Meanwhile, the promotion of the project in the villages was going on. An Honorable, a representative of a constituency in the parliament within the area was appointed by the Makani businessman to win the local population for the undertaking. Himself an inhabitant of the designated site, he began to arrange meetings and convince sceptics of the benefits

¹⁴ Addax Bioenergy was also registered later as Addax Bioenergy SA in Geneva the 23 December 2008 (Schweizerisches Handelsamtsblatt, 2008).

of the project. As an MP his voice was of great influence. In a radio interview with a Canadian journalist and activist he presented himself as 'the champion of Addax Bioenergy' (CBC, 2010). He seemed to accomplish his mission. There was little evidence to be found of people openly speaking out against the project. Most people seemed to be hopeful or did not dare to raise their voice, since the local authorities overwhelmingly supported the project in public.¹⁵

Further, the formation of the set of standards, that Addax Bioenergy is now following, were of great importance. The compliance with guidelines focussing mainly on social and environmental responsibility was the key to access financing and the European market. The problem was that a many different DFIs were to be engaged in the project, all with their own conditions, while the European Union had not yet defined its requirements. Most DFI guidelines have to be adapted from the very beginning of a project. A project has to be designed to meet the requirements, even its planning phase has to be conducted in this sense. It is not possible to adapt the guidelines in a later stage. The first DFIs that could have been won for the project was the Swedish DFI Swedfund and the World Bank (See ENVI, 2008:9). The engagement of the first was a direct result of the connections of one of the project founders who worked many years in Swedish diplomacy and development cooperation. How the support of the World Bank was achieved is not clear. Presumably, their Sierra Leonean partner brought them in. As an agriculturalist and civil servant, he worked with World Bank projects back in the 80s (See *ibidem*, 3). The exact process by which the other DFIs became investors/lenders in the project could not be determined. Fact is, the Dutch FMO and the Emerging Africa Infrastructure Fund (EAIF) acted as co-lead arrangers for the debt financing. The FMO collaborates with the Swedfund in the context of the European Financing Partners (EFP). It is the platform, where the German DEG and the Belgian BIO were won for the project (EDFI, 2011: 21). The EAIF is a facility of the PITG Groupe, another DFI association. The World Bank's IFC-Debt Pool as well as the FMO are part of. It is assumed, that the lead arrangers then brought the other DFIs in: the African Development Bank (AfDB) and the South African Industrial Development Corporation (IDC). At least one DIF, the European Investment Bank (EIB), withdrew from

¹⁵ The notion of Addax bringing development to the people was omnipresent at the time of the field stay. It was regularly pronounced by local authorities in meetings and in interviews and was shared by the vast majority of people in Makeni and in the project area. However, project affected people also stated, that they didn't dare to discuss negative aspects of the project openly, since their leaders, including the president himself, were in strong support of the project.

an engagement.¹⁶ The level of engagement differed between the DFIs. The FMO and Swedfund were joining Addax as equity partners, taking more risk, while the others acted as lenders. In a complex process of negotiations taking place between 2008 and 2011, a common set of guidelines was determined. The AfDB's Standards (AfDB, 2001) were thereby added after the other DFIs already agreed on the application of the IFC Performance Standards (IFC, 2006) and the Equator Principles (EPFIs, 2013). Financial closure took place in December 2011, shortly after the groundbreaking for the Ethanol factory. DFIs were financing €142 million of the at the time estimated €267 million total size of the investment (PIDG, 2012: 55).

Next to the DFIs requirements, the biofuel entrepreneurs had to worry about the access to the European market. The biofuel policies of the European Union became more and more precise since a 1997 white paper (EC). When the plans for the biofuel project were developed, there were no mandatories for biofuel consumption. But it was very possible, that a stable market would be formed soon. However, many uncertainties remained, especially concerning the conditions for the market access of non-member states (See EC, 2007). It was thereby of utmost importance for the project managers to keep track of the process. As an ABSL manager stated in an interview, all proposals that were made in the European Parliaments regarding biofuel guidelines were carefully analysed and tested, to see if their project would pass it. But they also went beyond simply observing the policy building process and got to take part themselves. In a Workshop of the Economic and Scientific Policy Department of the European Parliament, the Sierra Leonean agriculturalist and head manager of the ABSL project in Sierra Leone was invited as a consultant. He was thereby not only promoting their project and highlighting the benefits of biofuel production in Africa (clean, CO₂ efficient, sustainable, bears high potential for overall development, etc.), he also summited proposals for the Renewable Energy Directives, that were in process at that time. He thereby pleaded for strict and clear guidelines where the ABSL design was strong (e.g. CO₂ savings), demanded similarly high standards for other industries and demanded the abolition of 'hidden protection for EU producers' in technical water content specification guidelines (ENVI, 2008). When the EU standards finally were defined in June 2009 with the adaption of the RES Directive 2009/28/EC (RED), the ABSL project could meet the requirements.

¹⁶ The reasons therefore are not fully clear. ABSL stated that the EIB was declining because of the high risk. NGOs argued that the cause was an unsatisfactory fulfilment of the EIB's environmental requirements (BFA, 2011: 15). These allegations were however not confirmed by the RSB audit (See DNV, 2013).

As a result of the uncertainty regarding the EU market access prior to the EU RED and as a mean to further add value to their product and their project as a whole, ABSL supported the creation of biofuel labels. The ABSL entrepreneurs were involved in the establishment of the Roundtable on Sustainable Biofuels (RSB) from the beginning. The RSB was originally an initiative of the Swiss Federal Institute of Technology in Lausanne (EPFL) that was designed to be an international multi-stakeholder initiative consisting of companies, NGOs, scientists, governments, etc. with the goal to ensure the sustainable production of biofuels. The initiative started operating in 2007 with a first meeting (RSB, n. a.). The RSB managed to assemble a large group of diverse actors and involved them in a process of guideline as well as measurement and monitoring tool development (See Aidenvironment and EPFL, 2013: 3 and BAFU, 2011). With a lack of clear EU guidelines, Addax Bioenergy adapted the RSB proposals, which at the time only existed in a draft form. The RSB later developed a third party certification system for the production of sustainable biofuels. In February 2013, ABSL received the first African certification for a biofuel project (RSB, 2013). Further, ABSL also gained the certification of the Bonsucro Better Sugar Cane Initiative, a certification scheme for sustainable sugar cane production. Both Bonsucro and RSB standards were later accepted by the EU to demonstrate compliance with its Renewables Directive, since they were regarded as even extending the Directives with the incorporation of additional factors (See Fortin, and Richardson (2013)).

Parallel to that process on the ground in Sierra Leone, negotiations with the government took place. Since the ABSL project was a pioneer — the first agriculture enterprise of that size and probably the biggest investment apart from the mining sector — there was little experience on how to handle such a project that, among others, leases a large area of land, produces electrical power for a national grid and extracts water from major rivers. ABSL entered the country when the setting up of an investment friendly policy framework was still ongoing. However, substantial incentives could be expected, as well as general broad support.¹⁷ Other issues such as the water extraction were more complicated. According to an ABSL manager, it was a difficult task to obtain rights for the use of the Rokel River as an irrigation source. They had to dig out an old law themselves and insist on its application. Extraction rights (that include a fee per extraction unit) were important to secure that nobody else would implement a project upstream and endanger their supply.

¹⁷ In a radio interview government officials and SLIEPA agents make clear, that the ABSL project fits their policy framework and that they will provide incentives (CBC, 2010).

On 9 February 2010, a formal agreement between the Government of Sierra Leone and Addax Bioenergy as well as its parent company AOG (Addax and Oryx Holdings at the time) was achieved. The Memorandum of Understanding (MOU) was defining the rights and obligations of the parties in this project and was intended to be legally binding. ABSL was granted significant tax incentives, a range of permits concerning expatriates, imports of goods and the like, extensive investment securities and the assurance of a general support of the government. In return, ABSL commits to the adaption of Sierra Leonean laws (e.g. environmental impacts), the creation of employment, the setting up of a mitigation program for project affected people including the intention to introduce an outgrower scheme, among others. Further, a framework for a power purchase and a water rights agreement were given. It is clear, that the expertise and the personal connections of the two local Addax Bioenergy managers were facilitating this process considerably.

Parallel to the process of the formulation of the Memorandum of Understanding, the negotiations concerning the land lease agreements took place. As explained in before, the leasing of land in the Sierra Leonean provinces by non-native companies is a complex task. According to the 1960 Provincial Land Act, formal lease arrangement can only be signed with the chiefdom council under the approval of the District Officer. The purchase of land is not possible and the maximum lease period is limited to 50 years (Tuboku-Metzger, and Van Der Laan, 1981). Against this background a negotiation process started in 2008 between the company and the paramount chiefs of the three involved chiefdoms (Makari Gbanti, Bombali Shebora and Malal Mara). Initially, ABSL was taking Magbass as a benchmark for the rent level. The Chinese sugar cane estate is paying less than \$1 per acre. However, during the negotiations it became clear that a similar rent level was not an option. ABSL was offered a little bit less than \$5 per acre, when a cabinet resolution in January 2009 (GoSL, 2009b) stipulated a minimal rent of \$5 per acre. In a draft land lease agreement of May 2009, an overall rent of \$5 per acre (ca. \$12.35 per hectare) per year was set (CES, 2009a). In an interview, an ABSL manager stated that the today's lease was comparable to other African countries. It remained unclear how much the company relied on this benchmark and what impact the higher than expected lease rent had. The 2009 cabinet resolution also recommended a change in distribution of the rent. This was not yet applied in the draft lease. When ABSL approached the chiefs and district officials, they were told that the lease would be split into three equal parts which would be distributed to the district, the chiefdom councils and to the landowning families. The new government proposal substantially changed this previous practice and introduced a new splitting

formula: 50% landowners, 20% Chiefdom Council, 20% District Council, 10% to Central Government (GoSL, 2009b). ABSL was happy with that change in practice, since the landowners, the people the company has to deal with the most, get a bigger share. But one problem remained. All the lease money had to be paid to the District Council that would then distribute the shares. It was thereby highly doubtful if and how much of the rent would end up with the landowners. Not just because of corruption issues, there was just no land register for the area. It was thereby impossible for the District Council to distribute the landowners' share accurately since it simply didn't know who had how much land in the leased area.¹⁸ In order to ensure the land owners support, ABSL invented another legal instrument, the so called Acknowledgement Agreements. AAs are additional agreements that were signed with each landowning family when their land was about to be used for the project. ABSL hired a consultant (CSS) specialised on Geographic Information Systems (GIS) that would map the land together with the owners. This process bore a big conflict potential, since borders had never been formally defined. At the time of the field stay, there were still some unsolved land disputes remaining. AAs include an additional rent, augmenting the land owners' share to 64% of the total rent and are directly paid. They include a formal declaration of support for the project and a recognition of the Land Lease Agreement (LLA) signed by the paramount chiefs.

The whole land lease process had to follow the principles ABSL agreed on, especially the IFC standards. ABSL thereby had to ensure, that the paramount chiefs and landowning families were adequately legally represented. It paid for a law firm that was chosen by the locals. Together with ABSL's legal representative, they developed a draft land lease agreement until May 2009. It was then also checked by the DFIs' law firms before a one year disclosure period started. This process had to meet an important requirement of ABSLs' guidelines: free, prior and informed consent of the affected population. Many meetings were held, within and out of the project area, by ABSL or solely by the chief's legal representatives, where the draft lease was presented. On the 9 April 2010, the land lease agreement was finally signed (See English and Sandström, 2014 and Bisset and Driver, 2012).

Parallel to the land lease process, an Environmental, Social and Health Impact Assessment (ESHIA) was conducted. This was another main requirement of the guidelines. The ESHIA allowed to estimate the consequences of the project and was the

¹⁸ Two years after the signing of the land lease agreement, in 2012, ABSL could negotiate a direct payment to the landowners (Bisset and Driver, 2012).

base for programs mitigating negative effects. It was heavily considered in the design of the plantation and the factory. In 2008, ABSL commissioned a Netherlands company to conduct a preliminary Environmental Impact Assessment (EIA). It had on one hand the purpose to identify potential environmental impacts on the physical, biological and human environments and on the other to clarify the requirements demanded by the Sierra Leonean government and their set of international guidelines (at the time primarily the IFC standards). The report was completed in October 2008 (Bisset and Driver, 2012). Thereupon, ABSL hired a lead consultant, a big South African consulting company with experience in the biofuel field (CES, n. a.), that was working with a Sierra Leonean partner Cemmats Group, n. a.). It started operating in early 2009 and first released a draft Scoping Report that was disclosed together with the LLA. Based on a final report which included the inputs from various stakeholder meetings that were held, 14 specialist studies were undertaken.¹⁹ Therefore CES acted as a lead contractor, they brought in the specialists for the studies. They were supplemented with additional consultants to tackle special challenges. For example, it was overlooked that a Health Impact Assessment (HIA) became part of the IFC standard in 2007. The DFIs were then intervening and an additional consultant was brought in by ABSL to close the gap.²⁰ In general the lenders were having a big impact on the project. During the ESHIA preparation process, they appointed an UK consultancy company that would regularly visit the site and report back. Lenders were then commenting on the reports and demand clarifications or modifications of the projects operations. At the end of 2009, the ESHIA was publicly disclosed (Bisset and Driver, 2012). Specific meetings were held in Makeni and in Freetown. A manager declared in an interview that they were making sure, that every (potentially critical) NGO was getting a copy of the ESHIA. The ones that were not attending the meetings were paid a visit and had to give a signature proving that they received the documents.

¹⁹ The ESHIA included the following Specialist Studies: Biodiversity and Ecological Assessment; Hydrology and Surface Water Assessment; Preliminary Sustainability Appraisal of Agricultural Production; Land Use Analysis; Social Impact Assessment; Resettlement Policy Framework; Preliminary Visual Impact Assessment; Co-Products Management Study; Air Quality Impact Assessment; Infrastructure and Transport Assessment; Greenhouse Gas Lifecycle Assessment; Carbon Stock Assessment; Fisheries Assessment; and Health Impact Assessment (Bisset and Driver, 2012: 4). The entire ESHIA Rapport could not be obtained, only partial (see CES 2009a+b). The ESHIA process is reconstructed based on the *Independent Study Reports* (Bisset and Driver, 2012,2013,2014), Interviews with the ABSL management as well as various Media articles.

²⁰ As stated by the HIA specialist in an interview.

The ESHIA process was at the time discussed among international organisations and NGOs. A discussion in an online forum (Google Groups discussion, 2009) shows a rather positive evaluation of the ESHIA process. However, some voices were still doubting that such an impact assessment was enough to protect the local population from negative effects of the project, even when conducted in an exemplary way. In a 2011 study (Englund et al., 2011), ordered by the European Commission, ABSL's ESHIA was highly praised and promoted as best practice example. The ESHIA identified key issues²¹, potential problems that have to be mitigated. These issues were addressed by a Social and Environmental Management Plan (SEMP) that included a set of policies and 30 individual management plans (AfDB, a: 22). Probably the one with the most direct effects on the local population was the Comprehensive Resettlement Policy Framework (CRPF) that provides for the overall implementation of the project's (physical and economic) resettlement and compensation policy. It includes a Farmer Development Program (FDP) that is combined with a Farmer Fields and Life School (FFLS). These programs, which were developed in close collaboration with the FAO²² and the Sierra Leonean Government, intended to guarantee food security by the transformation of the local agricultural system. The intention of the FDP was to introduce a mechanised rice production scheme with the aim to secure the per capita food baseline in the project area (See AfDB, b).

5.5 The implementation of the project

The project implementation process is interlinked with the feasibility phase. The setting up of the sugar cane fields, the factory and the mitigation measures²³ were in preparation since 2008. The feasibility process of the different project components didn't end at the

²¹ The following key issues were identified: Loss of habitats and associated species; Contamination of land and water by pesticides and fertilisers; Community conflicts; Food security / loss of land; Economic / physical displacement; Socio-economic benefits; Health, safety & security; and Sustainability (Bisset and Driver, 2012: 14).

²² The Sierra Leonean FAO responsible sees a big potential in the ABSL project to positively affect the agricultural system of the project area as well as the whole country (See Google Group discussion, 2009 and ABSL, 2009).

²³ A range of mitigation measures had to be taken resulting from the ESHIA process. Probably the most important of those is the Farmer Development Program FDP (see p.63).

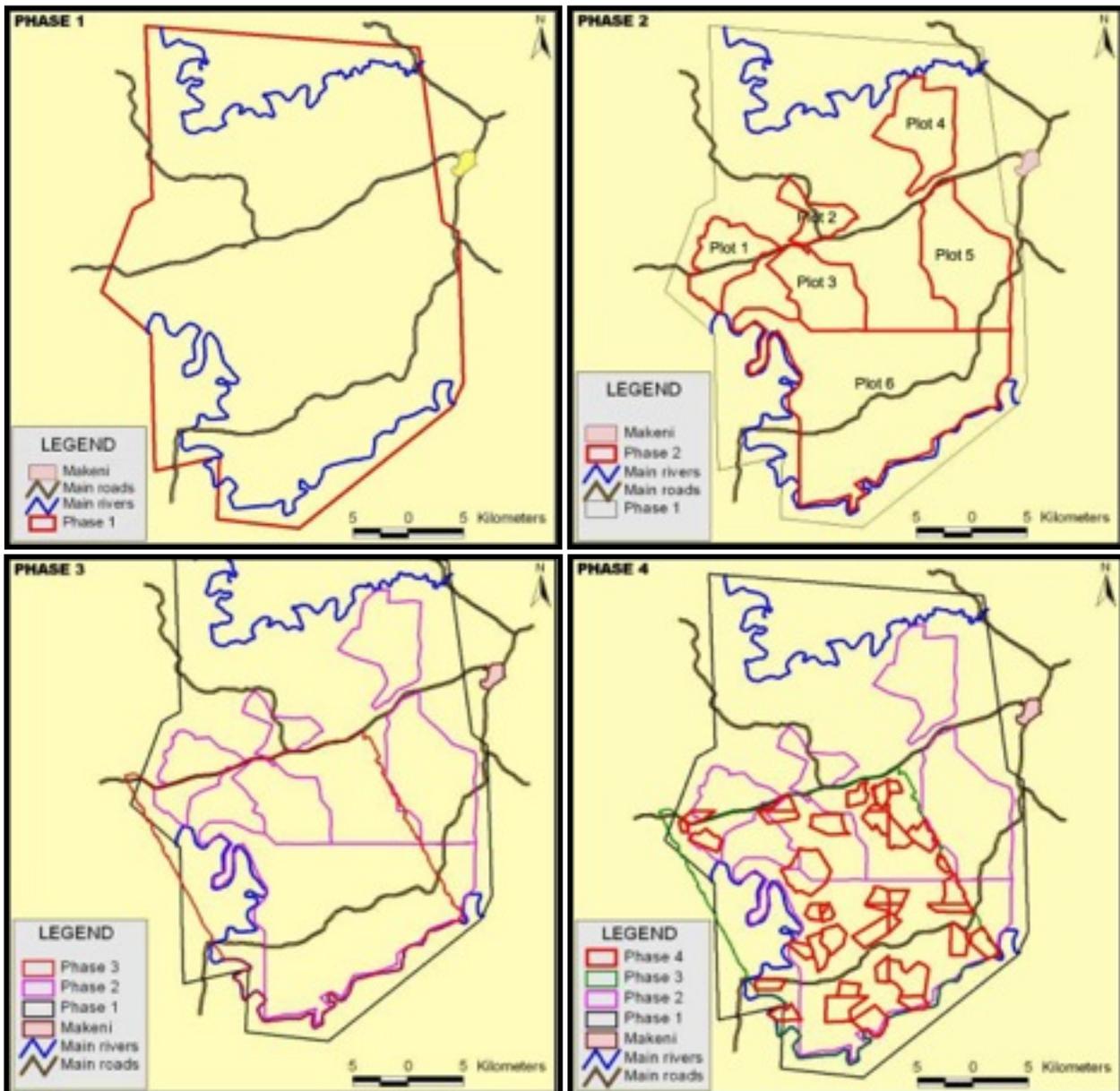


Figure 2: Evolution of the project design between 2008-2009. Source: CES 2009a, 3-6.

same time. The planning of the concrete project implementation in the area began in 2008 and underwent significant changes (see figure 2). From the beginning on, it was planned to acquire a much bigger area than would be needed in the projects final stage. According to an ABSL manager it was of great importance to be flexible in the planning process. There were too many factors that were not yet sufficiently assessed. In 2009, a final operation area of 13,500 hectares was estimated, with 12,500 hectares for sugar cane fields and 1'000 hectare for the factory. In the first phase (see figure 2, phase 1), the designated project area covered an area of 87,000 hectares, lying on both sides of the Makeni-Freetown highway and in between the riverbeds of the Seli and the Rokel River. In the second phase (see figure 2, phase 2), field surveys identified six potential areas suitable for estates within the first phase, covering just 45'000 hectares. In January 2009,

new evidences, based on remote sensing technologies, lead to the exclusion of two major plots. There appeared to be a too high population density that would have required many resettlements and a relatively high forest cover, that couldn't be touched because of the requirements of the EU RED. In phase 3 (see figure 2, phase 3), the area north of the highway was left out. This was mainly because of logistical considerations to minimise traffic impact on the Makeni-Freetown highway, since the biggest plot on the north side was left out before. Based on phase 3 and with additional scoping data (aerial photographing, detailed ground surveying and soil sampling), tentative field layouts were identified (see figure 2, phase 4) based on factors such as: the presence of settlements or forests, soil type, slopes, proximity to the rivers (because of irrigation reasons), general agricultural and infrastructural requirements (see CES, 2009a: 3-6, 10-11). In 2010, an area of 57'000 hectares was leased, an area that was larger than the planned one, providing a certain scope (AfDB, a). In 2009, there were still major uncertainties about basic technical issues. It was not yet decided what kind of irrigation system was to be adapted, how the transport of the sugar cane to the factory should be organised, even the feedstock was not defined and therefore the specific design of the factory neither (See CES, 2009a). In January 2010, the ABSL management went to Brazil to meet with the local ethanol industry (See ABSL, 2009). It is assumed, that during this visit the mentioned uncertainties were tackled as well as the adaption to the Bonsucro label was examined. In the same year, ABSL employed a South African lead contractor for the design and management of the sugar cane fields (Agricane, n. a.). Later, a Belgian engineering and contracting company was tasked with civil works and the setting up of the ethanol factory (DSEC, n. a.). In the background of the specialist studies and the lenders' comments, decisions on the plantation and factory design were taken. It was decided to use a central picot irrigation system that creates round fields with a max radius of 500m and allows a steady, economising watering. It was decided to only use sugar cane as a feed stock, and not like initially planned, also cassava, a locally grown, starchily food crop. The project of a rail system to transport sugar cane from the fields to the factory was no longer developed. The generation of biogas out of the fermentation process to further fuel the power plant was abandoned.²⁴

An important part of the project was also the selection of the right sugar cane variety. Since it takes a long time to create a field from few seed cane, a pre-nursery was

²⁴ Compare CES, 2009a with Sandström, 2012; English and Sandström, 2014 and AfDB 2011a and CDM EB, 2011.

established already in early 2009 (CES, 2009a, 7). According to the management, it takes 30-40 years to see if a variety is optimal for a region. Therefore, usually different varieties are used for such a project. ABSL got their sugar cane seeds from different places. First, varieties from the neighbouring Chinese sugar cane estate were planted. Later, varieties from a failed Illovo sugar project in Mali were received (See Cohen, 2012) and others were ordered from a research center in Mozambique.

After the LLA was signed with the paramount chiefs, the opening up of the project area began, plot after plot was developed. But before the work could begin in an area, a number of preliminary processes had to be terminated. This included a detailed mapping of the area, where boundaries were clearly defined and an Acknowledgement Agreement was signed. All the Social & Environmental Management Plans had to be adapted. This included detailed GIS mapping with all assets (like individual palm trees or planted crops) that needed to be compensated. An office was established with the purpose to interact with the affected communities and to serve as a contact point for grievances. The Health, Safety, Social and Environment (HSSE) Manager was thereby in charge of the following sections: Resettlement and Social Affairs, Environmental Affairs and Sustainability, Health and Safety, Quality Assurance and the Farmer Development Programme (AfDB, a). Later it was reorganised, Safety and Environment became own units and the remaining Social Department became the additional responsibility of the AA process. A core competence was thereby the setting up of the FDP. A particular field, the size based on the number of inhabitants of a village, would be prepared for rice production (See figure 2, the established FDP fields, designated to a certain village, lying in between the irrigated pivots). In the first year everything was free of input. Then every year in a 3 years period, farmers would be more and more investing. The program was significantly adjusted from its initial design (See AfDB, 2009b). Since the farmers could not contribute the demanded amount, the minimal participation fee was the seed input. At the time of the field stay, the FDP was facing considerable challenges, as the first villages were about to terminate the program at the end of 2013. To mitigate the transition period, the Farmer Development Services (FDS) were established. The FDS provides the services of the FDS but at cost. Therefore, a compound was set up with new machinery that also offers rice storage facilities (Bisset and Driver, 2014: 12-13). It remains to see, how the transition from FDP to FDS proceeds.

Further, the Social Manager is responsible for the Stakeholder Engagement Plan. Its main purpose is to keep the stakeholders of the project up to date and to discuss problematic

issues. It consists of regularly held meetings on different levels. There are meetings held in the villages (Village Liaison Committees) as well as Multi Stakeholder Forums that take place 4 times a year in Makeni and are organised and held at the University of Makeni. District Liaison Committees (DLS) between paramount chiefs, district and governmental officials took not place as often as intended. However, it seemed that the purpose of the DLS was integrated in the Multi Stakeholder Forums. In the context of the MSF, a group of Community Liaison Officers is maintained by ABSL. They serve to keep a steady flow of information between stakeholders and also act as negotiators in conflicts (such as land disputes and the like) (Bisset and Driver, 2013: 12-15). CLOs comprise employees of the University of Makeni and representatives of local Civil Society Organisations that are strongly in favour of the project.²⁵

When all the management plans were adapted, the project implementation could begin. Roads were constructed, pivots cleared and levelled, pump stations, irrigation pipes and machines established, etc. On 10 November 2011, the ground-breaking ceremony for the factory was held. All key stakeholders were present, including the Sierra Leonean President and the AOG founder Jean Claude Gandur. The factory was initially planned to be located close to the highway, but was then, due to land dispute, shifted considerably closer to the center of the operational area.²⁶ The first thing that was established was a cell phone pole next to the factory site. ABSL entered into a contract with a national telephone company to ensure the communication in the area. The construction of the factory itself was managed by a lead contractor that hired several sub-contractors. A Senegalese company was engaged to do the civil work (CSL), two Indian companies provided a cane crushing mill and the power plant (ISGEC) and a fermentation and distillation element (Praj) (See Sandström, 2012). At the time of the field stay, the factory was nearing completion. Almost the entire factory set up was imported. Even lower skilled Indian workers were brought in. Next to the factory a container settlement was established to

²⁵ The chairman of the CLO was met on several occasions including in an interview. He appeared to interpret his role rather to be the one of a supporter of the project than moderator between stakeholders. At the time of the field stay, he was in financial need with his organisation Civil Society Organisation for Peace and Development (CISOPAD). According to an ABSL manager, he offered to do independent monitoring of the project, which the company declined because of his questionable neutrality. According to members of a project critical CSO, CISOPAD was originally funded by the government to promote the ABSL project.

²⁶ See CES, 2009a. According to an ABSL manager, an agreement with the village authorities already existed, when some individuals were reanimating an old land dispute with intention to extort the company. It was then considered a better option to shift the location of the factory and the staff housing.

5.6 Conclusion

The acquisition of the land and the implementing of the project was a complex process that took place on different levels. Essential was thereby a social network of people with the right set of skills and experiences who came up with a business idea that connected the five pillars discussed in the previous part. They triggered a range of processes that established relations of exteriority between a growing number of elements within the Addax Bioenergy assemblage.

At first there was just a business idea that emerged from the interaction of a social assemblage. The interpersonal network was formed through habitual repetition of social interactions. A pattern of recurring links evolved that showed properties like a significant density and stability. The uniting force was a shared idea, that came into being as a result of a process co-evolution and exchange within and between the cognitive systems of the group members. At the same time it triggered a coding-process that established a common identity. During the evolution of the project assemblage, the business idea took different forms, was specified and opened up again.

Until the five key elements could be integrated: the Biofuel Complex, the European Union, the DFIs, the AOG-Mothership and Sierra Leone as a Place of Operation. The prospect of an economical benefit was thereby the main territorialising force. The access to the land and the establishment of a subsidiary in the country was enabled by a local kin group. The merging of the two networks was the key process of the ABSL assemblage. Further, the project was heavily determined by the specific local context, including governance, land use and agricultural system, biophysical environment, infrastructure, etc. The complex of guidelines and marked requirements was heavily shaping the process of assemblage. It acted as a coding element, forming the projects legitimacy and identity. The actual development of the fields and the factory was a largely standardised process carried out by contractors. Assessment and mapping tools such as GPS and GIS were of utmost importance. They allowed the territorialisation of a project of that scale and they were used to control and appropriate the land. Figure 4 shows the expansion of ABSL project at a pivotal stage, at the time of signing of the land lease agreement in 2010. The surface acquired by the company demonstrates the territorialisation of the project assemblage. In the next section processes that had a deterritorialising effect on the assemblage are presented.

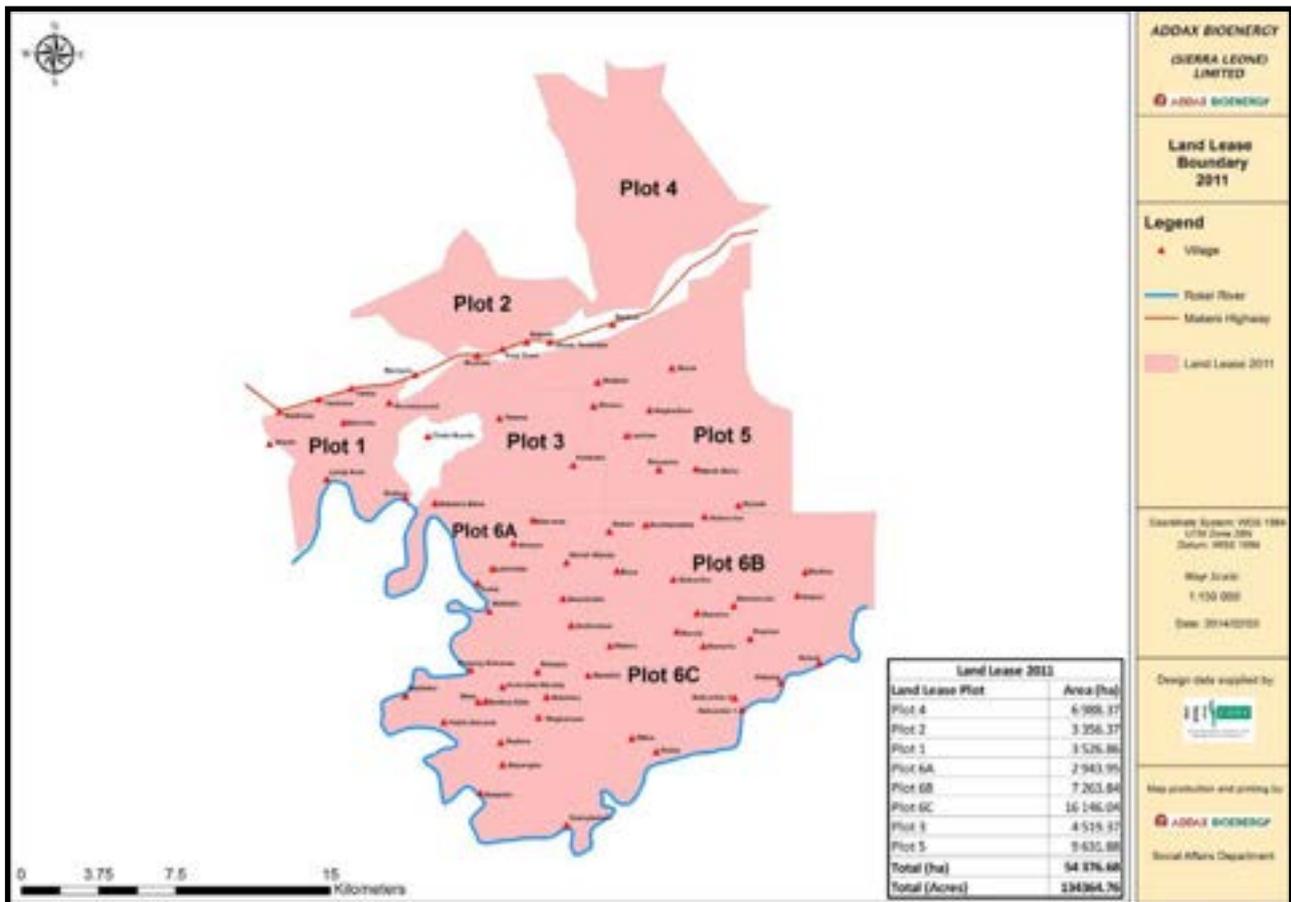


Figure 4: Original Land Lease Boundaries in 2011 (signed in 2010), Source: English & Sandström, 2014: 18.

6. Elements of Deterritorialisation

In this part, processes that work against the emergence of the Addax Bioenergy assemblage are identified.

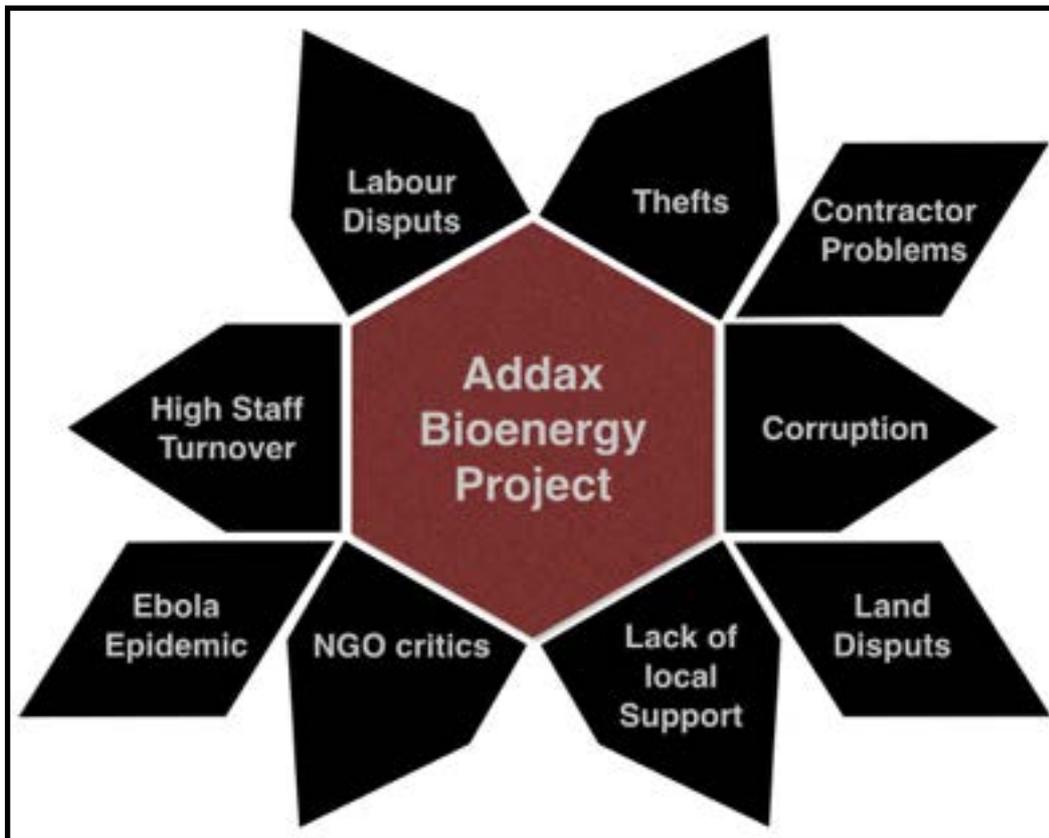


Figure 5: Elements of Deterritorialisation of the Addax Bioenergy project.

6.1 NGO critics

The ABSL project was encountering fierce criticism from NGOs and media all over the world at the time of the field stay in autumn 2013. It was depicted as another example of an evil company in the global land grabbing debate. According to the narrative of the critics, Addax Bioenergy deprives project affected people of their livelihood and let them starve so that Europeans can fill their fuel tank. The most pointed and most direct expression thereof was found in a children's magazine. This type of literature is produced by adults and intends to reach children with a simple language. The phrase 'fuel for cars instead of food

for us?’ (see Kiki, 2013) is representative for the majority of the consulted NGO statements.

This chapter analyses how the deterritorialising process started, of what elements it consists and how it affects the implementation of the project. It appears that the ABSL project became a pivotal point in the discourse about development in general. According to the company, the project was designed as a model for sustainable development. It was meant to become a benchmark for other enterprises in Africa (not limited to biofuels) and to prove that development can be achieved through business. ABSL has intended to demonstrate that a *win-win* situation for investors and affected people is possible and that private investment is the way to go to develop the Global South. In concrete terms, the project should combine the production of sugar cane ethanol with the improvement of the lives of the local people by bringing them employment opportunities, infrastructure, access to markets and skills building programs. etc. Further, it is also expected to develop the country as a whole with the provision of electricity, future tax incomes, knowhow generation and the attraction of other investors.²⁷

It thereby virtually provoked a reaction of supporters of an opposite view on development. Many critics labelled it as neo-colonial project whose only aim is to make profit on the back of poor people. The biofuel project thereby became a discursive battleground on which the future of development politics was shaped.

At the beginning, the Addax Bioenergy project was highly praised in Sierra Leone but got little attention outside of it — except for the global biofuel industry. However, things began to change when a Canadian journalist and activist began to investigate the project from a critical perspective. In early 2010, she published a first article and took part in a radio show (See Baxter, 2010 and CBC, 2010). Therein, she criticised the project heavily: She accused ABSL to take away the lands of the people without their consent and leaving them behind deprived of their livelihoods. Further, she blamed the Sierra Leonean government to support this injustice with beneficial treatment and heavy tax exemptions for investors. Her publications had a huge international impact as her findings and arguments were very well received by a growing group of activists and researchers engaged in a land grabbing discourse. This discourse was a result of a global food, finance and fuel crisis that was triggered in 2005 and an increased interest in agricultural land by investors in the following (See Anseeuw et al., 2012, as well as Saravia-Matus et al. 2013). During the year 2010, a

²⁷ This conception was expressed by every ABSL manager in every conversation. It is formally described on ABSL’s website: ABSL, *Sustainable investment model*.

number of NGOs got involved in the Addax Bioenergy case, usually coming from countries that were somehow linked to the company or the DFI's.

Sierra Leonean NGOs thereby played a crucial role in this development since they often served as an access point for international NGOs. One of them is a Freetown-based environmental and civil rights organisation (Green Scenery, n. a.) that was directly linked to the Canadian journalist mentioned above. Another one is a Makeni-based food rights NGO (Sierra Leone Network on the Right to Food, SiLNoRF, n. a.) that entered in close relationship with the former (Green Scenery and SiLNoRF, 2012). Through previously existing networks, NGO coalitions were formed and began to take action. From 2010 to 2013, most (national and international) NGOs gathered in a bigger associations such as the Action for Large-scale Land Acquisition Transparency (ALLAT). The international partners provided funding for their local partner to engage in monitoring and in the establishment of community liaisons. In 2011, first NGO reports about the ABSL project pointed out severe impacts for the affected population, such as limited access to land natural resources and little employment possibilities. (See Anane and Abiwu, 2011). Until now, a number of other studies and follow-up reports have been published that display a predominantly negative picture of the project, but with a recent trend towards a more positive view (SiLNoRF, 2012 & 2013a). Equipped with their reports, the NGOs approached the media in their countries that then began to investigate the case themselves. In the following, almost all states that contributed to the project in any form (usually countries with their DFI involved) experienced almost exclusively negative media coverage about the ABSL project. For example in Switzerland, where the head office for ABSL is located, a 20 minutes program broadcasted on national television presented ABSL in a very bad light (ECO, 2011). A similar image was presented in the Swedish radio (Radio Sweden, 2012, 2013). Other examples are British and Austrian news media reports (See Wiener Zeitung, 2013 and Tran 2013). Following these broadcasts, Addax Bioenergy frequently lodged a complaint but usually had limited success (See e.g. Casanova, 2011). The NGO coalition thereby intended to campaign against the role of the DFIs in this context. According to them, public funding should not be used to support private companies to destroy livelihoods in the Global South (BFA and Fastenopfer, 2013). The DFIs reacted with an image campaign for the project. The most prominent example hereby is a promotional clip produced by Swedfund (2013).

The scientific community, that usually has a strong weight in such debates, was thereby divided: Researchers that were engaged by the company for ESHIA were generally

very positive about the project. They considered the project design as progressive and expected it to set a precedent. They believed the problems caused by the company's operation to be mitigable or at least outweighed by its positive impacts. However, there was at least one researcher that left the ESHIA team because he felt constrained and started an independent monitoring of the project. Other researchers that would access the field independent from the company with the help of the NGOs were drawing a more critical picture of the project (e. g. Vlasak, 2013).

The NGO network further took concrete actions in order to influence the EU energy policies. For example, a study about the ABSL project (Action Aid, 2013) was commissioned to strengthen their arguments ('Biofuels = Land Grabs + Hunger', Action Aid, n. a.) in order to influence the specific decision-making process in the European Parliament in September 2013. Additionally, a member of a Sierra Leonean NGO was invited to underpin the critics of the report. The European Parliament concluded on behalf of the international NGOs and took measures to limit first generation biofuels (inter alia sugar cane ethanol) in the future (EP, 2013). Eventually, also the certification of the ABSL project with the RSB label was contested (See SiLNoRF, 2013b). An NGO member stated in an interview, that he considered it a missed opportunity that they didn't engage in the RSB process from the beginning. According to him, it would have been easier to shape the guidelines in their formation phase than trying to change the requirements for a better adaptation to the project affected people's needs retroactively.

Apart from the challenges ABSL was facing in Europe, NGO activities also affected its operations at the (project) site. First, media awareness programs about land grabbing were also present here. In September 2013, I was attending a BBC Media Action meeting, consisting of a discussion forum with a live audience, that was recorded and later transformed into a radio program. Here, the same critical voices as in European media were dominating. Hence, also local people were getting improved access to more critical information about investment on land going on in their country. Affected people in the area would be encouraged to express their grievance in public. The meeting was held in the same location, a conference hall of the University of Makeni, where two weeks later the Multi Stakeholder Forum would take place, but with a considerably different atmosphere. Further, local NGOs approached people living in the operational area of Addax Bioenergy were. Providing them a contact point for their complaints, independent from their chiefs. With this support from the (international) NGO community, people more easily dared to speak up. A land issue in one particular village is a good example about how this affected

ABSL: Villagers opposed to lease a certain part of their land to the company. In the renegotiation process, they were supported by local NGOs and eventually got what they requested, in this case, the exemption of a part of their village land from the lease. The company claimed that this was a bad deal for the village and they would lose rent of over \$20'000 for land that didn't serve them anyway (See English and Sandström, 2014, 23). For ABSL, increased NGO involvement results in more difficulties in the interaction with the local population.

However, at the time of the field stay the hardened fronts between national and international NGOs and the company seemed to soften. To various degrees, NGOs began to engage with ABSL. International NGOs within their coalition were in disagreement whether this would improve the situation for the people or just greenwash the companies' doing. It must be stated, that the company has always been open to engage with NGO's due to their commitment to its internal values such as transparency. According to an ABSL manager, the relation to the NGOs was at the beginning much more positive and collaborative until it changed in 2010.

In any case, critical NGO networks — themselves complex assemblages, consisting of personnel, financing, contacts, values, strategies, a mission, etc. — in collaboration with media and universities were a major factor of deterritorialisation. They were damaging fundamental pillars of the project such as the access to DFI financing and to the European market. They were also weakening the support of the local population and therefore complicating its operation.

6.2 High staff turnover

Another disintegrative effect ABSL is facing are frequent changes in the staff. Only two people of the local and expatriate management have been part of the project from the beginning until today. Such a staff turnover took place at least once in all the upper management positions — except of one of the initial biofuel entrepreneurs that has remained until today. Even the local management that was enabling ABSL's access to the country seemed to take a step back from the project. Only one of the initial biofuel entrepreneurs remained and also the local management, that was enabling ABSL access to the country, seemed to take a step back from project.

There is a variety of reasons for this to happen: Especially for the expatriate staff, working and living conditions in Sierra Leone are difficult. The expatriate's poor understanding of the local society's functioning leads to frequent misunderstandings. This was also displayed in a tensions within the ABSL staff, between the foreign top management and the local junior management. Numerous stories about difficult trust relationships were encountered while in the field. One example was an anecdote of an ABSL administrator that had too much confidence in a local assistant. He once handed him a key for a locked container. The key was then copied and the container emptied overnight. The ABSL Social Manager too declared that they had to fire personnel that repeatedly stole diesel from their cars fuel tank. Such incidents erode mutual trust and create an unpleasant workplace atmosphere.

A lot of frustration is also generated by the difficult interactions with the project affected population. ABSL managers perceived the people in the area to be very demanding and repeatedly complained about their attitude. As stated in an interview: 'Villagers approach us on a regularly basis. Can you give me a job? Can you give my son a job? Can you plough my field for free? It seems like the more we give, the less people are satisfied.' Always they are approached with needs and claims, never is anybody pleased. They feel like the more they give, the less the people are satisfied. This results in a negative image of ABSL and affects the employees. They don't want to be seen as the bad guys that take the poor farmers' land away. On top of that, there's hardly anything to do for expats in the region. There are no cinemas, theatres and the like where one could spend his free time. Relationships with local people are perceived difficult because of the economic disparities. Feelings of loneliness and social frustration are widespread. The wives of the expatriates who joined their husbands to Sierra Leone hardly find anything to keep themselves busy and get frustrated easily.

Furthermore, my information demonstrates, that there has been a conflict within the expatriate management. In June 2013, a number senior staff resigned at the same time. This was in context of severe allegations against ABSL's General Manager and his team, which has been accused inter alia to disrespect local employees (See Bundu, 2013). Comments from non-ABSL expatriates seem to confirm these events.

The information obtained suggest, that the consequences for the Addax Bioenergy assemblage were severe. Important elements were removed and replaced regularly. With every staff turnover, expertise was lost and had to be acquired in a time consuming process. It was getting increasingly hard to find successors in order to avoid vacancies.

Often candidates had to be persuaded over months to join the team. This resulted in high costs: The efficiency of the management decreased, expensive head hunters had to be employed and salaries to be increased. Further, the company's relations with the communities suffered from the frequent changes. For the affected people, it was of great importance to have a personal relation to the project managers and the frequent changes made them feel insecure and suspicious about the project. Especially the retreat of the former Social Manager was perceived with great concern among the representatives of project affected population (See UNIMAK, 2013a).

6.3 Corruption

Corruption is a major problem for the ABSL project that acts as a deterritorialising element. In Sierra Leone corruption is endemic. It became part of the system in the course of the collapsing government services in the pre-war period (See Chêne, 2010).

There are various incidents of corruption that affected the project example therefore is the unfinished rooftop of one of the factory buildings. The material for its construction had to be shipped in from overseas and was stolen at the port in Freetown – not once but twice. The part of the roof that is in place today had to be flown in by cargo planes. According to different sources, I have consulted, the reason for this inconsistencies has to be searched in the notoriously corrupt Sierra Leone Port Authority. It is assumed that the disappearance of the material is a consequence of ABSL's refusal to pay bribes. ABSL managers reported, that they had to contact the Sierra Leonean president for them to get access to items remaining in the port facilities. Similar issues were also encountered during the ESHIA process. Several baseline environmental monitoring activities were delayed drastically due to technical equipment and samples stuck in customs. The water quality monitoring samples were held in for so long, that the analysis lost its reliability (See Bisset and Driver, 2012).

Another way by which ABSL is affected by corruption is related to the land rent that is paid to the chiefdom councils, districts and the government. At the multi stakeholder meeting on the 28th September 2013 questions about the use of the money were raised. A participant stated, that payments of this scale should manifest in visible investments and he complained that he couldn't see any. However, the question remained unanswered. (see also UNIMAK, 2013b). Generally, among most interviewees it was an

open secret, that a portion of these funds was embezzled by men in charge. For ABSL this is an uncomfortable situation, since this form of corruption is undermining part of the benefits for the local population their operation was supposed to have.

In this context, ABSL supports the Anti-Corruption Commission that was founded in the early post-war period (See ACC website and Sierra Express Media, 2012).

Corruption in a broader sense is also present in the labour market (see Käser, 2014). It is not uncommon that one has to pay a bribe to the person in charge to get employment. ABSL is insofar affected by this practice, that it can increase tensions in the project-affected villages, when personnel manager of the various contractors sell the jobs to those who can pay, instead of providing them to the locals free of charge. The company has promised to prioritise workers from the project area and has modified its employment policies accordingly (See AfDBa: 9). A company manager stated in an interview, that they used to contact the local headmen when they needed workers. However, they would then sell the jobs to outsiders instead to appoint the youth of the village. In mid-2013, the task/privilege to assign employment was transferred to the local MP. I assume that the practice continuous (For further Information about employment practices see the case study of village next to the factory in Käser, 2014).

Corruption in general was complicating the setting up of the ABSL project considerably. Issues with the Customs and Port Authorities led to delays and increased costs enormously. Endemic corruption in local government and labour recruitment fostered resentment in the local population and partially eroded their support for the project.

6.4 Labour disputes

Another problem ABSL was encountering were labour disputes. Local labour is an essential part of the project and any difficulties affect the integrity of the whole assemblage.

As already explained earlier, the customary land tenure system and the traditional Temne economy differ considerably from private land ownership and formal neoliberal economy practiced by the company. In Northern Sierra Leone, and in the project area in particular, formal employment was a new phenomena. Except of a mining site in an adjacent chiefdom, there was hardly any formal employment in the region until the arrival of ABSL. Most people were practicing subsistence oriented agriculture and were therefore not

familiar with employment contracts. The very different understanding of wage labour of the affected people and the company created a lot of misunderstandings concerning contracts, responsibilities and payments.

In the Temne context, negotiation on working conditions do not end, when a contract has been signed, but start in this very moment. According to Temne understanding, every day terms can be renegotiated constantly. Moreover literary level in the region is very low and most of the workers are not able to understand the content of the contract. So it occurred, as stated by an ABSL manager, that workers would either not show up anymore after the payday, because they have earned enough for the next few weeks or that they would constantly ask for higher salaries. Further, wage taxes were not known and considered as thefts of the company.

With the beginning of the construction of the factory, many different sub-contractors began to employ workers. Formally obliged by Addax Bioenergy to follow the same guidelines, they often provided even more precarious working conditions in practice. Labourers were usually paid low wages and often hired and fired on the spot (See Käser, 2013: 70-74). ABSL's Social Manager confirmed the situation and declared that he sometimes had to intervene to avoid confrontations.

However, the bigger issue concerning labour seems to be the relationship between the expatriate senior management and the local junior management, the better-qualified and formally educated Sierra Leonean employees. From the beginning of the construction of the factory in late 2011, labour conflicts, including strikes, became an ongoing problem. In a government report the ABSL General Manager pointed out difficulties with the recruitment of local staff — empathising the low skill level, but after all, 'the lack of suitable middle management personnel' — and frequent industrial actions (GoSL, 2013: 33). The junior management, which was responsible for most actions taken on the operational site, felt discriminated by the expatriate senior management and complained about lack of respect. A repeatedly heard story gives further insight to these circumstances. It was reported, that the local junior management could not afford to eat with the expats since the latter were served expensive, largely imported western food. Now one has to know, that the act of eating-together in Temne culture is very important, bearing a strong symbolism about equality and mutual respect. I was told , that even a high-ranking government official intervened and ordered the company to change the situation. The feeling of unequal treatment was further intensified, when the junior management learned about the dimensions of the wage gaps between their and the expats' salaries. In contrast to other

foreign companies, ABSL did not run different payroll office for local and expatriate staff. As a result, the significant wage differential became public. Another issue was the occurrence of racist behaviour of foreign staff towards local employees. Such an attitude is sharply contradicting with the company's values (ABSL: *Values*) and led to immediate dismissals if reported. At least five expatriates got their contracts terminated, following investigations on complaints of racism and discrimination (AYV, 2012). However, since the situation could not be defused in the following, it resulted in a complete three-day strike of local workers in June 2013. In a letter addressed to the ABSL CEO, the local staff accused the General Manager and his inner circle inter alia of disrespect and violation of their rights, making him responsible for the degradation of the enterprise's morale and a climate of mistrust and demanded his immediate resignation (See Bundu, 2013).²⁸ I was told by a long-time expat, that the ABSL senior management reacted in confusion, left the site in a rush and headed for the capital. However, things calmed down a bit when the vice chancellor of the University of Makeni (UNIMAK), a highly esteemed and trusted local authority, was appointed as a mediator.²⁹ He managed to solve the conflict and after three days of stoppage, the operations continued. Following the strike, ABSL had to make certain commitments, yet it could not be determined to what extent they had to agree to the workers' demands. The strike revealed a bad understanding of the ABSL expatriates for the local context and a limited capacity to comprehend the processes going on in the project-affected area. The UNIMAK thereupon offered a personnel training to encourage a better and more respectful relation between the senior and junior staff. The effects of labour issues are heterogeneous and weighty. Direct results of the strike are higher costs due to increased wages. However, the resulting inefficiency of operation and delaying of the project are estimated to be far more damaging.

From an assemblage point of view, tensions arose within the ABSL personnel, due to a lack of knowledge and communication skills that resulted in misunderstandings, along with existing prejudices and structural inequalities. Such deterritorialising processes within a central element of the ABSL assemblage opened up a dangerous gap between the business idea and the financial and technical means with the place of operation.

²⁸ One year later their wish came true. His successor took over in May 2014 (See ABSL: *Trevor Endres*).

²⁹ I was told, that ABSL preferred the appointment of higher ranking government officials but it was denied by the strikers.

6.5 Thefts

Thefts are probably the most fatal problem ABSL is facing. It is a process that is literally disintegrative. Constitutive parts of the project such as irrigation pipes, transformers, tools, machinery, cement, fertiliser, but also air-conditioning systems and a lot of fuel — basically anything — was removed from the project site on a regular basis. In 2012, the company's General Manager declared that thefts were 'the single most important threat of the existence of the company'. He stated, that if thefts continue on this scale, the project would fold up in the next three years (GoSL, 2013: 33). At the time of the field stay, the issue of thefts was omnipresent. At every stakeholder meeting a detailed list of stolen things, the estimated financial damage and an update to the investigations was given. At a Cluster Village Liaison Committee Meeting in August, the security manager estimated the damage caused by thefts from January to July 2013 to be around \$400.000. Other sources suggested that the damage was even much higher. Theft occurred everywhere ABSL was operating: At the port, on the fields, at the factory construction site and even in the offices. There were different types of stealing. Employees with access to cars would extract diesel from the tanks, villagers would dismantle the infrastructure of the fields surrounding their village and organised crime would come from outside, collaborate with workers, bribe security personnel and police and take off with the big things.

The reaction of the ABSL management team was relatively helpless. In collaboration with the Sierra Leonean Police, it set up roadblocks at the access roads and installed a police station at the factory: They engaged an investigation team that tracked thieves in the area and ran an impressive awareness campaign, to make clear to the people in the area, that if the thefts don't stop, the company will disappear. At the time of the field stay, ABSL was about to dismiss its security contractor, the third already since the beginning of the project. I was told that the company intended to test a new system that would incorporate the sons of the chiefs in the area to further delegitimise the act of stealing.

I have encountered the following explanations for the massive stealing were multiple and mostly speculative:

One reason is located in the low payment of many workers, especially security personnel.³⁰ Their salary was often hardly enough to sustain themselves, let alone a

³⁰ Security personnel was usually paid LE7.000 (≈ \$1.60) a day, while a monthly supply of rice for a family was LE150.000 (≈ \$32.20). Many were living separated from their families as strangers in villages where they spent most of their salary for food and accommodation.

family.³¹ A further cause is seen in the general understanding of wage employment in the area. Before the project, the only formal employment was offered by the government. The disintegration of the public services since the 70s led to losses of wages and only sporadic payments and forced employees of the public sector to find other means to get paid. This led to the incorporation of theft as a form of payment in the labour system. To illustrate this point: Workers were even said to turn down better paid office jobs because there were less opportunities to get an extra income.

Another explanation for the massive thefts can be found in the role of family and kin groups. In the Temne society in the Makeni region an individual is highly integrated in family and community structures. A worker that managed to get employed (usually with the help of someone) has heavy obligations towards his kin group. Actual wages of workers are sometimes heavily overestimated by the family and their demands cannot be turned down by the worker. Stealing is a way to suddenly increase income and to satisfy demands of the extended family network. An anecdote I was told by a long-term expatriate was about a man that got employed by ABSL. His uncle that had sponsored his education approached him when the man got employment and requested him to do the same for his two nieces. The man had no choice and had to comply. In this case, he chose to get a loan from a newly set up bank in Makeni with an exorbitant interest rate that would probably ruin him over time. It was further reported that employed workers voluntarily turned down well paid jobs to avoid excessive demands from their surroundings. This leads to the assumption, that peer pressure was a major cause that led somebody to get involved in thefts. However, there are also indications that thefts can be interpreted as an application of *weapons of the weak* as described by Scott (1985), as a form of resistance of the poor farmers against a multinational company (See Käser, 2013: 109).

However, the consequences of thefts were and still are severe for Addax Bioenergy. Continuous costs for replaceable goods like fuel are already very high, but even more expensive is the replacement of special components that sometimes lead to long delays in the operations. I was told about a box of purpose-built screw-nuts that got stolen and it took several months to replace it, while it was of no use for the thief. Nevertheless, the mistrust caused by the thefts deeply damaged the working atmosphere and further increased the division between local and expats management.

³¹ The lowest wages were paid to the employees of the security contractor. It was Le7,000, about \$1.60 a day. Employees directly hired by Addax received higher salaries of about Le10,000/\$2.30. To compare, a bag rice that was said to last for one month for one family costed Le150,000.

6.6 Lack of local support

Another major disintegrative factor of the ABSL project is a basic lack of mutual understanding between the ABSL management and the affected people in the area. To talk about a clash of two different worlds is thereby not exaggerated. By the end of the millennium, it was a remote bushland, sparsely inhabited by subsistence farmers living in small villages under the rule of traditional authorities. There was no electricity, no mobile telephone network and hardly any roads. Things began to change with the civil war and especially with the entering of international NGOs that came in significant numbers in order to rebuild the country. They were encountering many difficulties in the interaction with the local population (See Bolten, 2009), particularly with the Temne patron-client networks. Patron-client networks are complex relationships of mutual dependence between a patron, a big man, and a dependant. A big man acts as a sponsor that takes responsibility for the dependants needs and provides protection, resources and opportunities. In return, the client accepts the big man as a patron to whom he obeys and demonstrates loyalty and gratefulness. This notion dominates the relationship between the people of the Makeni region towards their leaders: traditional chiefs, politicians, businessmen, religious leaders and the secret societies³² (See Millar, 2011b). This was also the case for western NGOs that were accepted as patrons by Sierra Leoneans. The people considered the NGOs to be responsible for them and expected them to care for their well-being. In the course of the contacts between locals and NGOs, a new norm that an ABSL manager once called 'a hand-out mentality' had developed. When Addax Bioenergy came to develop its project, they were seen in the same manner. People didn't really differentiate between an NGO and a private company, an organisation they didn't know before and which purpose they didn't understand separated from their own world view. As ABSL was promising them development and opportunities, landowning families were accepting the company as a patron and signed the Acknowledgement Agreements. This understanding (partly) explains the high expectations project affected people have of towards the investor. However, expectations ABSL is not willing to meet the expectations of affected people to such an extent — always emphasising that they do business and not welfare when confronted with these demands The resulting disappointment among the

³² Secret societies such as the *Poros* play an important role in people's every day lives. They keep traditions alive and are a spiritual authority that concretely governs society with protocols and laws (see Käser, 2014, 50-54).

affected people leads to a decrease of their support and willingness to cooperate with the company.

I got evidence that also local authorities and the company's local management have to be blamed for the misconception about ABSL's role that prevails in the project area. People frequently reported that promises that had been made by local company agents were not fulfilled. They thereby mainly pointed at their local honourable and the ABSL's Social Affairs Manager, both related to the local business man that brought the biofuel entrepreneurs to the area.³³ In an interview, an ABSL senior manager denied that they have made the promises reported by the affected population. He declared that they had absolutely no interest in spreading promises they do not intend to fulfil. He further stated that they were warned about this to happen and put more effort in their expectation management. The manager instead blamed the local NGO to incite the population against the company, in order to meet their donors agenda.

The patronage-client notion can also be adapted to explain the difficulties ABSL was encountering with its Farmer Development Program (FDP). It was a difficult task to explain the purpose of the project to the people. They did not understand that the program should be managed by themselves after the initial three years without further support of the company. It was assumed by ABSL's managers and partly confirmed by local farmers, that the FDP was rather seen as the company producing food for the farmers that gave their land, than an agricultural development program.

The local support for the project was endangered in even another way: When ABSL came, the lives of the people changed considerably. The area was no longer isolated since it became accessible through the roads built by the company. Previously, it was known as a black spot on a map and a journey to certain villages was not possible to undertake in just a day trip. With the start of the operations of Addax Bioenergy, the mobility of the people increased considerably and the social structure in the villages began to change. This development undermined the absolute power of the local authorities in different ways. Even though landowning families profited from the land lease rent, they no longer have the exclusive power over the land since the land is leased to the company. They lost their influence by ceasing to be the only ones that can assign land to individuals and thus strengthen livelihoods. With the ABSL project, the FDP guarantees land for everybody and the landowners consent is no longer needed. In case somebody got wage employment,

³³Vincent Kanu, the local businessman and ABSL partner appointed one of the honourable to promote the project in the region. His niece got the position of the Social Affairs Manager and was also married to an influential police officer in Makeni.

access to land becomes less important. d. Wealth is now achievable without the direct consent of a chief. Addax Bioenergy accepted its assigned role as a patron at least partly and meets people and listens to their needs. As a consequence of that, the power of the traditional ruling class was contested and it attempted to retain its position through the involvement of the Poro society, the major secret society in the region. There were several issues involving the Poro society, the major secret society. Taboo sticks were put in place to sabotage ABSL's operation. No worker would dare to oppose a ban imposed by the secret society. However, an agreement between the paramount chiefs (usually the big men within the Poro) and the company in summer 2013, that banned the use of Taboo sticks against ABSL put an end to such incidents.

Generally speaking, the inhabitants of the area and owner of the land are important stakeholders whose support is indispensable for the implementation of the project. If local authorities and project-affected people wanted the company to leave, they would have the power and the means to achieve it: Since the sugarcane plantations are located in between the villages, the people could easily sabotage the infrastructure, build roadblocks or even burn the sugar cane fields. If the support of the local people is not ensured, the project could fail very quickly. During the strike, the landowners demanded to get properly informed about why so many expatriate employees would leave the company at the same time. They threatened to seize back their land otherwise. Other companies already experienced such actions. I was told, that a railway of a mining company was demolished in the past after no satisfactory agreement about compensations could be achieved. Also in connection with the thefts ABSL is dependent on the local authorities.

Hence, losing the support of the local population results in processes of deterritorialisation in the true meaning of the word. The company would simply lose the base on which their project is built on.

6.7 Other deterritorialising factors

There are a number of other processes that are working against the emergence of the biofuel project that haven't been mentioned yet.

One of those are often occurring land disputes between neighbouring villages that either already existed previous to the arrival of the company or began to emerge when the company began to map the land. There have rarely been clearly defined borders before,

so conflicts in this process are not surprising. The issue was widely discussed for example at the multi stakeholder conference. The ABSL Social Manager reported that the Community Liaison Officers would play an important role as mediators. Many disputes could be solved, but there were still some remaining at the time of the field stay. Before the boundaries are not clearly defined, management plans and lease arrangements cannot be undertaken and ABSL can't start operating on these plots. Such disputes have a big influence on the project and they result inter alia in planning difficulties. The best example therefore is the location of the factory and the staff housing. Due to a land conflict, the principal factory building had to be shifted to another chiefdom what resulted in a fundamental change of the project arrangement.

Another issue were problems with contractors. Already mentioned was the problem of finding a suitable security company that manages to contain the thefts. I was told that there have also been problems with ABSL's contractor responsible for the sugar cane production. It makes clear that ABSL is depending on their contractors' performances and has limited control over their activities.

Finally, a most recent event had a significant effect on the projects integrity: the Ebola outbreak in the country. Its effect on the company's operation cannot be clearly assessed since a considerable timespan has passed after the fieldwork. However, the ABSL project is especially vulnerable, since it was not built in a closed area that could be easily controlled or sealed off, but that operates in a populated area with lots of movement from outside. Many workers commuted daily from Makeni in crowded busses. The interactions with the local population that lives in big household with very low hygiene standards were frequent. The epidemic arrived when production started in May 2014. The senior management established an Ebola Task Team that took a number of measures, including the setting up of an Ebola Isolation Unit and temperature screenings and chlorine wash stations at the factory site and the estate. Efforts to recruit external medical staff were taken. Further, ABSL supported the actions of the overstrained national Ministry of Health and Sanitation, as other international companies did. They donated vehicles and a number of equipment including cell phones, loud hailer and even shovels (AOG, 2014 Overview). They further supported the construction of a 100-bed Ebola Treatment Centre in Makeni (Conteh, 2014). A previous cooperation of the Addax & Oryx Foundation with the Magbenteh Community Hospital was thereby expanded. However, the company did not remain unaffected, at least 8 employees were infected of whom 4 died (AOG, 2014 Overview). It was reported that the management fled the country at least for a certain

period of time. Some contractors moved their staff while ABSL had big problems keeping theirs in the country. At some point holidays abroad were denied to expatriates.³⁴

The Ebola epidemic was a major deterritorialising force that endangered the project in its fundament. Not just the project itself but the whole country's institutions, infrastructure and economy was at the edge of collapsing. Roads were blocked, the borders were closed, curfews were imposed — no investment can sustain under such conditions for a long time. Today it seems that the epidemic is getting more and more under control but remains a latent risk. However, the epidemic could come back anytime and at full force (Gerhard, 2015).

6.8 Conclusion

The Addax Bioenergy assemblage was and is still affected by a number of deterritorialising forces. Many of them can be related to the difficult environment the company is facing in the field. On one hand, the local population is not accustomed with the concept of a large company leasing land to generate profit. On the other hand, the ABSL senior management has little understanding of the functioning of the local society. Hence, the interpersonal network between the company and the project affected people, as well as within ABSL, between the expatriate senior and the local junior management, is loose and unstable. Resulting mutual misunderstandings caused labour issues and resulted in high staff turnover. The personnel structure, that runs the operations and keeps the company together, wasn't functioning properly. Further, thefts disintegrated the project in a literal sense and destroyed trust relationships. Essential elements, that have to be into place in order for ABSL to get the capacity to produce bioethanol, are removed on a regular basis. Corruption in the form of bad governance and as a daily obstacle additionally weakened the integrity of the project. An alliance of critical NGOs affected the ABSL assemblage beyond their operations on the site. It threatened the fundamentals of the project while endangering its access to markets and financing. It partially decoded the narrative of the ABSL assemblage, the setting up of a sustainable, climate friendly pioneer business that at the same time brings development to a whole region, while confronting it with an another one, that pictured the project as a neocolonial, exploitative land grabbing that

³⁴ This information was obtained in interviews held after the field stay in Switzerland with NGO members and researchers.

seeks to make profit with the cost of the livelihoods of the poorest of the poor. The broad distribution of this counter-notion in international media networks endangered the capacity of ABSL to achieve funding as well as to sell its product. The impact of the NGO's on the local level was also considerable. They supported resisting farmers in the renegotiation processes and therewith contributed to the success of community resistance and to the projects deterritorialisation at the same time. The interaction with the NGOs generated new capacities for the local population, that lead to an increased bargaining power. All these effects resulted in a significant increase in costs and delays for ABSL. In 2008, during the pre-feasibility phase, the total project investment was estimated at \$200 million and the start of production planned for 2011 (See EC, 2008: 8-9). However, in 2012, the project was far from being completed and the costs were now estimated at €267 million (Bisset, and Driver, 2012: 3). Production eventually started in May 2014 with an adjusted total investment of €400 million (ABSL, *Facts and Figures*).

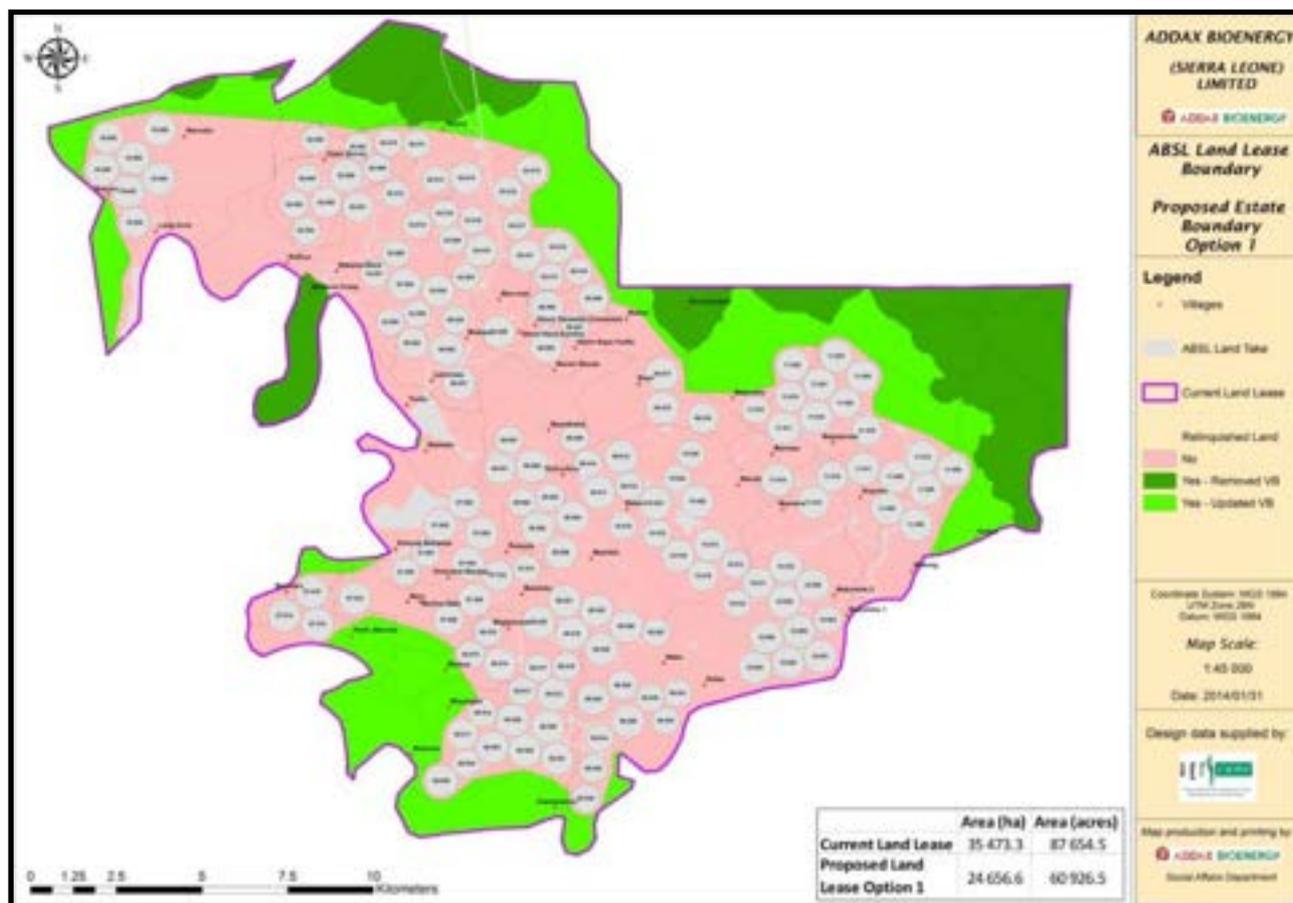


Figure 6: Proposed final project design, February 2014. Source: English & Sandström, 2014, 29.

Figure 6 shows the spatial dimension the ABSL project was intended to have in its final form. Deterritorialising forces were present and had their effect on the project's spatial realisation. A prominent example is the location of the factory building. Due to problematic relations with a particular affected community it has been shifted from the far north west off

the project area to the central west. Together with the factory site the whole arrangement of fields and roads had to be changed.



Figure 7: Factory site in September 2013. Fenced in with barbed wire. The central red building, the Cane Mill remained without a rooftop, Source: Photo Samuel Lustenberger.

But also on the ground deterritorialising forces have their impact. The factory site is heavily protected. Checkpoints at the entrance and a police station within the area had been set up.

Finally, the outbreak of the Ebola epidemic in mid-2014 posed the so far greatest threat to the ABSL assemblage. As a strong deterritorialising force it managed to disintegrate the whole country, the assemblage, of Sierra Leone. From public health system, transportation, the economy in general to smaller social assemblages, since close interactions with other members of the society were feared or no longer possible, was in a state of dissolution. The ABSL assemblage is embedded within this macro assemblages and thus risks to lose its capacity to operate.

7. Conclusion

The Addax Bioenergy project can be described as a complex assemblage of a variety of elements on different scales. A number of processes have been identified that were acting as territorialising forces — processes that bring elements together — or deterritorialising forces — processes that tear established wholes apart or prevent their gathering.

Along with the three research questions the major findings in regard of the three research questions are presented below:

First, five important elements were identified that enabled the coming into being of the Addax Bioenergy project. The mother company AOG, the Biofuel Complex, the European Union, Development Finance Institutions and the region around Makeni in Northern Sierra Leone were the five main pillars on which the ABSL assemblage consists of.

The AOG was the mother ship. ABSL adapted its mode of business and the cornerstones of its identity framework. It benefited from its reputation and its network. It provided a starting credit and provided essential infrastructure through another subsidiary. The Biofuel Complex created a business model. It offered a proven way to produce bioethanol in Africa and generated a demand for it. The EU acted as a demander and prepared the ground in Sierra Leone. Its energy and development policies created an accessible market for biofuel and carbon credits. Its development partnership helped building up the country for private investment. So did the DFIs. Additionally, they acted as the bank, provided affordable capital and took a share of the risk. They supported ABSL in a discursive struggle about the legitimacy of its project. Finally, Sierra Leone as the host country for ABSL's operation offered cheap, accessible agricultural land with optimal properties. It welcomed ABSL with an investor friendly political framework and basic infrastructural services at a geographically ideal location.

Second, the acquisition of the land and the implementing of the project was shown to be a complex process that took place on different levels. Essential was thereby a social network of people with the right set of skills and experiences who came up with a business idea that connected the five pillars discussed in the previous part. They triggered a range of processes that established relations of exteriority between a growing number of elements within the Addax Bioenergy assemblage. A social assemblage was formed through habitual repetition of interactions. A pattern of recurring links evolved that showed properties like a significant density and stability. The uniting force was a shared idea, that

came into being as a result of a process co-evolution and exchange within and between the cognitive systems of the group members. At the same time it triggered a coding-process that established a common identity. During the evolution of the project assemblage, the business idea took different forms, was specified and opened up again. The prospect of an economical benefit was thereby the main territorialising force. The access to the land and the establishment of a subsidiary in the country was enabled by a local kin group. The merging of the two networks was the key process of the ABSL assemblage. Further, the project was heavily determined by the specific local context, including governance, land use and agricultural system, biophysical environment, infrastructure, etc. The complex of guidelines and marked requirements was heavily shaping the process of assemblage. It acted as a coding element, forming the projects legitimacy and identity. The actual development of the fields and the factory was a largely standardised process carried out by contractors. Assessment and mapping tools such as GPS and GIS were of utmost importance. They allowed the territorialisation of a project of that scale and they were used to control and appropriate the land.

The ABSL assemblage has a territorial expression. It can be demonstrated through maps of the leased area and the distribution of fields, roads and the factory site. Together with the assemblage this expressions shift.

Third, the Addax Bioenergy assemblage was and is still affected by a number of deterritorialising forces. Many of them can be related to the difficult environment the company is facing in the field. On one hand, the local population is not accustomed with the concept of a large company leasing land to generate profit. On the other hand, the ABSL senior management has little understanding of the functioning of the local society. Hence, the interpersonal network between the company and the project affected people, as well as within ABSL, between the expatriate senior and the local junior management, is loose and unstable. Resulting mutual misunderstandings caused labour issues and resulted in high staff turnover. The personnel structure, that runs the operations and keeps the company together, wasn't functioning properly. Further, thefts disintegrated the project in a literal sense and destroyed trust relationships. Essential elements, that have to be into place in order for ABSL to get the capacity to produce bioethanol, are removed on a regular basis. Corruption in the form of bad governance and as a daily obstacle additionally weakened the integrity of the project. An alliance of critical NGOs affected the ABSL assemblage beyond their operations on the site. It threatened the fundamentals of the project while endangering its access to markets and financing. It partially decoded the

narrative of the ABSL assemblage, the setting up of a sustainable, climate friendly pioneer business that at the same time brings development to a whole region, while confronting it with an another one, that pictured the project as a neocolonial, exploitative land grabbing that seeks to make profit with the cost of the livelihoods of the poorest of the poor. The broad distribution of this counter-notion in international media networks endangered the capacity of ABSL to achieve funding as well as to sell its product. The impact of the NGO's on the local level was also considerable. They supported resisting farmers in the renegotiation processes and therewith contributed to the success of community resistance. The interaction with the NGOs generated new capacities for the local population, that lead to an increased bargaining power.

Deterritorialising forces also had their effect on the project's spatial realisation. A prominent example is the location of the factory building. Due to problematic relations with a particular affected community it has been shifted from the far north west off the project area to the central west. Together with the factory site the whole arrangement of fields and roads had to be changed.

Finally, the outbreak of the Ebola epidemic in mid-2014 posed the so far greatest threat to the ABSL assemblage. As a strong deterritorialising force it managed to disintegrate the whole country, the assemblage, of Sierra Leone. From public health system, transportation, the economy in general to smaller social assemblages, since close interactions with other members of the society were feared or no longer possible, was in a state of dissolution. The ABSL assemblage is embedded within this macro assemblages and thus risks to lose its capacity to operate.

8. Interviews and Conferences

Date	Interviewee	Duration
09.08.2013	Simon Cleasby, ABSL, CEO	ca. 15'
24.08.2013	Senasy S. Jalloh, Head Teacher in Mabilafu	1h5'
22.08.2013	Clive English, ABSL, Social Manager	2h45'
16.09.2013	Lansana Hassan Sowa, SiLNoRF, Programmes Coordinator	25'
20.09.2013	Project Affected Farmer	50'
20.09.2013	Santigie Sesay, SiLNoRF, Communication Officer	1h20'
20.09.2013	Abbas Kamara, SiLNoRF, Program Manager	55'
25.09.2013	Abbas Kamara, SiLNoRF Program Manager	50'
29.09.2013	Jörgen Sandström, ABSL, Executive Officer, Business Development and External Relations	3h20'
01.10.2013	Abbas Kamara, SiLNoRF, Program Manager	35'
09.10.2013	Joe Sengbeh Pieh, CSOPAD, Chairman	1h15'
21.10.2013	Leonard Bangura, UNIMAK, Director of Academic Affairs	1h
22.10.2013	Abbas Kamara, SiLNoRF, Program Manager	45'
22.10.2013	Jane Mattia, UNIMAK, Secretary Multi stakeholder Forum	55'
27.10.2013	Mohamed S. Conteh, Director MADAM/ SiLNoRF	3h50'
08.11.2013	Amadu B.J. Sesay,, Ministry of Agriculture Forestry and Food Security, Makeni, Bombali District, District Extension Officer	35'
17.11.2013	Simon Cleasby, ABSL, CEO and John Moul, ABSL, General Manager	ca. 2h
20.11.2013	Adam Goguen, UNIMAK	ca. 3h
20.11.2013	Bai Seboru Kasangha II, Paramount Chief Bombali Shebora	1h10'
26.11.2013	Senasy S. Jalloh, Head Teacher in Mabilafu	ca. 1h
16.12.2013	Rev. Dr. Joseph A. Turay, UNIMAK Vice Chancellor (Conducted by Franziska Marfurt)	1h50'
23.09.2014	Yvan Maillard Ardenti, Bort Für Alle, Program Coordinator	1h5'
26.09.2014	Mirko Winkler, Swiss TPH, Environmental Epidemiologist	55'
Date	Event	Duration
16.08.2013	Cluster Village Liaison Committee Meeting in Mara	ca. 3h
18.08.2013	Paramount Chief Candidate Election Kanu Family in Masethle	ca. 2h
17.09.2013	BBC Media Action Meeting in Makeni	ca. 3h
28.09.2013	Multi Stakeholder Forum in Makeni	ca. 4h
01.10.2013	Meeting between SiLNoRF with the FMO and the monitoring team from NKUK	ca. 1h
10.10.2013	Opening Ceremony of the Farmer Development Services in Kantobe	ca. 4h

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