Reforming Development Trajectories? Institutional Change of Forest Tenure in the Brazilian Amazon

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With a foreword by Prof. Dr. Klaus Töpfer

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Abstract

This study offers an analysis of forest tenure reform in the Brazilian Amazon. It focuses on five initiatives by forest-dependent people to have their property rights to land and forest recognized and protected by the State. These tenure reforms meet fierce opposition by those benefitting from the lack of land rights regularization. The study describes the key events, agents and their strategies and outcomes of these reform processes. This study treats these reform processes as instances of institutional change. It applies institutional economics – tending to its classical interpretation – as the theoretical basis of analysis. For the empirical research work, the study proposes a hermeneutic approach to institutional analysis. It advances a "generative view of causality" that builds – on the ontological level – on social elements that possess causal powers. These social elements possess causal powers irrespective of whether they are exercised. Causal powers co-exist and influence each other. In effect, events – such as the process and the outcomes of forest tenure reform – are explicable but not predictable. This reasoning provides the rationale for establishing an inductive approach to institutional analysis and for case studies as the principle research strategy for *understanding* institutional change. Given the highly contested nature of forest tenure in the Brazilian Amazon, this study emphasizes power as the driver of institutional change. It defines power as *power to* or the capacity to act. Building on the "generative view of causality" the study proposes an integrative view of different sources of power: power stemming from agents, social structures and discourses. Concerning the prevailing social structures in the case study region, the study identifies clientelism and selective state – a state apparatus that is dominated by some social groups – as constitutive for the region. These social structures put forest-dependent people in a marginalized social position. Hence, to get their property rights recognized by the State, forest-dependent people not only needed to mobilize for tenure reform at the local level, they also needed to reach out to the national level. The cases in which tenure reform actually took place show that these two factors additionally required windows of opportunity for reform, they required particular circumstances that generated momenta of responsiveness by the state. The election of President Lula da Silva was decisive in this respect. The study further shows that recognized land rights are a necessary but insufficient factor in improving forest-dependent people's livelihoods. Results show further that successful tenure reform does not imply that the rights to use resources (primarily timber) are also transferred to the intended beneficiaries of reform. Tenure reform establishes – what in this study is being referred to as – a legal rule. Institutions, rules that are socially embedded, derive their efficacy from being adhered to habitually. If this is not the case, rule enforcement is essential. In the cases analyzed here, rule enforcement often remains weak. In conclusion, the study suggest that development trajectories that were laid out in the colonization of the Brazilian Amazon from the 1960ies onwards remain difficult but not impossible to reform.

Foreword

1992 was a hallmark year in international cooperation. At the first United Nations Conference for Environment and Development in Rio de Janeiro, member states adopted three multilateral agreements on pressing sustainability challenges: climate change, desertification and land degradation, and biodiversity loss. Looking at the challenges of reaching binding international agreements on questions of environment and development today, this achievement can hardly be overestimated. In the aftermath of Rio 1992, Brazil developed an elaborate legal framework for the sustainable use of its Amazonian rainforest. It pioneered initiatives for the sustainable use of forests by its inhabitants, thereby bringing the motto "Environment for Development" into being. Translating these innovations into its governance approaches to sustainable development on the ground is a challenge. In fact, since the adoption of the three conventions in 1992, 340 000 square kilometres of rainforest have been lost in the Brazilian Amazon. This represents an area about the size of Germany. At the same time, land use conflicts – which often incur human losses – prevail, and many social indicators in the region are below national averages.

There is widespread recognition of the importance of governance to redirect development towards more sustainable pathways. Environmental Governance has been in vogue since the Rio Summit. It is a core concern of responsible national governments; it permeates international cooperation; and a very large number of scientific journals are dedicated to the topic. Much of this thinking is devoted to the characteristics of better governance regimes. However, we often observe a mismatch between the desired governance regimes and the status quo. In the words of the author, "glossy policy papers often stand in stark contrast to gloomy policy outcomes." Having actively participated in the negotiations in Rio as the head of the German delegation, I am very much concerned with the question of how to make governance change happen. As the director of a research institute, I am eager to explore and understand how research can contribute to these governance transformations. Understanding the conditions of governance transitions, understanding how change happens, is far from being well understood in science and practice. What does the governance of transformations towards sustainability look like?

This book is a very welcome contribution in this regard. It analyses the history of five initiatives in the Brazilian Amazon aimed at securing the land rights of forest communities. Their land rights have been or are threatened by the expansion of large-scale ranching activities and logging operations. Several opportunities to secure the land rights of these communities and encourage sustainable use of forest products by them are built into Brazilian legislation. Recognition of these people's land rights denies other groups access to the forest. No wonder, then, that these tenure reforms met with fierce opposition from those who benefit from the status quo. Against this backdrop, this book addresses two issues that are of the utmost importance in the governance of sustainability transitions. It analyses prerequisites and strategies for change and proposes a research methodology in support of these sustainability transitions.

I believe that it is useful to think of sustainability governance in terms of the emerging concept of

transgovernance, as described in detail in the first Study Report of the Institute for Advanced Sustainability Studies (IASS). Transgovernance emphasises the co-existence of old and new institutions. Old institutions are not simply replaced by new institutional innovations; they tend to exist alongside each other. Coexistence means that there are interdependencies between the institutions, but also tensions and controversies. Transgovernance also highlights the fact that we are increasingly living in knowledge democracies. Knowledge democracy is a concept that aims to depict the ways in which democracy, media and science have developed and how they are interrelated. People are embedded in various ways in this amalgam of societal organisation. As members of different societal groups, they gain new insights and develop new ways of governance from within the system. They develop 'intraventions' innovations from within a system, as opposed to 'interventions' from outside the system.

This book focuses on people's different capacities to influence governance transitions. According to the author, these capacities largely stem from the positions they have come to occupy in society. Depending on their position, different people have very different powers to shape the course of events. Overall, those struggling for the recognition of their land rights found it significantly more difficult to influence governance transitions than those opposed to the reform. The institutional environment in the Brazilian Amazon very much favours rural elites. Path-dependency operates here. At the same time, Rio 1992 did leave an impression on the region. After Rio, the Brazilian Government invested significantly in the region to support community-based sustain-able development initiatives. These coexist with an institutional environment that favours rural elites. The support for community-based initiatives opened up channels of communication between local and national levels and created links to international fora. The successful initiatives for land rights reform covered by this book relied on collective action at local level and benefitted from links to national and international arenas. It was at the national and international levels that pressure to act built up and opened up windows of opportunity for governance transitions.

Don't get me wrong: transgovernance is neither easy nor is there any guarantee that it will succeed. Governance transitions continue to be highly politicised and sometimes even violent processes, as this book clearly shows. Coexistence can also mean that legal reforms do not develop traction in the face of well-established institutions that favour the opponents of reform. Transgovernance, however, draws attention to the more complex sustainability governance landscape that characterises our contemporary societies. An understanding of this complexity is vital to identifying entry points for reform. This book demonstrates that even in circumstances in which government-driven governance reforms face challenges, there are levers for change.

In this power play, how can research – or knowledge in general – have any influence on governance transitions? What research approaches could increase the leverage of knowledge in governance transitions? This book's implicit hypothesis is that an *understanding* of governance transitions provides lessons learned for future reform efforts. It also suggests that

this understanding depends on close interaction between the researcher and the agents of governance transitions. I share these views fully, as they are in line with the firm conviction behind the work done at the IASS. Addressing sustainability challenges requires transdisciplinary approaches, that is research as a process of interaction between scientists and societal actors. In this kind of research, these actors are no longer mere 'objects' of research. Instead, they become co-subjects in our search for understanding and, hopefully, for sustainability solutions. For example, to avail of windows of opportunity, we need ideas for reform. These ideas must build on excellent knowledge. But knowledge alone is not sufficient. It must be brought into dialogue with those responsible for implementing reforms: ideas for governance reforms need to co-evolve in the context of joint endeavours by scientists and decision-makers. These transdisciplinary approaches must acknowledge that the practical knowledge of decision-makers in government, industry and civil society is just as relevant for reform as scientific knowledge. Furthermore, the analysis presented here makes a strong case for the complexity of governance transitions and the contingencies involved in the process. The ability to respond to these contingencies depends on mutual understanding and the language of researchers and decision-makers. This is more likely to emerge in joint processes of knowledge generation. A final point on this: as we shift towards knowledge democracies, people are demanding more of a say and more participative forms of governance. Claims for citizen science are a corollary to this. An engagement with citizens beyond 'outreach' is a necessary complement to research approaches that encourage the co-evolution of knowledge. The research presented in this book partly responded to these needs by working primarily at local level with those who were actively involved in organising the collective action necessary for reform.

Let me briefly turn to the institute I head up, the IASS. It is my pleasure to have Dr. Weigelt with us as the leader of our renowned group on soils – an often forgotten, yet non-renewable and crucial resource. His doctoral thesis testifies to his ability to bring profound insights and new and innovative ideas to our common, transdisciplinary agenda on soils. It is easy to establish the connections between Dr. Weigelt's superb academic work and his way of developing and implementing the IASS soils agenda at the interface of science and society. Mark Twain is said to have advised us to "buy land – they are not making it anymore." At the beginning of the twenty-first century, it seems as if this piece of advice is being followed very closely. The first decade of the millennium witnessed what is now being referred to as the triple-f-crisis: the financial, fuel and food crisis. To varying degrees, these crises all have an impact on the demand for land. In response to the financial crisis, investors sought more tangible assets. Biofuels as an element of a renewable energy mix will remain. Even if diets change towards less meat and food waste is significantly reduced, we will need to produce more food to feed the projected ten billion people on this planet. Increased demand for land will be a close bedfellow of these trends, and managing the pressure placed on fertile soils will be a challenging task.

Strong governance will be required to balance the various demands for land and ensure that those demands take the environmental, social and economic dimension of sustainability into account. More often than not, this will necessitate governance transitions to shift towards more sustainable development trajectories. For all those interested in making these transitions towards sustainability happen, this book is a highly recommendable read.

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To those who struggle for the land rights of indigenous peoples, quilombolas, small settlers, and traditional peoples in Pará. I admire your work and courage.

Prologue

On December 22, 1988, Chico Mendes is assassinated. An activist of the National Council for Rubber Tappers, he had fought against the expulsion of rubber tappers from the areas they were traditionally using. To counter theses processes he suggested creating Extractive Reserves, areas that would allow the rubber tappers to continue their way of living. Two years later, in 1990, a rancher who tried to invade one of the areas Chico Mendes had fought to preserve, his son, and their henchman were each convicted to 19 years of prison for Chico Mendes' assassination. The first Extractive Reserves were created in the same year.

About 16 years later, on February 12, 2005, Marina Silva, that time minister for environment, travels to the community Carmelino in the municipality Porto de Moz. A companion of Chico Mendes, she intends to participate in a meeting necessary in the process of devolving the rights to land and other natural resources to the communities living in the area of the Extractive Reserve Verde para Sempre. At the end of this process, about 1.3 million hectares will be managed by the river dweller population traditionally using these resources. It has been a long struggle with the economic and political elites to finally get to this point.

The very same day some 250 kilometers southwards in the municipality Anapu, Sister Dorothy Stang is assassinated at the age of 73. Six bullets – some of which fired at short distance – terminate her endless support to achieve land rights regularisation for the peasant population of Anapu. A federal inquiry mission will later conclude that the thesis that there was a net of supporters of the one ordering the crime is nearly unrejectable. This list of supporters includes large cattle ranchers and a prominent member of the municipal administration.

The concurrence of these events demonstrates the vulnerability of the social movements fighting for the land rights of forest-dependent people and the challenges they need to overcome or live with. In 2005 it seemed as if history would simply repeat itself. After Dorothy's assassination, the responsible state agencies finally deployed the means to implement the settlement scheme she was fighting for. Like in 1988 after Chico Mendes' assassination, it appears as if it needed a prominent victim to advance the claims of those marginalised.

"Despite of the creation of the CNS and the increasing level of organization of rubber tappers throughout the Amazon region, we have a long and arduous road before us."[1] (*Chico Mendes*)

Cattle ranching is responsible for about 70% of deforestation in the Brazilian Amazon. Pasture in Medicilandia.

1. Introduction

1.1 The Background of this Book and its Objectives

This book is about forest tenure reform in Western Pará, Brazil. It conceptualizes forest tenure reform as the recognition of property claims that are voiced by forest-dependent people.[2] The term forest-dependent people in the context of this work refers to traditional people and small settlers, the two groups at the core of this work. Despite of their many cultural differences they share an attribute. Often, they live on their lands by rights of possession. The state, however, does frequently not enforce their rights to land and other natural resource or recognize their property claims. Infringements of their land rights are a frequent effect. In this context, forest tenure reform serves at least three different purposes.

First, it is essential to reduce livelihood vulnerability understood as "complex of influences that is directly or indirectly responsible for many of the hardships faced by the poorest people in the world" (Department for International Development 1999, section 2.2). This work conceptualises forest tenure reform as a type of agrarian reform (Kuhnen 1982, 330). Forest tenure then is about the property rights to land and other forest-related resources and the corresponding property rights regimes (cf. Larson, Cronkleton et al. 2008; Pacheco, Barry et al. 2008). There is a vivid debate on the role of agrarian reform in rural development. Some advance that rural livelihoods become increasingly divorced from the land. This increasing involvement in rural non-farm activities questions whether investments in agriculture or agrarian reform are the surest ways for poverty reduction in rural areas (cf. Rigg 2006). Yet others make a strong case for redistributive land reforms and their positive contribution to rural poverty reduction (cf. Keith, Azizur Rahman et al. 2002). In my reading, agrarian reform often remains a crucial element of strategies to achieve sustainable rural livelihoods. Rural poverty research shows that peasants pursue different livelihood strategies to meet subsistence needs and cash requirements (Chambers and Conway 1991; Rauch 1996a; Scoones 1998; Bierschenk 2002). Rural development policies will therefore necessarily comprise different means to address rural poverty in a particular region. Measures to secure land claims need to be part of rural development policies, when farming forms part of the livelihood strategies and if there is a risk that smallholders will loose access to land. This applies as well to access to other natural resources such as water, fishing grounds, or non-timber forest products. Work on chronic poverty identifies a link between access to land and escape from chronic poverty (and vice versa) (Hulme and Shepherd 2003, 415; Kabeer 2004, 26ff). Scholarly work on measures to increase smallholders' access to land demonstrates that even incremental increases in the size of the property can have significant welfare effects (Finan, Sadoulet et al. 2005). However, some scholars observe an increase in off-farm cash generating livelihood strategies. This tendency is often described as "new rurality" or "pluriactive" livelihoods (for an analysis in the Brazilian context, see Chase 2010).[3] This might be understood as undermining the necessity of agrarian reform. Arguing from a perspective of livelihoods diversification, Ellis and Allison (2004, 10), however, show that even highly diversified livelihoods in rural contexts depend on secure access to natural resources.

Second, secure property rights to land are a precondition for the successful collective governance of forest resources by smallholders (Pagdee, Kim et al. 2006). Or, to put it differently, the boundaries of the resource need to be properly defined and the resource users must be in a position to defend these boundaries against intrusions (Ostrom 2005b, 260ff). This is not to say that sustainable resource use automatically ensues once property rights are secure. Frequent resource degradation on private land protected by registered titles cautions this hope (Bromley 1989b, 868). However, if impoverished resource users are to invest in more sustainable resource use patterns (be it in the form of reduced use or investments in resource status), they need to reap the returns. Investments of scarce resources are unlikely to occur, if it is uncertain whether the returns accrue to the one investing. In order to secure these investments, property rights need to be secure (cf. Meinzen-Dick and di Gregorio 2004). Due to global environmental change, the need to invest in natural resources to sustain their benefits in times of climatic variability is likely to increase (cf. Rauch 2010).[4] This implies as well that the need and urgency for securing property rights will increase even further (Adger 1999; Toni and Holanda Jr 2008, 581).

Third, there are broader societal implications. Redistribution of land can also contribute to a changing political environment in rural areas, as there are often close ties between landholding and political power (Bardhan 2000, 226f). Later chapters provide detailed accounts of how forest tenure reform results in a redistribution of access to land. For now, a rather intuitive argument shall suffice. In the absence of acknowledged claims to resources (be it through codification or by other means), valuable natural resources are nevertheless likely to be used. Acknowledging the claims of smallholders on natural resources in these contexts, is very likely to alter the distribution of access among societal groups. Regarding fisheries Béné (2003) concludes "(…), the fact that the most profitable gears are usually the most expensive to purchase and to operate, and that the most productive fishing spots (…) are usually either 'privaterized' or their access requires high bribes (…) induces that fisheries, defined in terms of costs of entry, are far from open." Given the recipro-

cal character of asset distribution and political weight, forest tenure reform might lead to their political empowerment (regarding access to natural resources and the distribution of bargaining power across the sexes, see Agarwal 1997). Acknowledgement of property claims of forest-dependent people might then become an "institutional pathway to equity" (Bebbington, Dani et al. 2008).

This work approaches the question of land rights from an institutional economics perspective. Broadly speaking, this implies a focus on rule systems in the analysis of natural resource use (cf. Hagedorn 2008). It further conceptualises natural resources – many of which are essential to the livelihoods of small agricultural producers (Beck and Nesmith 2001) – as common pool resources, resources which are characterised by rivalry in consumption and the difficulty of excluding agents from their use (Ostrom 2001, 132f). When I began my PhD in 2006, Elinor Ostrom's work had already inspired academic writings – for an analysis of the evolution of scholarly work on the commons, see van Laerhoven and Ostrom (2007) – and development policy advice (see, for example, IFAD 2001, 199). Her seminal book "Governing the Commons" (Ostrom 1990) provides rich empirical detail on how resource users can organise for the collective sustainable management of common pool resources. Garrett Hardin's (1968) sweeping policy advice that common pool resources need privatisation or state management to avoid "The Tragedy of the Commons" had been proven wrong. Or, to put it more precisely, Hardin's case had been proven to be a rather particular case amongst many others (Ostrom 2007). There is no property rights regime, which is per se superior to all the others. Context matters. Collective management of natural resources in a sustainable manner by their users is possible and has been practised for long periods of time around the world.

My reflection on Ostrom's work – like many others' reflections, I suppose – began with an analysis of the "design principles of robust self-governed common-pool resource institutions" (in the context of forestry, see Ostrom 1999). In particular, design principle number 1 attracted my interest. It reads "Individuals or households with rights to withdraw resource units from the common-pool resource and the boundaries of the common-pool resource itself are clearly defined" (ibid, 7). Before I started my PhD I had just finalised a consultancy with the International Fund for Agricultural Development (IFAD) on the Fund's activities to enhance its target groups access to land and other natural resources. Despite of the many differences between countries and projects, one finding stood out: Poor resource users frequently experienced intrusions of the resource they were using not only by state agencies, the case frequently highlighted by Ostrom (cf. 2005a), but also from other private agents (for an analysis of West Bengal, see Beck and Ghosh 2000). Against this finding, I found this design principle to be a rather strong one, or, to put it the other way round, to exclude a vast range of cases.

Later, Ostrom (2005b, 262) appraises a rephrasing of this design principle suggested by Morrow and Hull (1996, 1644) "the resource itself and the users of the resource are clearly defined, and the appropriators [those with a right to use the resource] are able to effectively protect the resource from outsiders." The puzzle became even greater. How are the small Cambodian fishermen to protect their fishing grounds, when fishing lot operators put up armed guards to prohibit access to them (Béné 2003, 965)? What about the experience of the rubber tappers of the state of Acre who struggled to defend the land they were traditionally using against ranchers and who faced violent reaction (Almeida 2002)? What about the findings of analyses of decentralisation of forestry management that found proactive measures to protect the needs of the poorer segments of society necessary in order to avoid that reform will be captured by municipal elites (Larson, Pacheco et al. 2007)? Other processes than collective action by "resource appropriators" to create institutions for sustainable management seemed to be in place. However, I find these processes not strongly

reflected in many of the writings on the collective management of natural resources.

Motivated by questions such as these, I increasingly came across the work of scholars who critically reflected on "collective action scholarship" – as Johnson (2004) labels it. Broadly speaking, this label refers to scholarly work inspired by Ostrom focusing on collective action for sustainable resource governance. The work of these critical scholars agree on three related points: one, the analyses of collective action scholarship are evaluated as being ahistorical; second, they are considered apolitical; and, as the third emerging theme, scholars agree that there is a lack of consideration of power relations. The explanation that emerges from these analyses is that collective action scholarship relies on the assumption of methodological individualism (cf. Mosse 1997; Mehta, Leach et al. 1999; Mollinga 2001; Johnson 2004). This explanation led me to move from so-called New Institutional Economics – the theoretical home of many of the collective action scholars – to the so-called Old Institutional Economics. I found the Old – or Classical – with the importance given to social structures and the importance of history to be a rather crucial complement to the analyses inspired by the New (cf. Nitsch 1989). Furthermore, Old Institutional Economics offers a broader treatment of power (cf. Hodgson 2000c), which I consider to be of importance in understanding change in property rights in cases such as those that are at the heart of this work.[5] To me, this discussion served as a point of departure for the question, which inspired much of the theoretical work that underpins this collection of essays: the question of structure and agency.

Following Hagedorn (2002) and Bromley (1991), I focus on property rights in my analysis of institutional change. The prime reason is the pivotal role of the distribution of property rights and duties within society in shaping the distribution of society's wealth (Bromley 2006, 54). Further, property rights represent the link between policy objectives like reduction of inequality or poverty reduction in general and environmental policy. One goal of public policy is then to shape the distribution of property rights and duties (Bromley 1989a). In many tropical forest regions, states often find it difficult to enforce their

legislation (The World Bank 2003, 101ff). In these cases, access patterns do not reflect the codified property relations. There is a theoretical and an epistemological implication to this. Theoretically, it is necessary to distinguish the "right to benefit" (as stipulated by property rights) from access as the "ability to benefit" (cf. Ribot and Peluso 2003; Sikor and Lund 2009). Epistemologically, attempts at establishing property rights in these contexts are likely to challenge established social structures. Case studies on these attempts therefore represent what Danermark, Ekström, et al. (2002, 104f) call "pathological" cases. Cases that show social processes and structures more openly in comparison to situations in which these processes and structures remain uncontested.[6]

These considerations form the background to my work through which I aim to achieve the following objectives:

■ At the empirical level: (i) To provide an account of five forest tenure reform processes in Western Pará focusing on their trajectories and the strategies employed by proponents and opponents of regularisation. (ii) To describe the outcomes that land rights regularisation brought to the inhabitants of the areas subject to regularisation.

■ At the theoretical level: To describe the processes of land rights regularisation as processes of institutional change and explain their evolution and outcomes by reference to institutional theories.

■ At a prescriptive development policy level: To infer conclusions on how to support land rights regularisation processes.

In order to avoid misunderstandings that might arise, I do not intend to question the findings on the possibility of collective sustainable management of common pool resources. I think, collective action scholarship (as defined earlier) with its extensive review of cases demonstrates that resource user communities can agree on management institutions that provide the basis for sustainable resource use. I intend to show, however, that processes of institutional change that lead to the establishment of crucial pre-conditions for collective management (such as the integrity of resource boundaries) can exhibit characteristics quite different from those highlighted by collective action scholarship.[7] As a corollary to this, I will also demonstrate that the state can play a crucial facilitating role in collective management (cf. Henley 2008). There is another point that motivates my focus on processes of institutional change. In my impression, development policy is often rich in objectives but often less imaginative on how to achieve them. Glossy policy papers often stand in stark contrast to gloomy policy outcomes. The analysis of policy implementation might offer insights into the reasons why this is the case.

There is a thread woven into this collection of papers. This thread is primarily theoretical in nature but has significant implications for empirical analysis and policy advice: the importance of relating the concepts of institution and social structure. More precisely, this work suggests treating the concept of social structure as a meta-concept to the concept of institution. Institutions – understood as "systems of established and embedded social rules that structure social interactions" (Hodgson 2006, 18) – establish social structures, which comprise agents, a relation between them and emerging properties which are not attributable to the agents alone (Elder-Vass 2007a).[8] Later chapters will show that acknowledging the causal effectiveness of social structures does not imply denying agential powers. For now, it shall suffice to refer to distinguished scholars who all provide different perspectives on this question but share the dialectical approach to structure and agency (Giddens 1984; Bourdieu 1990; Archer 1995; Hodgson 2007a). In terms of institutional theory, this perspective leads to an acknowledgement of the pre-existence of institutions to individual action, the need to consider habitual behaviour in understanding insti-

tutional change, and a conceptualisation of path-dependency that considers the historical evolution of social positions of agents. Epistemologically, it implies the need for research approaches that allows for interpretive understanding *(verstehen)*, which is one principal route to grasp habitual behaviour in agents' actions. Further, it highlights the need for historical analysis. Regarding development policy, the thread highlights that institutional change that aims at favouring marginalised societal groups is often a battle with history. It requires a long breath, which might escape the influence of established development policy tools.

1.2 How I Approached the Task at Hand

This introduction outlines the way I have conducted my PhD research. It describes the research phases, their respective foci, and key decisions that I took during these phases. The character of this chapter is descriptive. Chapter 2 offers a justification of the approach pursued. There are two key motivations for this section. One is transparency. The other is my impression that PhD theses often serve as a source of inspiration for those who begin with their PhD projects. The methodological sections of PhD theses often, however, present the justification of a research process and the selected methods together with a description of the actual process. In these formats – for understandable reasons – the former often influences the presentation of the latter. This introduction offers the possibility of providing a description of the process with all its back and forth and decisions that evolved during the research process. This presentation offers an insight into the actual process, which I often perceived as resembling "muddling through" rather than textbook-like accounts of sequences of research steps. This is not to argue for total relativism. Chapter 2 offers strong arguments in favour of a particular approach to the analysis of institutional change in the commons and the end of this chapter offers further conclusion in this regard.

During the first phase of my research, I accustomed myself with institutional theories. This phase lasted for about eight months. The aforementioned reflection on Old and New Institutional Economics mainly took place throughout this phase. At the beginning of my PhD, I was conceptualising the process of institutional change as a policy implementation process. Influential writings were Thomas and Grindle (1990), Mehta (2001), Keeley and Scoones (2003), or the World Development special issue edited by Brinkerhoff (1996). I conceptualised the National System of Conservation Units *(Sistema Nacional de Unidades de Conservação)* as a policy and the (non-) implementation of Extractive Reserves *(Reservas Extrativistas)* as outcomes of the (non-)implementation of policies. Implicitly, I was focusing on decisions taken in Brasília or Belém as explanations for varying policy outcomes. Juxtaposing cases in which implementation took place with those in which it did not, I intended to derive reasons for institutional change or stalemate. Discussions with supervisors and colleagues that followed a presentation at the colloquium of the Division of Resource Economics highlighted the need to pay more attention to what happens at the municipal level. Did not the rubber tappers of Acre fight for the creation of Extractive Reserves by the practice of "empate", non-violent resistance to the destruction of the forest by means of its occupation? Have not these empates, rather than policy decisions in Brasília, been decisive in their quest for recognition of their land rights?

Inspired by these discussions, I left for Pará for the first time (for about two months) in order to select the case studies. Discussions with researchers from the Universidade Federal do Pará (UFPA) and members of Non-Governmental Organisations, such as the Conselho Nacional de Seringueiros (CNS) or the Instituto de Pesquisa Ambiental da Amazônia (IPAM) followed. Another key concern of mine was to find a Brazilian partner for the implementation of my research. This search put me in contact with the Universidade Federal Rural do Pará (UFRA) and other members of the ForLive research project. For-Live is a research project, which focused on identifying the needs, views, and capacities of smallholder families in the Bolivian, Brazilian, Ecuadorian, and Peruvian Amazon as a basis for development strategies for the Amazon. Members of the project chal-

lenged the criteria for case selection arguing for a spectrum of cases that did not only comprise those which were the result of a struggle but also those which had different trajectories. Although I perceived these discussions to be deeply disturbing in the beginning, they helped me to more clearly articulate the focus of my research: to provide a contribution to the discussion on collective action for institutional change in the commons. The contact with ForLive proved to be decisive later on to in facilitating field access. Many civil society organizations were deeply disappointed by the former contacts with researchers, as they perceived the relationship to be a rather unidirectional one. Oftentimes, they were not informed about the results of the research afterwards. When I entered the field together with researchers of the ForLive project, I was in the lucky position to build on the contacts they had established for already one year with representatives of the social movements in the municipalities. Although I later extended my work to other municipalities, I was always appointed to contact persons by my research partners in the municipalities ForLive was working in.

Having selected the cases, I returned to Berlin to elaborate the methodological approach to my research. The question that puzzled me primarily was how to link rather deductive theoretical considerations with my rather "open", "inductive", or "grounded" research approach that I had in mind. Korf's (2004) elaborations on Critical Realism in the context of his research on conflict in Sri Lanka had decisive influence on my thinking. In my reading, his work demonstrates that these two approaches, which are often presented as standing diametrically opposed to each other, can be reasonably combined. Critical Realism provided the theoretical basis for this combination.[9] When I presented my first methodological considerations to my peers, a lively discussion evolved. On the one hand, there were those who argued to further detail my research questions. Only this procedure would allow me to actually contribute to theoretical discussions. A further operationalization following a rather hypothetico-deductive research approach would be required. On the other hand, I received strong support for the rather open approach I had proposed. Besides the arguments for an interpretive approach to the social

world (Blaikie 2000, 114ff; Bohnsack 2003b, chapter 2), a principle reason advanced was the probability of me not being aware of the range of relevant social processes at work. I opted for the latter and retained the approach I had laid down in the first draft of the methodological chapter (which later evolved into chapter two of this book). Throughout this work, I will refer to this research approach as "inductive research approach." This ought not to be confused with the inductive mode of inference, generally interpreted as generalising to a whole from a representative sample (Danermark, Ekström et al. 2002, 80f).

In October 2006, I left again for Pará. That time I stayed for six months in order to gather the bulk of my data. During research in Brazil, it became obvious that I will not be able to provide a detailed account of the processes in Brasília *and* on the municipal level. I decided to focus on the municipal level and augment this description with information on what happened in Brasília. Later chapters provide research practice related information such as on the methods applied or the number of interviews conducted. I will therefore not provide an overview of these aspects of my research here. There is one point worth highlighting that is not that explicitly covered by later chapters. In the words of the anthropologist Jean-Pierre Olivier de Sardan (2008, 5f):

"It is only after (...) [the researcher] has mastered the local codes of civility and decorum that the field researcher can, at long last, feel comfortable during a chat or impromptu conversation, which is often the most productive as far as gathering information is concerned. The researcher in the field begins by improvising awkwardly, until he becomes, little by little, capable of improvising competently. One needs to have wasted time, an awful lot of time, in the field, in order to understand that these slack times were necessary."

Times during field research which might be perceived as a – polemically phrased – "hanging out in the field" – are thus essential to research success.

Returning to Berlin, I had to retake the discussion on how to relate theory and empirical findings. Whereas I concluded my work with the insight that my research approach envisioned is justifiable, the nitty-gritty questions of how to actually go about it were left unanswered. What ensued was a largely autodidactic endeavour in the philosophy of social science. Critical Realism proved to be a difficult friend. I perceived the writings on Critical Realism highly elaborated concerning the ontological and epistemological level. However, I perceived its concrete methodological implications less well elaborated. As Danermark, Ekström, et al. (2002, 204) conclude referring to Outhwaite (1987) "critical realism is ontologically bold but methodologically cautious."[10] In my reading, Layder (1993; 1998) offers valuable guidance on how to put critical realism into practice. Equipped with these methodological guidelines, I undertook a first analysis of my empirical findings. During my third field trip, I discussed the results of this first analysis with my research partners in the field.

I returned to Pará in August 2008 primarily to participate in the dissemination events of the ForLive project and to discuss my findings with research partners. The discussions that followed proved to be essential in furthering my understanding of the case studies. After another six weeks of field presence, I went back to my desk to begin the write-up process. The result of which is this book, which I now submit to your scrutiny.

There are four concluding points on this presentation of the research process. First, research is a social process. Challenging discussions with peers are essential. I perceived the weekly research colloquium at the Division of Resource Economics to be a decisive forum to progress with my thinking – although I often wished that criticisms on my presentations would have been less substantial than they were. Understanding research as a social process highlights that decisions are to a certain extent contingent. To give an example. Maybe I would have focused on the negotiations among the ministries and the political manoeuvring within them, had I not met the ForLive team, which significantly eased my field access at municipal level. Second, research as a social process does not only apply to the work with the peers but also to the research partner in the field.

Feedback on outcomes, adaptation of research processes to the needs and timing of partners are examples in this regard. Third, I found it necessary to adapt research processes to the circumstances in the field. For example, I had to postpone a visit to an area for several times, as my research partners could not find time – did not find it appropriate? – to travel to the area earlier. The inductive approach to institutional analysis that I am advocating here will probably need to be paired with a certain degree of openness regarding the implementation of research. As a corollary to the first three points, the fourth conclusion relates to timing. Although I would not claim that I have been particularly quick in finalising my PhD, I suppose that an inductive approach to institutional analysis requires time not only in the field but also to construct a coherent and meaningful narrative after fieldwork ends. This is not to extend the "hanging out" metaphor, but to acknowledge that the process of making sense is a creative one, which does not lend itself easily to milestone, GANTT chart-like types of operationalization.

1.3 Outline

Six chapters and a concluding epilogue follow. Each chapter is written in the form of a self-contained article. This implies, in particular towards the end of the book, some redundancies which I deliberately did not eliminate. Each chapter relates only the findings of the case studies which are relevant to the particular theme of the chapter. Hence, there is no chapter that presents each case study from the beginning of forest tenure reform up to the date when fieldwork ended. I continue to be uncertain how to judge this format. It urged me to be very specific in terms of theoretical discussions that I would like to relate my findings to. I perceived this to be very productive. However, there is no chapter that provides a comprehensive account of each case. This creates the risk that the holistic character of the case study is somewhat lost.

The sequence of papers does not reflect the process of understanding, if this were the case chapter three on power and institutional change would have moved to the end. I have chosen this sequence, as I hope that it facilitates reader's comprehension of the deliberations presented here. There is a further point on the presentation of the findings in each article. Chapter two argues for a research process directed at understanding, for an "inductive research approach," and for using multiple theories in forming tentative explanations. The way the findings are presented in the individual chapters does not necessarily reflect these considerations. For the reason of the article format, I have also chosen theoretical debates as the frame in which I embed the presentation of findings.

To provide an orientation, the following paragraphs explain the sequence of chapters. They include a – rather cursory – presentation of some of the key terms used later on. I would ask readers who find the presentation too coarse, to please refer to the respective chapters for more detail. The following chapter "A Hermeneutic Approach to Institutions of the Commons" presents the ontological and epistemological foundations of the institutional analysis conducted in this work. In short, it addresses the question of "how" to do institutional research on the commons. A central part of the discussion refers to the concept of causality. The chapter advances a "generative view of causality" that acknowledges that – what I call – social elements (such as social structures) with their respective causal powers co-exist and influence each other. Social elements possess causal powers irrespective of whether they are exercised. Events (such as the process and the outcomes of forest tenure reform) are explicable but not predictable. Concluding, the chapter suggests a frame for a hermeneutic approach to institutional analysis and advances six points on how to put it into practice.

The third chapter "Power and Governance of Tropical Forest Commons" introduces power as a driver of institutional change (and stalemate). The building block of this chapter is the "generative view of causality" introduced in chapter one. In line with this conceptualisation, power is a capacity to do something, which can stem from different sources. These sources are social elements possessing causal powers themselves. The chapter addresses the following social elements: agents, institutions and social structures, and discourses. In line with the focus on the question of structure and agency, several chapters of the book emphasize a relational understanding of power (Isaac 1987; Isaac 1992). More precisely, power stems from social positions that agents acquire in social structures. Social structures consist of agents, a relationship between them, and powers that emerge from this particular constellation of agents. Within a dependency relationship, for example, one agent obtains a particular capacity to act because of the other agent's dependence on him (or her). Agents are embedded in more than one structure. The combined influence of these structures and the other social elements influences agent's social position, affect his or her power. In short, the chapter addresses the ontological categories that I consider to be of importance when analysing processes of institutional change in property rights in tropical forests.

The relational understanding of power matches with a political-ecological approach (Neumann 1992; Blaikie 1999) to understand resource use phenomena which is applied in the fourth chapter "A Political Ecology of Frontier Dynamics in Western Pará". The aim of the chapter is to describe the social context

which gave rise to claims for forest tenure reform. Following the research methodology outlined in chapter two, it begins with a detailed description of two resource use practices: the illegal acquisition of public land and illegal logging. Based on this description, two social structures are proposed that, if they were actually operating, could contribute to explain the systematic occurrence of the two resource use practices. The chapter provides an analysis of the societal marginalisation of forest-dependent people, of their disempowerment. The explanation, so goes the conclusion of this chapter, lies in the social structures clientelism and selective state in which forest-dependent people occupy marginalised social position. This description serves as a background to the analysis of land rights regularisation processes in chapter 5. It highlights the challenges that forest-dependent people needed to overcome to acquire recognition of their property claims through forest tenure reform.

The fifth chapter "Struggles for Recognition" then analyses the trajectories of forest tenure reform. Forest tenure reform is understood as recognition of property claims by the responsible Government agencies, i.e., the allocation of property rights to the forest-dependent people. The chapter provides a description of the reform processes until the point at which forest-dependent people achieved recognition by the state of their property claims. Through a comparative case cases study approach it offers an explanation which factors contributed to the respective outcome. Each case corresponds to a forest tenure reform process. In four of the five cases recognition of property claims took place. Proponents of forest tenure reform in the other case did not yet succeed. The forest tenure reform process is distinguished in three different phases: (i) smallholder mobilisation at the municipal level, (ii) establishment of links with the decision makers at the federal level, and (iii) actions taken by these decision makers. It describes how smallholders and their representative social movements overcame their marginalised position. In terms of an analysis of power, paper shows that agents retain their agency despite of a marginalised social position. Partly by phrasing their needs in terms of an environmental discourse, they were able to get their claims being heard in other fora. At the same time, the chapter highlights that the circum-

stances under which land rights regularisation was achieved show the dependency of the smallholders on factors beyond their immediate influence.

The sixth chapter "Truncated and Fragile Victories" then turns to the outcomes of forest tenure reform. It addresses the question of what has changed for those living in the areas subject to reform. Its point of departure is the successful struggles for recognition described in the fourth chapter. It conceptualises the allocation of property rights as the allocation of *de jure* social positions. However, there are several influences – along the lines described in chapter three – that determine whether *de jure* social positions turn into *de facto* social positions. Due to other influences, other agents continue to enjoy access, continue to possess a de facto social position that allows them to continue their resource use practices. The chapter shows that recognition of property claims was partial. The right to market timber products – a key source for cash income for many families – were only partially devolved to the communities. The forest tenure reforms analysed here are only truncated victories. Because of this incompleteness of property rights allocation, dissatisfaction with forest tenure reform emerges. This dissatisfaction can lead to a situation in which smallholders opt for co-operation with those agents who initially created the demand for land rights regularisation. The victories are not only truncated, they are also fragile.

The seventh chapter "New Buzzwords, Old Challenges" puts these contemporary events into historical perspective. It traces the historical evolution of agents' social positions and demonstrates that large agricultural producers were able to reproduce their social position. The chapter shows that the evolution of property relations in Pará is a path-dependent process. Therefore, attempts to achieve environmental governance or the regularisation of land rights need to challenge these entrenched social positions. This, in turn, requires a politicised approach of development co-operation. Such an approach is, however, in short supply.

Table 1-1 provides an overview of the chapters that outlines their objective, salient point, key empirical findings considered, and their respective theoretical basis.

TABLE 1-1: OVERVIEW OF THE CHAPTERS

Chapter	Purpose	Title of the chapter	Content (NB: References are indicative only)
1	Intro-duction	Introduction	**Objective:** To provide an overview of and to introduce the selection of chapters. **Key aspects covered:** (i) background to and motivation for this piece of work: brief introduction into the role of agrarian reform in rural development, (ii) research objectives & questions, (iii) documentation of the research process, (iii) overview of the papers.
2	Meta-theore-tical frame	A Hermeneutic Approach to Institutions of the Commons	**Objective:** To develop a hermeneutic approach to the analysis of institutions governing the commons: *How* to do research on institutional change? **Salient point:** It is necessary to apply a hermeneutic approach (an approach focusing on understanding) in institutional analysis. Two key elements are an inductive approach to analysis (in contrast to research approaches following a deductive logic) and research methods, which permit respondents expressing themselves in their language. Claims to operate with large panel data sets in order to increase the external validity of the findings are based on a hypthetico-deductive model of reasoning which finds strong limitations in understanding the social world. Case studies are the principal research strategy for institutional analysis. **Key aspects covered:** (i) on the ontological status of institutions; (ii) a generative conceptualisation of causality; (iii) social construction of reality, ability of institutions to induce habitual behaviour → need for a hermeneutic approach; (iv) fostering openness towards unexpected findings through (iv.1) and inductive approach, (iv.2) multiple methods, (iv.3) and pluralist methodologies; (v) on the need to have an ontological and epistemological frame to interpret findings & Critical Realism as a suitable meta-theoretical basis for institutional analysis; and (vi) principles for a hermeneutic approach and points of departure to put these principles into practice. **Theoretical bases:** Critical Realism (Danermark, Ekström et al. 2002); hermeneutic approach (Blaikie 2000; Flyvbjerg 2001); case study approach (Mitchell 1983; Flyvbjerg 2006).
3	Concep-tual frame-work	Power and Governance of Tropical Forest Commons: Learning for Institutional Analysis from Chronic Poverty Research	**Objective:** To provide a conceptual frame for the subsequent papers (*What* to analyse in processes of pro-poor institutional change?). **Salient point:** Environmental governance can usefully be conceptualised as the "establishment, reaffirmation or change of institutions to resolve conflicts over environmental resources". The rural poor lack voice in processes of institutional change putting them in a marginalised position in governance reforms. Chronic poverty research provides a coherent framework for the analysis of power in institutional change. Alongside analytical attention paid to the agents of change, it highlights the role of social structures and discourses in these processes. With this emphasis it goes beyond the focus of New Institutional Economics on the agent as the sole driver of institutional change. **Key aspects covered:** (i) chronic poverty in rural areas, (ii) an individualistic perspective on power & institutional change, (iii) institutions as social structures and their emergent properties, (iv) the role of discourses in creating power, and (v) a generative view of causality as a basis for theorising the role of power in institutional change. **Theoretical bases:** (i) chronic poverty (Hickey and Bracking 2005); (ii) perspectives emphasizing choices by the individual (Knight 1992; Haller 2007), social structures (Elder-Vass 2007a; Hodgson 2007a), and discourses (Schmidt 2008) as sources of power in institutional change.
4	1. Results chapter: The social context of forest tenure reform	A Political Ecology of Frontier Dynamics in Western Pará	**Objective:** To describe resource use patterns and derive the prevailing social structures in Western Pará, which give rise to them. **Salient point:** The prevailing social structures systematically benefit resource use practices by economic elites (principally, ranchers and loggers). Consequently, rights to land and forests of traditional and small settler communities are being infringed upon. **Key aspects covered:** (i) introduction to the cases and the case study region; (ii) description of illicit resource practices (illegal acquisition of public land and illegal logging); (iii) social structures: (a) clientelism and (b) the selective state that emerges because of close ties between the municipal

Chapter	Purpose	Title of the chapter	Content (NB: References are indicative only)
			economic and political elites and the former's preferential access public organs responsible for protecting the rights of forest-dependent people to land and forest; (iv) a structuralist view on power. **Theoretical basis:** "Emergentist" perspective on social structures (Elder-Vass 2007d; Elder-Vass 2007a; Elder-Vass 2007b).
5	2. Results chapter: The reform process	Struggles for Recognition in the Brazilian Amazon: An Agrarian Perspective on Resource Governance in Western Pará	**Objective:** To describe and understand the forest tenure reform process in the 5 case studies. The paper also provides an explanation of institutional change or stalemate. **Salient point:** Power play characterises institutional change that establishes enabling conditions for communal resource governance. This finding stands in stark contrast to the processes of institutional change highlighted by many scholars interested in collective action for sustainable resource governance. The paper furthers emphasises the limitations of individualist conceptualisations of power. **Key aspects covered:** (i) description of the tenure reform processes, (ii) analysis of the process of institutional change from the perspective of power. **Theoretical basis:** The paper applies the conceptual map of power developed in chapter 2.
6	3. Results chapter: Reform outcomes	Truncated and Fragile Victories: On the Outcomes of Forest Tenure Reform in Western Pará	**Objective:** To describe and understand the outcomes of the three forest tenure reform projects that were formally created in 2008. **Salient point:** Despite of tenure reform, communities were not allocated the rights to market logs. Hence, they continue to work in illegality which leaves them with little more material benefits than pre-reform. Community members' social position vis-à-vis intermediaries were often not very much influenced by tenure reform. The resulting lack of increased cash income leaves the communities susceptible to the influence of better capitalised agents who continue to operate in the municipalities. **Key aspects covered:** (i) secure land rights → less land conflicts, increased access to NTFPs; (ii) lack of management plans → marketing of key resources such as timber remains prohibited (truncated victory); (iii) tenure reform did not increase cash income, community members still need to rely on intermediaries for marketing resources → tenure reform did not substantially alter prevailing social structures; (iv) capitalised agents are therefore in the position to exert influence within the communities of intended forest tenure reform beneficiaries (fragile victories). **Theoretical bases:** (i) Livelihoods (Scoones 1998; Bebbington 1999); (ii) access debate (Ribot and Peluso 2003); (iii) property rights (Schlager and Ostrom 1992; Sjaastad and Bromley 2000); (iv) social structures & social position (Elder-Vass 2007a).
7	4. Results chapter: Current reforms in historical perspective	New Buzzwords, Old Challenges: Climate-resilient Development and the Right to Land in the Brazilian Amazon	**Objective:** To put the findings from the chapters 4 – 6 into a historical perspective. **Salient point:** Climate-resilient development requires reducing livelihood vulnerability. Land tenure insecurity strongly contributes to vulnerability. Measures to achieve climate-resilient development therefore need to address tenure insecurity. This, in turn, calls for fundamental changes in social structures. Throughout the history of the Amazon, these social structures have been formed and re-enforced by policies that continuously favoured elites over smallholders regarding access to land and other resources, including protection by the state. **Key aspects covered:** (i) recent settlement history of the Amazon, (ii) illegal acquisition of land by better capitalised agents as an ubiquitous phenomenon through time and space, (iii) explanation of this phenomenon in terms of path-dependent processes at work. **Theoretical basis:** (i) path dependency (David 1994; Landesmann and Pagano 1994; Mahoney 2000), strategic relational approach (Jessop 2008).
8		Epilogue	**Objective:** To relate the outcomes of the chapters back to the objectives of my dissertation project and to the motivation that gave rise to this project.

1.4 Case Studies

Figure 1-1 presents the Legal Amazon region (*Amazônia Legal*) that comprises the following states or parts of them: Acre, Amapá, Amazonas, Maranhão, Mato Grosso, Pará, Rondônia, Roraima and Tocantins. The selection highlighted in the map shows the case study region which is presented in more detail in figure 1-2. Each case study represents a forest tenure reform process. These reforms took place or are still on-going in the following municipalities in Western Pará: Altamira, Anapu, Medicilândia, Porto de Moz and Prainha (see table 1-2). High levels of extreme poverty characterise these municipalities. The incidence of extreme poverty is even higher in rural areas where it is about 60% (Verner 2004, 16). Further, severe inequalities in income distribution and in the distribution of land further aggravate this situation (see table 1-2).

From the mid-1990ies onwards, Western Pará increasingly experienced an influx of logging compa-

nies and large ranchers. Illegal logging and the illegal acquisition of public land (*grilagem*) ensued. In effect, small settlers, traditional people and indigenous people suffered from expulsion of their land or the exploitation of natural resources located on their land. From the year 2000 onwards, logging and deforestation intensified even more. In some of the municipalities, deforestation – about 70% of which is done by large agricultural producers (see chapter 4) – increased significantly. In the period 2001–2004, deforestation in Porto de Moz equals 284% of all the deforestation that took place until the year 2000 (see table 1-3). In Altamira and Prainha the corresponding figure is 123% and 120%. The municipalities of Anapu and Medicilândia both comprise more land area that was transformed into pasture or agricultural land during earlier decades. Therefore, the increase in deforestation was smaller but nevertheless remained on a high level during this period (Anapu: 72,5%; Medicilândia: 91%). Much of this deforestation occurs illegally (Fearnside 2002b, 34; Aquino 2007).

FIGURE 1-1: THE BRAZILIAN LEGAL AMAZON REGION (AMAZÔNIA LEGAL).

Source: Instituto Brasileiro de Geografia e Estatística (2007). Revised chart.

The struggle of forest-dependent people for forest tenure reform emerged a response to these trends. These struggles were fierce, as detailed in chapter five. In some years, the list of persons suffering from death threats in the five municipalities reads as the list of my interview partners.[11]

There are two different modalities of forest tenure reform that are analysed here: Extractive Reserves (*Reservas Extrativistas*) and Sustainable Settlement Projects (*Projeto de Desenvolvimento Sustentável*). The former is a type of conservation unit acknowledged by the National System of Conservation Units (*Sistema Nacional de Unidades de Conservação*). This system distinguishes conservation units that do not permit human activity within their boundaries (*proteção integral*) from those in which certain forms of use are permitted (*uso sustentável*). Extractive Reserves fall in the latter category. They are established by the Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio).[12] Figure 1-3 shows the location of these Extractive Reserves. In the con-

text of the Brazilian Amazon, forest tenure reform does not only aim to reduce livelihood vulnerability of those who depend on the forests. It is also implemented to reduce deforestation. Indigenous lands[13] (*terras indígenas*) and inhabited conservation units provide more effective protection against deforestation than strict protection conservation units (Schwartzman, Moreira et al. 2000; Campos and Nepstad 2006; Nepstad, Schwartzman et al. 2006)

Sustainable Development Projects are a type of settlement project. The Federal Land Reform Agency INCRA (*Instituto Nacional de Colonizacao e Reforma Agrária*) is the responsible organ for establishing them. They foresee individual lots for the settlers and a forest reserve that is intended for sustainable management by the inhabitants of the area. Figure 1-4 shows the location of the PDS Virola-Jatobá in Anapu and figure 1-5 the area which is claimed by the proponents of forest tenure reform as PDS Ademir Federicci.

FIGURE 1-2: DETAILED MAP OF THE REGION IN WHICH THE CASE STUDIES ARE LOCATED.

Source: Instituto Brasileiro de Geografia e Estatística (2003). Revised chart.

TABLE 1-2: OVERVIEW OF CASE STUDIES AND THE MUNICIPALITIES IN WHICH THEY ARE LOCATED.

Municipality						Case Study			
Name	Size (km²)	Popu-lation (2000)	Pover-ty rate (in %) (2000)	Gini in-dex of income distri-bution (2000)	Gini index of land distri-bution (2003)	Name	Type	Size (ha)	Estab-lished in
Alta-mira	159,701	77,439	37.66	0.58	0.8 – 0.95	Riozinho do Anfrísio	Exractive Reserve	736,350	2004
Anapu	11,909	9,407	61.6	0.64	0.65 – 0.8	Virola-Jatobá	Sustainable Development Project	24,000	2003
Medi-cilândia	8,271	21,379	48.58	0.66	0.5 – 0.65	Ademir Federicci	Sustainable Development Project		Not yet
Porto de Moz	17,429	23,545	68.57	0.62	0.65 – 08	Verde para Sempre	Exractive Reserve	1,290,000	2004
Prainha	12,600	27,301	78.55	0.58	0.65 – 08	Renascer	Exractive Reserve	211,741	2009

Sources: United Nations Development Programme (2003), Girardi (2008). Girardi provides classes of the gini index of land distribution only. Data is nevertheless included, as it is provided on municipal level.

TABLE 1-3: DEFORESTATION IN THE MUNICIPALITIES ALTAMIRA, ANAPU, MEDICILÂNDIA, PORTO DE MOZ, AND PRAINHA.

Munici-pality	Defor-estation until the year 2000 (km²)	Deforestation rate (km²/year)								Defores-tation in 2000–2004 as % of the defor-estation until 2000	Defores-tation in 2004–2008 as % of the defores-tation in 2000–2004
		2001	2002	2003	2004	2005	2006	2007	2008		
Alta-mira	2,101.7	572.8	672.2	653.7	677.2	542.5	285.4	370.3	341.4	123%	59.8%
Anapu	859.2	240.3	31.0	180.2	171.8	134.8	137.9	81.0	74.1	72.5%	68.6%
Medi-cilândia	845.1	3.1	0.0	683.1	83.5	40.0	8.8	143.3	27.5	91%	28.5%
Porto de Moz	162.1	7.8	17.5	325.6	109.6	132.6	19.5	55.1	22.3	284%	49.8%
Prainha	353.1	288.7	46.9	73.9	12.6	18.5	45.5	27.5	45.1	120%	32.4%

Source: Instituto Nacional de Pesquisas Espaciais (2009).

FIGURE 1-3: LOCATION OF THE EXTRACTIVE RESERVES RIOZINHO DO ANFRÍSIO, VERDE PARA SEMPRE, AND RENASCER.

Source: Instituto Brasileiro de Geografia e Estatística (2003). Revised chart.
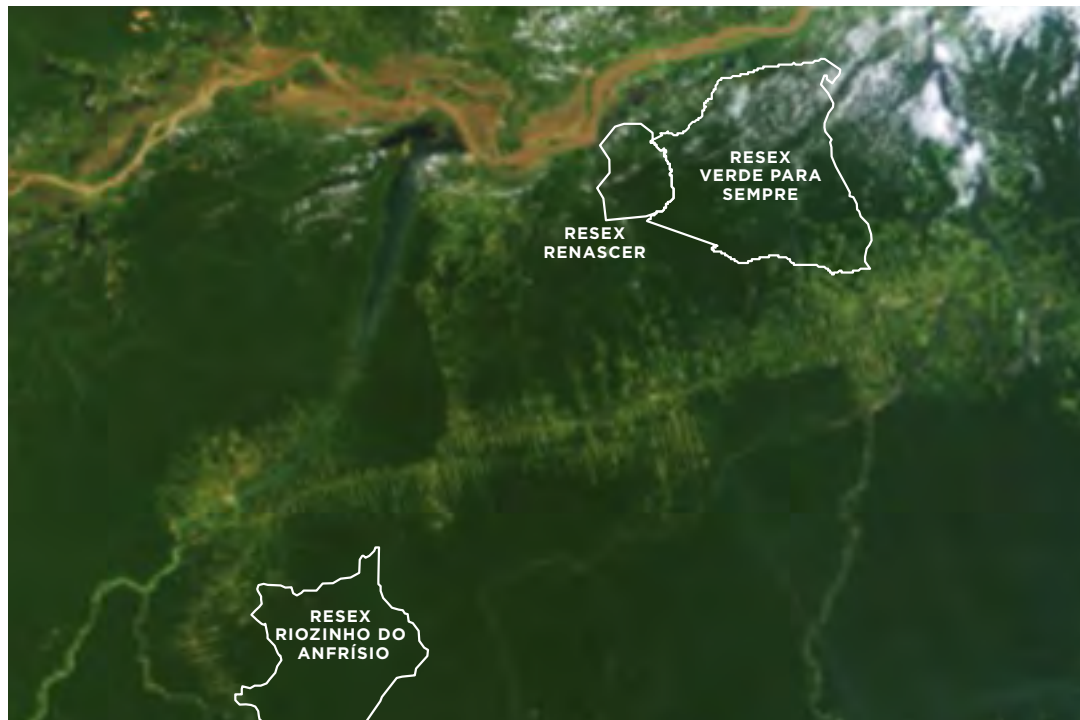
Source: NASA, GSFC, Jeff Schmaltz, MODIS Land Rapid Response Team (2011).

FIGURE 1-4: PDS VIROLA-JATOBÁ.

Source: Instituto Brasileiro de Geografia e Estatística (2003). Revised chart.

Source: NASA, GSFC, Jeff Schmaltz, MODIS Land Rapid Response Team (2011).

FIGURE 1-5: PDS ADEMIR FEDERICCI.

Source: Instituto Brasileiro de Geografia e Estatística (2003). Revised chart.

Source: NASA, GSFC, Jeff Schmaltz, MODIS Land Rapid Response Team (2011).

Deforestation often serves to lay a property claim on an area.

2. A Hermeneutic Approach to Institutions of the Commons

2.1 Introduction

In March 2007, I had concluded five months of field-work on the evolution of property rights in Pará, one of the states of the Brazilian Amazon. During these five months, I had tried to reconstruct the pathways of forest tenure reform. These reforms aim at providing so-called traditional people and small settlers secure rights to land and the natural resources located on it. Invasions of the land they had been traditionally using or had been allocated by the federal land reform agency by logging companies or the expansion of pasture had given rise to their calls for forest tenure reform. In their quest to obtain recognition for their land claims by state authorities they had suffered from violence, and the more exposed members of the communities were or had been living under death threats exercised or issued by those benefitting from the status quo. The illegal acquisition of public land by private individuals (so called *grilagem*) for speculative purposes or to obtain logging rights accompanied all my travels. An equally close companion had been the ties between those involved in those illicit resource use strategies and the members of municipal administrations.

Back in Belém, the capital of Pará, I turned to the institutional economics literature again to see how other scholars had conceptualised or tried to explain processes similar to the ones I had observed in the Brazilian Amazon. The work of Alston, Libecap et al. (2000) on the role of land reform in land conflicts and deforestation particularly attracted my interest.[14] Although their work focuses on land conflicts and despite of the fact that its policy conclusions refer to the whole of Pará, I did not find any reference to the

processes I had continuously observed. Particularly puzzling to me was the lack of consideration of *grilagem* as a source of land conflicts. At the time Alston, Libecap et al.'s article was published, official figures indicated that *grilagem* in Pará is widespread (Instituto da Colonização e Reforma Agrária 1999). Further, the process is well documented in literature written in English at least since the 1980ies (cf. Foweraker 1981; Bunker 1985; Schmink and Wood 1992). Alston, Libecap et al. (2000) do not elaborate on *grilagem*. Instead, their study suggests that land conflicts and deforestation are rooted in conflicting legislation. The Brazilian Civil Code strongly protects private property, whereas the constitution maintains that land should fulfil its "social" purpose. These conflicts in legislation give rise to invasions by landless settlers which are the drivers of land conflicts and increased deforestation (Alston, Libecap et al. 2000, 183). Comparing their analysis with the findings obtained during my fieldwork, their study appeared (and continues to do so) at least de-contextualised to me.

How could it be that *grilagem* and associated practices do not enter their considerations? Searching for an explanation for this puzzle, I turned to the research approach they pursued – without wanting to suggest that this is the sole possible explanation. Their analysis proceeds by developing a game theoretic framework to model the incentives landless settlers face (ibid, 171ff). The model is then used to derive hypotheses (ibid, 184), which they test through a regression analysis (ibid, 177ff) using data on municipal level in the federal state of Pará. That is, they pursue a hypothesis testing research approach. Trying to make sense of the puzzle, I felt

reminded of the risk associated with deductive approaches of forcing data into preconceived theories (see Layder 1998, 151). Against the considerations above, it seems as if the authors did not formulate their hypotheses based on empirical impressions but from theoretical considerations. Given the omnipresence of *grilagem*, its contribution to land conflicts and the degree to which it is documented, it seems highly unlikely that they did not come across this phenomenon, if they would have build there hypotheses from the basis of empirical observations.

On an epistemological level, other prominent institutional theorists working on institutions of the commons seem to implicitly share this largely positivist approach followed by Alston, Libecap et al. For example, Young, Lambin et al. (2006) note that "there are also good reasons to adhere as much as possible to the logic of statistical inference even when the universe of cases is too small to satisfy normal statistical requirements." Poteete and Ostrom (2008, 176f) point out that "the generality or external validity of findings from case studies can be evaluated, however, only through analysis of a larger number of representative observations."

This chapter offers a reflection on ontological and epistemological assumptions in institutional analysis and suggests a braoder approach for understanding institutions of the commons. The point advanced is that a hermeneutic approach is necessary to understand the institutions giving rise to use patterns of the commons. This hermeneutic approach builds on two core elements. The first is an inductive research approach. The second is the prominent role attributed to methods allowing for interpretive understanding *(verstehen)*. This is not to suggest that particular types of methods are forever incompatible or to slide back into qualitative versus quantitative methods discussions. The chapter argues, however, that the ontological characteristics of institutions and the often complex resource use dynamics of common pool resources call for a research approach characterised by the elements outlined above.

The chapter proceeds as follows. On an ontological level, the following section submits that institutions have causal powers, which cannot be reduced to the agents adhering to it. Further, section 2 outlines a conceptualisation of causality that addresses multiple social elements with their respective causal powers operating at the same time. Section 3 turns to the epistemological level. It shows that social phenomena are concept-dependent and highlights the role of institutions in inducing habitual behaviour. Both insights underline the need for a hermeneutic approach. The subsequent section 4 describes ways of fostering openness for unexpected findings. An inductive research approach is essential in this regard. Multiple methods also contribute to this aim. The application of multiple methods highlights the need for ontological and epistemological reference points. Section 5 elaborates on that. Section 6 outlines elements of a hermeneutic approach to institutional analysis. First, it describes three principles and suggests six points of how to put these principles into practice. The concluding section 7 relates the hermeneutic approach to institutional analysis to the question of policy advice.

2.2 Institutions, Ontology, and Explanation

Institutions are "systems of established and embedded social rules that structure social interactions" (Hodgson 2006, 18). Key to this definition is the role of habit in embedding rules and sustaining them. The inducement of habits, following this definition, is one of the ways through which institutions pose constrains to agential behaviour. Habits are defined as "propensity to behave in a particular way in a particular class of situations" (Hodgson 2004, 652). Hodgson (ibid, 656) refers to the process by which institutions incite habitual behaviour as "reconstitutive downward causation." In his words,

"institutions constrain our behaviour and develop our habits in specific ways.[15] *What does happen is that the framing, shifting and constraining capacities of social institutions give rise to new perceptions and dispositions within individuals. Upon new habits of thought and behaviour, new preferences and intentions emerge. (...) The situation of today shapes the institutions of tomorrow through a selective, coercive process, by acting upon men's habitual view of things. We are typically constrained in our actions. Accordingly, we acquire habits consistent with the operation of these constraints. Even when these constraints are removed, habits dispose us to act or think in the same old way"* (ibid).

For the ontological discussion of this chapter it is worth to highlight the term "downward" in the process that leads to habitual behaviour. It denotes that institutions do possess causal powers in their own right that partly constitute agential behaviour. It is an emergent property that cannot be reduced to the agents following the institution (Hodgson 2000a). The concept of emergence establishes that "novel properties may emerge when entities interact, properties that are not possessed by the entities taken in isolation" (Hodgson 2007b, 220).

The classical example is water. Whereas water can be used to extinguish a stock of burning wood, many of us would refrain from using oxygen and hydrogen separately for the purpose of extinguishing fire (with good reason). The property of water to be able to extinguish fire is emergent. It cannot be reduced to the constituent parts of water. This is not to say that institutions are independent of agents. Of course, if all agents cease to exist, so do institutions (Hodgson 2007b, 221). To avoid another misunderstanding that might arise: To maintain that institutions have emergent properties and causal powers does not mean that they alone determine the behaviour of individuals. They are factors that shapes agential behaviour. Without aiming to provide a comprehensive account here, it should be noted that there are further social elements, which possess causal powers. Discourses are one example. They hold the causal power to influence how agents interpret other symbolic expressions (cf. Fairclough, Jessop et al. 2002). In

this chapter, social elements, which possess causal powers that vest them with the capacity to produce or shape events, are considered as ontologically real.

This discussion serves as a background to the conceptualisation of causality. Within the social sciences the prevailing approach to establish causal relations is the so-called covering-law model (Steinmetz 2004, 172). It rests on a successionist view of causation that establishes causality through the observation of regularities between events. Causal relations are established through the identification of regularities between events. This conceptualisation of causality receives substantial criticism within economics – across theoretical schools (Elster 1998; Lawson 2003) – and other social sciences.[16] Critics claim that these regularities are only "phenomenal" but not "governing." They further maintain that the quest for law-like relations in the social world is elusive (cf. Little 1993). The social sciences should not emulate natural sciences (Flyvbjerg 2001).

A conceptualisation of causality that is consistent with the characteristics of the social world outlined above is the "generative theory of causality" (Ekström 1992, 114). It "sees causality as fundamentally referring to the actual causal mechanisms and processes that are involved in particular events and situations" (Maxwell 2004, 4). A causal claim in this understanding is "not about a regularity between separate things or events but about what (...) [a social element] is like and what it can do and only derivatively what it will do in any particular situation" (Sayer 1992, 105). The starting point is social elements with their causal powers. Causal powers exist by necessity of the internal structure of the social elements irrespective of whether they are exercised or not. Human beings hold the causal power, for example, to be able to co-operate for sustainable resource governance although this power might not be exercised in particular circumstances. These circumstances vary. That is, a particular element with its causal powers always coexists with other elements with their causal powers. Events are the effect of "multiple determination" (Elder-Vass 2007d, 472). Hence, if one does not observe an event *a'* that one would expect if a particular causal power *a* would

operate, it does not mean, that this causal power was not exercised. It might well be that an opposite causal power b was operating at the same time. This implies that in empirical observations the unexercised causal power a might have the same effect as, for example, the exercised causal power a and the exercised causal power b operating in an opposite direction at the same time. The relationship between an object A and its causal power a is internal. "A relation R_{AB} may be defined as internal if and only if A would not be what it essentially is unless B is related to it in the way that it is" (Danermark, Ekström et al. 2002, 46). But, the relationship between the causal power a and the effect a' is contingent, it depends on other causal powers operating (or not) at the same time. Explanation, then, refers to the identification of causal powers that jointly produce events.

Events become explicable but not predictable (Tilly 1995, 1601). At the same time, this conceptualisation of causality points at the limits of generalisation of institutional theory. To borrow Little's (1993, 203) words, "inductive regularities among social phenomena can be discovered [e.g. associations between GDP per capita and infant mortality]. But these are distinctly phenomenal laws rather than governing regularities; they have little explanatory import; and they are not particularly reliable as a basis for prediction."

2.3 *Understanding* Institutions: an epistemological comment

To develop the case for the role of understanding in institutional analysis, this section builds on three different lines of reasoning. First, section alludes to the social construction of social phenomena – such as institutions – and discusses its implications for institutional analysis. Second, section returns to "reconstitutive downward causation" and asks how to approach habitual behaviour empirically. Third and finally, it turns to the practice of institutional analysis and the indexical nature of interlocutors' responses.

Regarding the first point, social reality is partly socially produced. Social phenomena are "(...) *concept-dependent*. Unlike natural (i.e. non-social objects) they are not impervious to the meanings ascribed to them. What the practices, institutions, rules, roles or relationships are depends on what they mean in society to its members" (Sayer 1992, 30f, emphasis in original). Searle highlights this point in his analysis of institutional facts – "(...) facts (...) that can only exist given certain human institutions" (Searle 2005, 3). He identifies the logical structure of an institutional fact as "X counts as Y in context C." "The X term identifies certain features of an object or person, or state of affairs, and the Y terms assigns a special status to that person, object, or state of affairs" (ibid, 7). The "counts as" term underlines the importance of meaning. For example, my trust in the fact that the sales clerk in my favourite groceries store will accept the piece of paper that I hold in my hands as a 50 Euro note depends on the members of the European societies collectively giving this meaning to it. The importance of context becomes obvious if one imagines what happens in times of inflation. If the majority of the Europeans would cease to attach the meaning of 50 Euros to this piece of paper, it would have rather devastating effects on the institution of money. The example of the 50 Euro note – as a social phenomenon – is deliberately simple. The same structure of institutional facts holds true when we think of gender roles or the authorities of a traditional leader. Further, studies of the social world approach something that is socially defined by other subjects. That is, researchers need to interpret other people's interpretations as these make up an integral

part of the object of study. Social science involves what Giddens calls "double hermeneutics."[17] It always needs to include an interpretive or hermeneutic element. As Searle (2005, 22) phrases it: "Institutional facts only exist from the point of view of the participants and for that reason no external functionalist or behaviourist analysis will be adequate to account for them. You have to be able to think yourself into the institution to understand it."

Turning to the second point, Hodgson's elaborations on habitual behaviour. Agents do not necessarily or regularly reflect on their habits. It is a form of tacit knowledge that is distinct from the type of knowledge that agents can put into words. Hence, acts of reproducing an institution (even if it is detrimental to the agent) can occur habitually. An institution is maintained because agents were socialised within it without actually reflecting on it (that is, transforming the tacit knowledge into discursive knowledge).[18] This takes us back to the question of institutional analysis. How to acquire knowledge about an institution that people adhere to habitually? Is the assumption warranted that interview partners can give an account of these? The works on tacit knowledge suggest that it is not. Habitual knowledge is embodied in routines or unconscious reflexes. It is knowledge which cannot necessarily be codified. As Bohnsack, Nentwig-Gesemann et al. (2007, 11) observe "(...) agents themselves do not have full knowledge of their knowledge (...)." Hence, if knowledge that is highly relevant to institutional analysis is not immediately accessible by, in this case, users of common pool resources how is it possible to analyse it?

It is necessary to go beyond the narratives of the resource users. It is required to reconstruct the meaning behind statements in order to understand the institution. What does this entail? Epistemologically speaking, it is necessary to adopt interpretivist approaches (this does not imply assuming ontological positions commonly associated with it). As Blaikie (2000, 115) puts it: "Interpretive social science seeks to discover what people do by uncovering the largely tacit, mutual knowledge, the symbolic meanings, motives and rules, [and social institutions (ibid, 116)], which provide the orientations of their actions". The reconstruction of this frame of orientation of the agent is the objective of this interpretive (or hermeneutic) endeavour. But, how to go about this? What is the mode of inference that is needed?

Drawing on Charles Sanders Peirce, Fischer (2001) finds that deductive inference tells nothing new about reality that is not already included in the hypotheses. By means of inductive inference one generalises from a result obtained from a particular sample to a larger population (referring to a theory that is already established). Both types of inference are not well suited to move from observations or narratives to structures or institutions behind them. A different mode of inference is needed. Abduction is the "only logical operation which introduces any new idea" (Fischer 2001, 369). It is the logical operation by which a new hypothesis is built. Juxtaposition with the better known mode of inference deduction shows how an abductive inference proceeds. Deduction proceeds from premises (explanantia) to the conclusion (explanandum). The premises comprise the major premise (rule) and the minor premise (case) from which the conclusion (result) logically derives. For example (which I owe to Fischer), the major premise is that all humans are mortal (rule). The minor premise is that Socrates is human (case). From these premises one deduces the conclusion that Socrates is mortal (result). This finding was already included in the explanatia. Abduction proceeds differently. The starting point is a yet unexplained phenomenon (result). What follows is a move from effect to cause. If the aim is to explain why the road is wet, the beginning is the observation of a wet road. Following an unexplained phenomenon a rule is invoked, such as "if it rains, the road will become wet" and conclude from this that it is raining (case). The result is a hypothesis for the unexplained phenomenon that the road is wet. Paraphrasing Bromley (2006, 96ff), if the rule were true, the result would be a matter of course. So, one can conclude that the rule is actually operating (the case).[19] Although this section makes use of rather technical terms to introduce the mode of inference abduction, abduction is applied ubiquitously manner in our daily lives. Doctors or car mechanics use it to identify the reasons for our health problems or do diagnose the cause for an annoying sound that we perceive whenever we start the engine of our car. Abduction is therefore also called diagnostic inference.

Third, there is the question whether researchers actually do understand the statements of their respondents. Bohnsack (2003b, 18ff), drawing on Garfinkel, remarks that linguistic expressions are indexical. They are only indications of meanings. The listener always needs to interpret the linguistic expressions to arrive at the meanings. The more speaker and listener cannot draw on a common cultural background the more it is questionable that the listener will be able to correctly interpret the indexical statements of the speaker. Standardised approaches that are intended to be reproducible and to arrive at an intersubjective understanding restrict the possibilities of the respondent to actually make him or herself understood. Thereby they undermine what researchers pursuing a hypothetico-deductive approach intended in the first place: reliability.

There is a last note on the links between the last two sections. Explanation and thinking about causality and interpretive understanding (hermeneutics) are often presented as contradictory approaches. Hence, some might perceive the last two sections as arguing for a different approach to social phenomena – or institutions in particular. From the perspective I am advocating here, they are not incompatible, as reasons can be causes. This point is disputed as scholars associate causality with the successionist view outlined earlier, a conceptualisation of causality which this chapter does not share. Reasons can be causally efficacious, however, without us being able to record regularities (Fairclough, Jessop et al. 2002, 2f). Denial of the causal efficacy of reasons would be counterintuitive "(...) as if (...) when we put a cross by someone's name on a ballot paper, this had nothing to do with our reasoning regarding politics and candidates" (Sayer 2000, 18).[20]

2.4 Fostering Openness to the Unexpected: inductive research approaches, pluralist methodologies, and multiple methods

Common pool resources are, by definition, characterised by the difficulty of excluding agents from their use (cf. Ostrom 2001). Partly as a consequence, they are often characterised by a multiplicity of agents and a large variety of resource use strategies each possibly being sustained by different institutions. To give an example. Large-scale ranching and smallholder agriculture take place side by side in many tropical forest regions. The former relying on favourable credit terms, the other on agreements for co-operation with family members or neighbours. Large logging operations working on the basis of management plans and logging by riverine communities in clientelistic relationships with monopsonistic traders coexist. A large-scale rancher who opens up an unofficial road finances this operation by selling the land (of which he is not necessarily the owner) to migrant settlers seeking a living. In the absence of cash, small settlers might pay with political support in the upcoming elections. Further, several factors influence the types of agents and the prevailing resource use strategies in a given locality. For example, physical factors like road access, land use legislation and its extent of enforcement, the demand for particular products, and the history of the locality all matter. How to address this complexity in order to understand and explain the institutional foundation of these land use dynamics? This section submits that against this complexity (i) an inductive approach is advantageous in comparison with hypothetico-deductive research designs, (ii) plural methodologies are likely to highlight different aspects of the land-use change processes and their institutional basis, and (iii) that the same is likely to hold true for multiple methods. I will elaborate on each of these points in turn.

First, there is some conceptual clarification necessary. As mentioned before, an inductive research approach should not be confused with the mode of inference induction. The latter refers to the thought operation of generalising a finding drawn from a representative sample to the population as a whole. The former implies openness towards generating new

hypotheses regarding the phenomenon under analysis. It follows Glaser and Strauss' (1967, 1f) criticism of the hypothetico-deductive research approach who observed that there is an "overemphasis in current sociology on the verification of theory, and a resultant de-emphasis on the prior step of discovering what concepts and hypotheses are relevant for the area that one wishes to research." The advantages of an inductive approach derive, inter alia, from the role of theories in scientific discovery in general and institutional analysis in particular. The following quote attributed to Albert Einstein captures the problematique "It is theory that decides what can be observed." Observations are theory-laden. The elaboration of theory always draws on a pre-existing stock of knowledge (Kelle 2005, 3). Furthermore, concepts used to describe social phenomena are influenced by social position (e.g., gender) and the available discourses and descriptions (Sayer 2000, 47; Downward, Dow et al. 2006, 170f). These influence research interests and the way research problems are framed; they influence the "context of discovery" (Jackson 2006, 532). In other words, access to social phenomena is mediated on several accounts and socially constructed. The resulting knowledge is likely to be relative. The hypotheses advanced in hypothetico-deductive research approaches are then likely to reflect theoretical projects instead of being informed by an understanding of the land-use change processes and their institutional foundations.[21]

Turning the argument around, different theoretical perspectives are then likely to shed light on different aspects of a social phenomenon. Plural theoretical perspectives are, then, one way to obtain a broader understanding of the phenomenon under analysis. Think of, for example, different analytical frameworks. The Institutions of Sustainability Framework (Hagedorn, Arzt et al. 2002), the Institutional Analysis and Development Framework (Ostrom 2005b), and the Environmental Entitlements Framework (Leach, Mearns et al. 1999) all draw attention to different aspects of common pool resource use. Attempts to unify different theoretical stances to (Fischer, Petersen et al. 2007) serve as an indication of this point. Combining plural theoretical stances might give rise to commensurability problems in theorising. I return to this point later (section 2.5)

but would like to stress the following two points here. First, theories refer to the same reality otherwise they would not be competing – instead of being merely different (Bhaskar 1998, xi). Second, I think that the processes of theorising and understanding are in part different. While I agree that incommensurable assumptions create problems of coherence in theorising, I do not perceive this problem as being as acute in attempts to *understand* a particular social phenomenon (for examples along these lines, see Vatn 2005, 51ff).

A similar point in favour of pluralism can be made with regard to the methods used to study the institutional foundation of land-use change. There seems to be an emerging consensus that multiple methods are necessary to understand the institutional basis of common pool resource use. Scholars of collective action for natural resource management, for example, (Meinzen-Dick, DiGregorio et al. 2004; Bardhan and Ray 2006; Poteete and Ostrom 2008) and of land-use change (Young, Lambin et al. 2006) highlight the complementarities of different approaches to and methods of institutional analysis. The analysis of, for example, satellite images draws attention to areas of high land-use change activity but does not necessarily tell who is involved.[22] The sole application of in-depth interviews to discover the institutions that resource users adhere to habitually, to give a different example, is not sufficient, if the goal is to identify the extent to which environmental legislation is enforced in a particular region. These findings highlight the general assessment that research should pursue "question led" (meaning that it is the research question that indicates the most appropriate method) instead of "method led" (Grix 2002, 180).

While the claim in favour of plural theoretical perspectives might be understood as a call for "anything goes" (Feyerabend 1993, 14) or as the manifestation of an eclectic position, this is not the point that I am advancing. I submit instead that making sense of the results that methods yield and subsequent theorising requires a unifying epistemological and ontological stance. To that I now turn.

2.5 Plural Theoretical Perspectives and Multiple Methods on a Shared Ontological and Epistemological Basis

Theoretical pluralism necessitates a joint point of reference, necessitates shared ontological assumptions. If ontological assumptions do not allow for social structures as part of the explanantia, it is incoherent to include them in the explanation. A regression analysis, to turn to methods, holds different lessons for somebody who works on the assumption that explanation depends on identifying regularities between events than for somebody who conceptualises causality based on objects with causal powers. Making sense of methods requires ontological assumptions.

The chapter submits that Critical Realism offers a fruitful basis for institutional analyses that allows for theoretical pluralism and the application of multiple methods – a basis that is, of course, amenable to insights of other schools of thought.[23] I can not offer a comprehensive introduction into Critical Realism in the confines of this paper. The following is therefore restricted to those elements of the Critical Realist epistemology and ontology that are relevant to the discussion further down below.[24] First, it is necessary to distinguish between the transitive and the intransitive dimension of reality. The latter term refers to reality, the former refers to knowledge of reality. This knowledge is, as section 2.4 alludes to, theory-laden and socially constructed. Our knowledge of reality is fallible. Therefore, the epistemological position of Critical Realism is relativistic (epistemic relativism). Second, regarding the intransitive dimension, Critical Realists assume that there is a reality outside of our conceptualisations of it (ontological realism). This reality is differentiated. It consists of three different domains: the "real", the "actual" and the "empirical." Within the domain of the "real" lie the objects that by force of their causal powers are able to bring about events. These objects are not necessarily observable but known by their effects. The domain of the "actual" comprises events or phenomena that happen irrespective of whether they are observed or not. When events or phenomena are observed, they enter the domain of the "empirical." Third, building on the earlier elaborations on causality, society is an open system. Causal

powers overlap, they counteract, or reinforce each other. Hence, events are the outcome of "multiple determination" (Elder-Vass 2005, 332). Consistent regularities of events only occur in closed systems. The conditions for closure are that "the object possessing the causal power in question is stable (the intrinsic condition), and (...) that external conditions in which it is situated are constant (the extrinsic condition)" (Sayer 2000, 15). The intrinsic condition for closure implies that "a cause always produces the same effect" and the extrinsic condition for closure implies that "an effect always has the same cause" (Downward, Finch et al. 2002, 482). These closure conditions do not hold in the social world (see section 2.2).

With regard to plural theoretical perspectives, section 2.2 already outlined the ontological stance of Critical Realism. Therefore, the remaining paragraphs of this section discuss the application of multiple methods. Critical Realists, in general, endorse the application of methods that are commonly referred to as qualitative or argue that these approaches should form the basis of a Critical Realist methodology (Sayer 1992; Danermark, Ekström et al. 2002; Lee 2002). When it comes to the application of statistical methods of data analysis, the positions are more diverse. While descriptive statistics is generally accepted, the use of inferential statistics is contested by prominent Critical Realists (Sayer 1992; Lawson 2003). The criticism is that these methods rely on an empiricist realism, as they rely on the identification of regularities between events. Hence, they are not well suited to address the depth ontology outlined earlier. Given that Critical Realism objects to the succesionist view of causation (section 2.2), the application of inferential statistics is rejected as well, as acceptance would involve frictions between ontology and methods.

Other Critical Realists[25] are more optimistic regarding the application of inferential statistics in the context of mixed method triangulation albeit under the umbrella of an ontology that rests on a generative view of causality. These scholars argue that it is the interpretive (epistemological and ontological) frame that matters. There is a general point and a point in relation to institutional analysis in favour of their assessment. First, the application of inferential statis-

tics need not imply the assumption of ontological closure. Olsen and Morgan (2005, 270ff) use the example of logistic regression to demonstrate its usefulness in pointing at causal powers at work within the context of a differentiated ontology. "To start with a mathematical system, such as a data matrix and equations estimating some patterns within that system, and then say that it tells us about the real world is not to argue that the two things are identical" (ibid, 274). The relation between variable can reflect causal mechanisms. "To seek regularities is not necessarily to reify regularities" (ibid). Knowledge claims can be based on relations identified through a regression analysis. These might serve as a basis for counterfactual thinking. It is the interpretation of the results that makes the difference. To treat variables as real would mean to conflate two domains of reality, the empirical and the real. Conflating these two domains – as empiricist interpretations of regularities do – turns methodological closure into ontological closure. Second, institutions produce to some extent regularities in behaviour, they produce situations of "quasi closure" (Downward, Finch et al. 2002, 486ff). This is intuitive as institutions would otherwise cease to exist.

Overall, these points underline the importance of the interpretive frame, the importance of the ontological assumptions. Again, this shall not be interpreted as a claim for anything goes. It is a claim that maintains that it is necessary to have *an* ontological basis. It is further a claim in favour of an ontology that takes into account the considerations on the "generative view of causality" (outlined in 2.2). It is that ontology on which the subsequent approach to institutional analysis of the commons draws.

2.6 A Hermeneutic Approach to Institutional Analysis: a frame and six points of departure

Preceding sections advance several arguments in favour of a hermeneutic approach to institutional analysis. This section suggests elements that such a hermeneutic approach implies. It is intended to be a contribution to a debate instead of a finalised list of guidelines. First, this section advances three principles that together form a frame for a hermeneutic approach to institutional analysis and outline stages of discovery. Second, based on this frame, this section outlines six points of departure to put this hermeneutic approach into practice.

Frame for a hermeneutic approach to institutional analysis

Reasoning needs to take into account the depth ontology. Reality comprises the domains of the real, the actual, and the empirical. Understanding and explanation need to go beyond the empirical to seek the underlying causal powers within the domain of the real to understand the phenomena under analysis. Bromley (2006, 169ff) gives an illuminating example that is indicative of the move from the empirical to the real domain of reality.[26] Discussing explanations of tropical deforestation he criticizes that many of those treat proximate causes (like roads) as reasons for deforestation. "Let us consider road building into remote forested regions, an activity that will, in many instances, be followed by deforestation. Can we therefore conclude that roads 'cause' deforestation? Assume that the roads are built into remote forested areas precisely to gain access to timber. Here, the desire for access to timber is the reason for roads (...). The quest for timber constitutes a reason for roads to be built, so roads are the mechanical cause of deforestation [the empirically observable event associated with deforestation, J.W.], but they are not the reason for deforestation" (Bromley 2006, 169ff). Some pages (ibid, 175) later he suggests an – abductively formed – competing hypothesis for a possible reason for deforestation. This hypothesis is about causal powers in the domain of the real although Bromley does not apply this terminology. He suggests the following thought experiment. Assume that a large part of the non-forested land is in the hands

of a politically well connected elite which is able to obstruct land redistribution. In such a situation the State could have a reason to invest in settlement programmes (and associated infrastructure measures) in forested regions to reduce pressure for land reform and to make land available for landless peasants.[27] As alluded to earlier, the reconstruction of the frame of orientation – the unveiling of tacit knowledge – involves the same mode of inference to underlying causal powers. A focus on the empirical level is insufficient.

Several sections highlight the need for abduction as a mode of inference.[28] Abduction, in the terminology advanced here, hypothesises a causal power or a combination of causal powers that accounts for a phenomenon under analysis. How to move from a hypothesis to a corroborated explanation? I build on Wuisman (2005) to outline stages of discovery in a critical realist institutional analysis. I use the term stages deliberately as stages imply "tasks which can be returned to repeatedly and do not come in a strict linear order" (Olsen and Morgan 2005, 269). Stages emphasise the iterative character of understanding and explanation. Wuisman builds on Charles Sanders Peirce considerations on the modes of inference and combines these with the critical realist conceptualisation of different domains of reality. His "cycle of scientific discovery" acknowledges that the different modes of inference deduction, induction, and abduction have different strengths and weaknesses and that none of them alone can account for the process of scientific discovery. The cycle of scientific discovery begins with an unexplained fact. From this unexplained fact a cause is hypothesised (a social element with its causal powers) that, if it were actually operating, would explain the fact. This represents a move from the consequent (effect) to the antecedent (cause) and, hence, it is necessary to analyse whether the hypothesised cause is actually operating. The second stage in the cycle of discovery therefore involves deducing the "(...) information required to corroborate the hypothesis about the underlying mechanism" (ibid, 385). Lastly, an induction based on carefully collected empirical material is made whether the observed fact can actually be understood and explained by the hypothesized cause (whether it fits with the information deduced from the hypothesis).

An inductive approach to institutional analysis. This principle highlights the need to remain open to unanticipated insights suggested by the empirical material.[29] It furthermore underlines the risk associated with deductive approaches of forcing data into preconceived theories (see Layder 1998, 151). Institutional analyses of common pool resource use address a range of ontological elements giving rise to institutions and associated resource use practices. The empirically observable manifestations of land-use change are often the result of several institutions operating jointly. At the same time, observations are theory-laden. A deductive approach to institutional analysis, therefore, bears the risk of focussing on a particular set of factors that carry the explanatory burden but the relevance of which in the overall picture is difficult to assess. This principle emphasises as well the importance of context in institutional analysis. Context is essential to the hermeneutic endeavour. The hermeneutic circle stresses the interplay between the parts and the whole meaning that the part can only be understood in relation to the context (Poser 2001, 213f; Danermark, Ekström et al. 2002, 159f). The institutional reasons for common pool resource use can only be understood against the social, historical, and physical context in which it takes place. Many scholars highlight the importance of the physical and social environment for institutional analysis (Ostrom 2005b; Hagedorn 2008).

Approach and methods need to allow for understanding. Several insights highlight the need for an approach and for the application of methods that allow for understanding: the social construction of institutions and the resulting importance of meaning, the double hermeneutics involved in social analysis, the indexical character of statements, and the need to access tacit knowledge in institutional analysis. This calls for an approach to institutional analysis that enables the researcher to familiarise oneself with the environment of the interlocutors to understand the meaning that our interlocutors attach to the terms they are using. The same applies to methods of data collection and analysis. Our interview partners must be enabled to express themselves in their terminology.

Six points of departure

Case studies as the principle research strategy. Methodological reviews on institutional analyses of common pool resources acknowledge the value of case studies (Meinzen-Dick, DiGregorio et al. 2004; Poteete and Ostrom 2004). This is a welcome departure from views that maintain that case studies can at best serve as a stepping stone for large-N studies or as a complement to "rigid" hypothesis testing approaches (see Flyvbjerg 2006, for a review of criticisms in this vein). Against the setting of the discussion above and for reasons given below, I would underline and qualify this assessment by adding "principle" to the term "research strategy." Some scholars characterise case studies by reference to the topic to which they are applied or the methods that are being used in conducting them (often "qualitative"). Yin (2003, 12ff) is among those arguing forcefully for case studies as a research strategy. It is the approach followed here. Case studies are then "(...) a way of organizing social data so as to preserve the unitary character of the social object being studied. Expressed somewhat differently, it is an approach which views any social unit as a whole" (Goode and Hatt in Blaikie 2000, 215). The importance of context is a logical successor (Yin 2003, 13; Flyvbjerg 2006, 221ff). Creswell adds the time dimension to the definition of case studies by pointing out that the phenomenon under analysis is analysed over a "sustained period of time" (Creswell in Blaikie 2000, 216). In order to "preserve the unitary character of the social object being studied" case studies can make use of several types of methods and sources (Yin 2003, 14). Hence, the case study is well suited to put the principles above into practice. They allow for an inductive approach and for the application of methods that take into account the social construction of institutions and the importance of meaning in analysing them. Surveys, in comparison, have a highly limited ability to investigate context (Yin 2003, 13). Within Critical Realism, case studies are an integral part of intensive research design. An intensive research design aims at providing "causal explanations of the production of certain objects or events (...)" (Danermark, Ekström et al. 2002, 165). Its focus is on substantial relations, which are internal relations in the sense defined above.[30]

Qualitative methods are indispensable. Generally, research questions indicate the most appropriate method for institutional analysis. A caveat applies. The need to unveil tacit knowledge and the importance of understanding meaning make in-depth interviews and other techniques to familiarise oneself with the milieu essential. It is difficult to imagine causal analysis without these. The extent to which these methods need to be applied depend, of course, on the research question. This also impinges on data analysis and calls for procedures that allow for the analysis of verbal data (see Miles and Huberman 1984). Discovering tacit knowledge requires specific data analysis procedures. Bohnsack (2003a) suggests the so-called Documentary Method for this purpose.

The necessity of extensive field exposure. The necessity of extensive field exposure is largely a consequence of the points raised earlier. Olivier de Sardan (2008) observes "The researcher in the field begins by improvising awkwardly, until he becomes, little by little, capable of improvising competently. One needs to have wasted time, an awful lot of time, in the field, in order to understand that these slack times were necessary." There is a further practical aspect to this. Often, use of common pool resources involves illicit acts. The widespread occurrence of illegal logging is one example among others. These land-use decisions are often associated with other illicit acts like corruption (Robbins 2000). These in turn might provide important insights into the institutions at work. Obtaining insights into these sensitive issues require relationships of trust. Establishing these relationships demands time (Evans, de Jong et al. 2006, 6).

Adaptive Theorising. Adaptive Theory (Layder 1998) calls for a process of theorising that is iterative or continuous in character (ibid, 174) and which builds on a "dialogical relation" between theory and the empirical findings. In this conceptualisation of theorising theories exist prior to the collection of data but are sensitive to and adapt to the insights obtained in data collection and analysis. Theorising is a continuous process in which theoretical concepts and empirical insights inform each other mutually. In the stages of discovery referred to earlier, theories are a crucial input into the process of abductively forming tentative explanations of the phenomenon under analysis (Danermark, Ekström et al. 2002, 90). In

this context and taking into account the earlier point made in favour of case studies as research strategy, the question might arise whether case studies can contribute to theorising. Case studies have long been criticised for not contributing to theory-building, as they do not allow for generalisation. Against the setting of the depth ontology and the need to identify causal powers in the domain of the real, it is obvious that in-depth knowledge is required for theorising. It is important to point out that this type of generalisation (to ontologically real social elements) is different from the type of generalisation in the meaning of applicable to a wider universe of cases.[31]

Unit of analysis. Often, studies of common pool resources or of land-use change define spatial units as the unit of analysis, e.g. a watershed or a particular forest. Talk of "local communities" or "local resource users" often accompanies this. While every resource use strategy manifests itself locally, the motivations of agents who, for example, do not live within the confines of this spatial unit might be very different. Think of a branch of an European logging company which happens to operate in an otherwise communally managed forest in the Brazilian Amazon. While spatial units can be a starting point, they are insufficient as unit of analysis. Conceptually, the unit of analysis instead needs to build on those agents and processes that stand in substantial relations to each other with regard to a particular resource. This is in line with Hagedorn's (2008, 361ff) claim that transactions should form the unit of analysis.[32] In consequence, the definition of the actual unit of analysis in the field is an open empirical question. [33]

The importance of history. As individuals we are born into a world that is not of our choosing. Institutions pre-exist individual action. "Individual interactions with a social structure are engagements with something already made; in this sense, social structure pre-dates the individual. As individuals we do not make society: it is there in some form at our birth, bearing the marks of past practices of the former – even deceased – generations" (Hodgson 2000b, 12). The social positions occupied by members of society are influenced by history. Recognizing their trajectory is crucial to understand the differing capacities of agents to mould institutions or legal rules.

2.7 Conclusions

There are, for sure, several loose ends within this chapter. I am aware of some of them and happy to learn of more. The question in how far the considerations presented here are tied to one's affiliation with Critical Realism is one. Hodgson's (2000a) elaborations on emergence or Bromley's (2006) attribution of a pivotal role to abduction as a mode of inference suggest that some of the findings might be of broader relevance for institutional economics. A second refers to the scope of institutional theories in the face of limitations to generalisation within the social sciences.

Social influences on the process of producing scientific knowledge are a third one. Although alluding to it, the chapter did not yet take up this thought. That is an omission that I would like to correct here albeit in a cursory manner. The Sociology of Scientific Knowledge shows that the findings of environmental science are not apolitical. Through framings of science and by other means, findings tend to reflect the interests of particular groups (Forsyth 2003, 76ff). One possible source of influence is the potential recipients of findings. Mosse (2006, 720) finds that "the strong presence of economic thinking in the centres of policy and power has encouraged the critical observation that economistic models (...) are useful because they are consistent with certain policy priorities in a normative or ideological sense." Large-N studies and other research approaches commonly associated with holding predictive power are therefore likely to be requested by decision makers. The earlier discussion of the possibility of generalisation within the social sciences shows that this type of generalisation within the social sciences is a fugitive goal. Irrespective of these considerations, backing of a particular research approach by decision-making elements (and the associated material resources) might become decisive in decisions on how to go about researching institutions of the commons (cf. Campbell and Pederson 2001). Defending a hermeneutic approach to the analysis of institutions of the commons in the face of these demands might become a challenging task.

The hermeneutic approach to understand institutions of the commons and policy advice are not at a dead end. The identification of social objects and their causal powers might offer an alternative route for policy advice. It addresses the question of causality and draws attention to influencing factors, which might become the targets and instruments of policies. At the same time, the assumption of multiple determination requires a deeper analysis of the cases subject to policies. More differentiation within policy advice is likely to result, as is modesty regarding its possible breadth and impact.

Participatory planning contributes to empowerment of forest-dependent people. Community resource planning in Porto de Moz.

3. Power and Governance of the Commons: Learning for Institutional Analysis from Chronic Poverty Research

3.1 Introduction

Currently, governance features prominently among the solutions to reconcile rural poverty reduction and sustainable resource use of common pool resources (Barrett, Lee et al. 2005). In multiple use commons this is particularly challenging. Competing land uses in tropical forests – and in particular in so-called frontier regions – often clash incurring high social impact on those who depend on the forest for their livelihoods. Invasion of indigenous lands is one among many well-documented examples (Cotula, Toulmin et al. 2006). Time and again, actors who are in a position to enforce their resource use strategies upon others dispossess poor forest dwellers (Chomitz 2007, 91ff). Environmental governance can in this context usefully conceptualised "as the establishment, reaffirmation or change of institutions to resolve conflicts over environmental resources" (Paavola 2007, 94). The contemporary distribution of property rights to land and forest often reflects past inequities and influences who has superior influence over decisions that would affect this distribution (Sikor and Nguyen 2007). Resource use, therefore, needs to be understood "in relationship to historically shaped relations of production and power" (Nygren 2000, 12).

Insights such as these give rise to criticisms of analyses focusing on collective action for sustainable resource governance (such as Ostrom 1990). Critics claim that work conducted in this vein creates an apolitical picture of institutions of the commons. This is partly attributed to the assumption of methodological individualism (see, for example, Mosse 1997; Mehta, Leach et al. 1999; Mollinga 2001).

Another line of reasoning is the distance of New Institutional Economics to critical social science. "Collective action scholarship" – as Johnson calls it (2004) – is firmly rooted "in the wider intellectual trend of positivism" (ibid, 407). Recent reviews of common pool resource literature mirror these critiques and call for a more explicit treatment of the role of power in the analysis of collective resource governance (Agrawal 2003; Haller 2007; Haller and Merten 2008; Mwangi and Markelova 2009).

High poverty rates characterise remote rural areas (Bird and Shepherd 2003; McKay and Lawson 2003). These regions are not only characterised by high poverty rates but also by a high incidence of chronic poverty (Sunderlin, Angelsen et al. 2005, 1385), defined as "(...) occurring when an individual experiences significant capability deprivations for a period of five years or more" (Hulme and Shepherd 2003, 404f). Research on chronic poverty emphasizes the need to analyse the relations between different groups within a society in order to comprehend the processes leading to perpetuated marginalisation of parts of the population (cf. Green and Hulme 2005). Building on Bhaduri's work (1973), Harriss (2007, 11f), shows that relationships of dependence between tenants and the larger landholders in West Bengal result in the capacity of the latter to control the large majority of a region's produce. With this emphasis on social relations, chronic poverty research highlights structural sources of poverty. It adopts a different perspective than the one favoured in much of current institutional economics analyses of power and common pool resource use, which tend to focus on the agent and his or her choices and motives (Bardhan and Ray 2006, 660). These two differing

perspectives – individual versus relational – relate the discussion above to the more general treatment of power in the social sciences. Where does the power of agents stem from? Is it a result of his personal endowments or tangible resources that he can command? Or is power rooted in the embeddedness within social relations and prevailing discourses within society (Lukes 2002; Mosse 2004)?

Although common pool resources are essential to the livelihoods of the rural poor (Beck and Nesmith 2001; Vedeld, Angelsen et al. 2007) and despite of the fact that common pool resources are often located in regions characterised by chronic poverty, insights of chronic poverty research are yet to be systematically taken up by institutional research on common pool resources. This chapter argues that chronic poverty research offers important insights for those interested in institutional change that aims at governance reconciling the needs of the poor and environmental sustainability.

The chapter provides a conceptual frame for the analysis of the influence of power on institutions and institutional change in the commons. The following two research questions are at the core of the chapter: Who has the power to change institutions (or to systematically break legal rules)? Where does this power stem from? This implies situating the individualist perspective on power (section 3.2) within the larger array of social forces capable of shaping institutions. Throughout the sections, the chapter draws on Haugaard's (2003) classification of "ways of creating power" to categorise the different sources of power. Drawing on chronic poverty research, section 3.3 links the contemporary discussion on institutions and common pool resources to the broader debate on structure and agency. It shows that institutions can establish or sustain social structures and elaborates on the implications of this perspective for the analysis of power. The concept of emergent properties and the allocation of social positions within relationships as well as habitual behaviour (as two manifestations of emergent properties) are at its core. The review of social elements influencing institutions and institutional change closes with a review of findings of "discursive institutionalism" (Schmidt 2008) which will be presented in section 3.4. Section 3.5 summarises the different sources of power in a

coherent frame. A theoretical challenge for such an endeavour is to provide a common basis for the different ways power is produced. Incommensurability problems might arise when attempting to combine different lines of thinking on power (Clegg, Courpasson et al. 2006, 216ff). The chapter addresses this question by rooting the different sources of power in the "generative concept of causality."[34] The concluding section 3.6 discusses possible implications for commons research.

3.2 New Institutional Economics: Emphasizing Choice and the Individual

The works of Jean Ensminger (1992) and Jack Knight (1992) belong to the most elaborated accounts in New Institutional Economics on the role of power in institutional change. In working on institutional change in the commons, Haller (2007; 2008; 2008) has extensively applied Ensminger's theory emphasizing the pivotal role of bargaining power in the reproduction or eradication of traditional resource use institutions.

Regarding models of institutional change, Ensminger and Knight (1997, 3) note "The goal of such models is to explain aggregate social phenomena in terms of the intentional acts of social actors". In Ensminger's (1992, 9) words "(...) choice is fundamental to any model of institutional change".[35] On the direction of change, Knight (1995, 107) notes "(...) Social institutions are a by-product of strategic conflict over substantive social outcomes. By this I mean that social actors produce social institutions it the process of seeking distributional advantage in the conflict over substantive benefits". In making strategic decisions, actors use their bargaining power to achieve desired institutional change. In both theories, desired means distributional benefits. Regarding the sources of bargaining power and the elements to consider in institutional analysis, their approaches differ. According to Knight (1992, 129) the "key feature" of his theory is "the fundamental relationship between resource asymmetries, on the one hand, and credibility, risk aversion and time preferences on the other." Risk-taking and resource ownership are positively related (Knight 1995, 109). Resource ownership allows actors to engage in extensive bargaining processes as they can afford lower discount rates. In effect, strate-

gic commitments by well-endowed actors become credible. Further, resource ownership plays a crucial role in the process that leads to the acceptance of the institutions by community as a whole. Resource ownership is more easily perceived than other factors influencing bargaining power. Hence, it is a factor which allows for the generalisation of the institution across a community. Ensminger (1992, 7) adopts a broader view on the sources of power. Like Knight she sees wealth as one source of power. In addition to this, she sees "social position" and "the ability to manipulate the ideology of others" as further sources of bargaining power. In her model of institutional change (ibid, 9ff), bargaining power interacts with ideology, institutions and organizations. All of these factors interact with each other when actors respond to changes in relative prices for natural resources.[36]

Related to Ensminger's and Knight's focus on choice is their methodological individualist approach. This approach is most clearly spelled out by Knight "(...) major intuitions of macro-level accounts of institutional development and change can be incorporated into a micro-level explanation of the decentralized emergence of social institutions" (1992, 129).[37] Institutional change – according to his conceptualisation – is a two-stage process. In a first step, two agents bargain in a "decentralised" setting. Conceptually, Knight models change as a game with two Nash equilibiria.[38] As the outcome of this bargaining process, an institution evolves that favours one actor over the other. In a second step, Knight examines how the institution becomes generalised for the community as a whole emphasizing the role of resource ownership. Knight's focus is on self-enforcing institutions. The State steps in only as an entity on which agents might call upon later to formalise the self-enforcing institutions. Proceeding like this, the individualist goal of explanatory reduction to the micro-components of society (cf. Hodgson 2007b, 222) is achieved.

This relates Knight's work back to the discussion of how "macro-elements" of society influence individuals, which does not receive much attention in his work. Emphasizing "downward causation" (the influence of higher level parts of a system on lower level parts), Hodgson (2000a) shows that agents' adopt habits that are in line with the constraints to which

they are exposed to. However, "the mechanisms of habits [or norm driven behaviour, J.W.] are largely unconscious (...)" (Hodgson 2004, 652). Following Haugaard (2003) tacit knowledge – in which habits are inscribed – is, however, an essential source of power. Knight (1992, 14) rules out the consideration of "norm-driven" behaviour in the analysis of distributional conflicts for practical and theoretical reasons. Although Ensminger and Knight (1997, 2) state that they "(...) agree with Bourdieu that habit is an important [alternative motivation for norm compliance]" they strive "(...) to explain aggregate social phenomena in terms of the intentional acts of social actors" (op. cit.). This would rule out a focus on habits.

The problems that might arise with a sole focus on rational choice when attempting to analyse the role of power in institutional change and its relation to poverty alleviation in empirical settings is also demonstrated by di Gregorio, Hagedorn et al. (2008). While their account also adopts an individualist perspective in the major part of their paper (for example, in their analysis of action resources), the sole focus on individuals as *explanans* of the power of agents becomes difficult to sustain. In their analysis of the different sources of power on which an agent can draw, they build on Bourdieu's habitus concept (Bourdieu 1990). They find that "the 'habitus' an actor demonstrates in the public and private realm (...) is essential to how he or she can gain recognition as a leader in public discourse and collective action. (...) This habitus may become an important power resource to influence the perceived choices available to other actors" (di Gregorio, Hagedorn et al. 2008, 28). Acknowledging the role of habitus implies recognition of structural influences. Bourdieu developed the concept of habitus, on the one hand, to conceptualise the agent not as a sole puppet of structural influences but, on the other hand to not fall back to individualist positions (Rehbein 2006, 86ff).

There are varieties of methodological individualism. Some of which allow for influence of "social structures" on individuals (Udehn 2002, 492ff) that make them difficult to separate from emergentist accounts of social structure as described below (section 3.3). Given Ensminger's reference to "social position" it is possible that her concept of methodological individ-

ualism is in line with what follows. Nevertheless, "what many methodological individualists seem reluctant to do is to use this awareness [that the idea of an individual free of all social relations is untenable; J.W.] to rule out such isolated individuals in the explanantia" (Hodgson 2007b, 221). Given the importance of habitual behaviour as a source of power, this paper argues to include social structures as part of the explanantia. This is what the following section sets out to do.

3.3 Chronic Poverty and Its Relational Perspective: implications for institutional analysis

Adopting a historical perspective, one might ask – responding to Knight's analysis – why is it that some are well endowed with assets and others are not (cf. Nitsch 1989)? Why do some own large tracts of land allowing him or her to play a decisive role in municipal politics whereas the other is landless?[39] From a chronic poverty perspective, the answer is to be found in the historically evolved social relations that tie the poor and the non-poor together. Green and Hulme (2005, 871) discussing the concept "social exclusion" provide an illustrative example of what this focus implies. They argue that the concept of social exclusion is misleading, as it "(...) separates the poor and thus poverty from the rest of society, so that poverty appears as a problem of the excluded." However, the poor are integral to society although they occupy marginalised social positions. From this perspective poverty as an effect "(...) can be apprehended as an outcome of the *social relations* which tolerate, or promote, such effects" (ibid). Poverty and wealth are "causally linked" (Harriss 2007, 12).[40] Does this juxtaposition of individualist and relational perspectives lead back to an irreconcilable positioning of structure versus agency in explaining the sources of power? It does not need to. Several authors suggest approaches to reconcile the influence of both on social phenomena (Giddens 1984; Bourdieu 1990). Below, I will outline an emergentist account of social structures as developed by Elder-Vass (2007a) building on Archer (1995).[41] Then, I will discuss how institutions establish social structures and show how the emergent properties of social structures can be important sources of power.

Archer (1995, 7f) proposes to approach the question of structure and agency from the perspective of "analytical dualism." "Analytical dualism suggests that structure and agency can be distinguished over time. It rests on two propositions: "that structure necessarily pre-dates the action(s) leading to its reproduction and transformation and that structural elaboration [changes in structures because of these actions] necessarily post-dates the action sequences which give rise to it" (Archer 1995, 15). What are the reasons for the pre-existence of social structures? Briefly stated, "as individuals we are born into a set of structures that are not of our making" (Hodgson 2000b, 11). Language, customs, or beliefs have to be learned by social actors. The churchgoer or the family member needs to acquire rules and the behaviour that is considered to be adequate for a particular social position. The social positions that are being allocated to us at the time of our birth might fundamentally influence the abilities of a given individual. Think, for example, of the Indian caste system. For the reason of being born into a particular social position, Dalits have fundamentally different options than a member of the Brahman caste. Reviewing the work of Bhaskar and Archer (1995), Hodgson (2000b, 12) concludes, "Individual interactions with a social structure are engagements with something already made; in this sense, social structure pre-dates the individual. As individuals we do not make society: it is there in some form at our birth, bearing the marks of past practices of the former – even deceased – generations."[42]

With this conceptualisation, Archer's "Morphogenetic Approach" offers a dialectical perspective on the question of structure and agency, which serves as a basis for the emergentist perspective offered here.[43] This emergentist perspective acknowledges the causal efficacy of social structures (which implies that social structures are more than the individuals constituting them) without denying agential powers within the social structures. The concept of emergence is central, as the name indicates. Emergence implies that an object has properties which can not be reduced to its constituent parts. "A property is emergent at the level where the parts of the entity possessing it would not themselves have the property if they were not organised into this sort of whole" (Elder-Vass 2007b, 236). For social structures

to become causally effective in their own right, they have to have emergent properties that justify their treatment as ontologically different from agents. [44] To make this claim, I need to clarify what I mean by social structure.[45]

According to the emergentist perspective, social structures are composed of agents, the relations between them, and the properties that emerge because of this relationship. The emergent properties cannot be attributed to its constitutive parts. While a relation between the agents is the precondition for an emergent property, it does not fully explain the process through which the emergent property emerges. In the terminology advanced here, this explanation lies in the causal mechanisms that sustain the emergent property. "Causal mechanisms are processes that depend on interactions between the parts, interactions that only occur when those parts are organised in the particular relations that constitute them into wholes that possess this emergent property" (Elder-Vass 2007b, 230). Think of the example of an intermediary who is the sole buyer of valuable hardwood in a municipality. Would it be coherent to attribute his capacity to buy logs at low prices from the communities to his entrepreneurial capacities? Following the elaborations above it would not; it would represent a case of an "eliminative reduction" (Elder-Vass 2007b, 236). His capacity to buy logs at a very low price evolves from the dependence of the smallholders on him. This dependency relation puts the buyer in a social position that vests him with this particular power. If the sellers could choose among other buyers, his capacity is likely to diminish. This capacity is different from his capacity to speak to the sellers of timber. This ability rests with the agent and attributing it to the social structure would be an "untenable reification" (ibid).

What is the relationship between the term institution and the term social structure? In contemporary institutional economics the individualist perspective prevails and a link to the concept of social structure is largely missing. Maybe as a corollary to this absent debate, terminological clarity is sometimes lacking. Some authors treat the two concepts of institution and social structure interchangeably (Ishihara and Pascual 2009, 1550). I will not attempt to resolve this discussion. Instead, I advance that treating social structure as a meta-concept to institutions offers valuable insights into the way institutions affect individual behaviour.[46] These effects, in turn, are emergent properties relevant to an analysis of power in institutional change. This does not imply that all social structures are institutions. Social positions might also evolve because of, for example differential command over tangible resources in a singular interaction (cf. Knight 1992). Institutions according to Hodgson (2006, 18), are "(...) systems of established and embedded social rules that structure social interactions." Two emergent properties of institutions stand out: the allocation or perpetuation of social positions and their influence of individual habits.

First, institutions can give rise to social structures (as defined above) by creating relationships between agents that vest agents with powers they would not possess, if the institution establishing the relationship would be absent. That is, institutions establish social positions, which are emergent properties of the resulting social structure. Property rights are an example. A property right as an institution assigns a rights to a right holder and corresponding duties to other members of society. The ability of the right holder to enjoy the benefits of a resource is an emergent property of the institution property right. Haugaard (2003, 109) refers to this as "power created by social order." Several institutions allocating social positions coexist at the same time, which might reinforce or contradict each other. Scholars of legal pluralism show that this pluralism allows actors to apply "forum shopping" strategies (Benda-Beckmann 1981), that is, to refer to the social order that suits their needs. Competing land rights administration systems are an example. An actor might refer to land rights backed up by the more recent legislation that favours rights based on title or he or she might only accept land allocation decisions taken by a group of elders. Of course, not all agents are in the similar position to make use of forum shopping. The web of social relations does not entail that all actors enjoy the same power to use and benefit from resources. That is, "power [is also] created by system bias" (Haugaard 2003, 109). Institutions do not only create power to do something, they also put some in social positions that leave them very little room for action. However, "power created by system bias" is

not only negative or inherently biased against certain societal groups. It is also a necessary correlate of "power created by social order." If property rights are not accompanied by corresponding duties of non-right holders, they are meaningless. Having said this, the active use of a preferential position within the web of social structures to ones benefit also occurs frequently. Take the example of unsuccessful agrarian reforms. The close ties between owners of large landholdings and members of the political parties in power, for example, often worked against the implementation of redistributive land reforms (Kuhnen 1982, 338). Studies on the effects of decentralisation of forest management provide another line of empirical evidence for "power created by system bias": If specific measures to protect the rights of poorer segments of the rural society are not employed, the traditional elites are able to benefit from the decentralisation measures at the expense of the livelihoods of the poor (Larson, Pacheco et al. 2007). As Green and Hulme (2005, 872) observe: "The question becomes not why are some people poor in society, but why some societies tolerate poverty as an outcome and for whom, and how this toleration becomes embedded within institutional norms and systems." Institutions do not only allocate social positions, they also serve to perpetuate them.

Second, Hodgson (2007a) points at a mechanism that contributes to the perpetuation or reproduction of social positions: the influence of institutions on agents' habits. This second emergent property of institutions involves a process, which he calls "reconstitutive downward causation." Reconstitutive downward causation describes the phenomenon that institutions can cause agents' intentions (Fleetwood 2008). Through "reconstitutive downward causation" institutions can cause changes in habits, defined as "propensity to behave in a particular way in a particular class of situations" (Hodgson 2004, 652). How does "reconstitutive downward causation" work? By constraining agents' behaviour over extended periods of time, agents acquire habits consistent with these constraints. Even if the constraints are removed, agents continue to behave in the same manner. This does not mean that deliberation is absent but that there can be other significant forces at work as well. Habits are inscribed into agents' tacit

knowledge that is distinct from the type of knowledge that agents can put into words (discursive knowledge). Hence, acts of reproducing an institution (even if it is detrimental to the one reproducing it) can occur habitually. Agents maintain an institution because they were socialised within it without actually reflecting on it (that is, transforming the tacit knowledge into discursive knowledge). Haugaard (2003, 100f) refers to this way of creating power as "power created by tacit knowledge." Agarwal's (2002) analysis of women's land rights provide an example. She finds that women "slightly internalized" the statement of some men that they were useless as agricultural labourers and could only work under supervision (ibid, 24).

Vatn (2005, 31) refers to this type of socialisation in which actors internalise the basic rules of the society as "primary socialisation." He distinguishes this from the socialisation that takes place in smaller societal groups that might be of our choosing, such as the professional training that we experience in the departments of a university ("secondary socialisation"). The underlying mechanism is the same. Haugaard (2003, 106) refers to this "secondary socialisation" as "power created by discipline." In his analysis "disciplinary power" is a way of maintaining social order. With regard to natural resource use, we can observe more mundane forms. By reference to "scientific" findings, the knowledge of communities is frequently ruled out. Holmes-Watts and Watts (2008, 441) observe with regard to participatory natural resource governance in South Africa: "'I manage, you participate' (...) appears to dominate the attitudes of state conservation officials in interacting with local communities. The continued existence of protectionist conservation in South Africa despite the abundance of legal frameworks for participatory conservation reveals the difficulties in weeding out entrenched institutional cultures."

Government agencies often remain inaccessible to forest-dependent people contributing to their disempowerment. Closed office of the national land reform agency INCRA in Anapu.

In summary, chronic poverty focuses on the analysis of social relations – without ruling out other sources of entrenched poverty. This emphasises the need to investigate the pre-existing institutions, which establish or perpetuate social positions and significantly affect agents' capacities to act. Although social positions might evolve because of differential ownership over tangible resources – as Knight suggests – there are also other influences. Social relations, to turn the argument around, are also decisive in getting access to resources or might substitute for the lack of them. Further, a social position of an agent evolves because of his or her embeddedness in many social relations. If these relations all put an agent in a marginal social position (instead of contradicting each other), escaping this position might become insurmountable. From an analytical perspective, a focus on emergent properties of social structures established by institutions calls for attention to habitual behaviour. This does not rule out rational decisions and deliberation but underlines that there are other forces shaping agent's behaviour. In line with other scholars (cf. March and Olsen 1998), the agents are conceptualised as being able to take decisions based on deliberation although they might at times act habitually (Elder-Vass 2007c). In comparison to the individualist perspective, this allows for a broader account of how power influences the process of institutional change.

3.4 Chronic Poverty, Discourses, and Discursive Institutionalism

Attempts at explaining chronic poverty do not only refer to the institutionalisation of social relations, but also to the legitimising role of political discourses. The way the chronically poor are "spoken of" and "spoken for" (Hickey and Bracking 2005) influence their ability to gain representation within political discourses. They influence who is considered to be eligible for assistance (Hossain 2005) and how they are being addressed (Bebbington 2005). Chronic poverty scholars particularly question whether mainstream discourses on poverty and poverty reduction foreclose or open up pathways for the chronically poor to find their claims and realities recognised (Bracking 2005). Representation of the chronically poor in political discourses or the lack of it influences as well processes of institutional change. Work on environmental policy processes shows that concepts with their particular histories empower some while at the same time marginalising others (Keeley and Scoones 1999, 25). Roe's work (1995) on "development narratives", for example, demonstrates how technical experts assume stewardship for resources – at the expense of resource users' influence over them – by appealing to crisis narratives. Discourses influence how agents interpret phenomena, which actions are considered to be legitimate and which statements intelligible. Languages principally allow for a countless number of texts to be produced, but only some of them are consonant with the "(...) actual range of variation [that] is socially determined and structured (...)" (Fairclough 2005, 924). In other words, "discourses make certain ways of thinking and acting possible, and others impossible or costly" (Phillips, Lawrence et al. 2004, 638). This implies at the same time that agents do find themselves in different positions to influence institutional change.

The question of how discourses affect institutions is at the core of the emerging research agenda of "discursive institutionalism". Schmidt (2008, 314) distinguishes two different processes: "background ideational abilities" and "foreground discursive abilities". "Background ideational abilities" refer to the "ideational processes by which agents create and maintain institutions" (ibid, 315). They allow agents

to make sense of something in a given "meaning context" (Schmidt 2010, 14). Fairclough, Jessop, and Sayer (2002) emphasise that meaning and the process of constructing meaning are socially situated and subject to influences of discourses[47] (Fairclough, Jessop et al. 2002, 6f). This does not preclude agential powers to deliberate. However, it highlights, that "the projects (...) formulated by agents, in exercising their subjective and reflexive mental powers (...)" interact with "structural and cultural factors" (Archer 2003 in Fleetwood 2008, 194f). These make up the situation in which the actor is finding him- or herself and influence what he or she can draw on when deliberating on motives for action. Power is created by systems of thought (Haugaard 2003, 97ff). Searle (2005) highlights that institutional facts – "(...) facts (...) that can only exist given certain human institutions" (ibid, 3) – depend on the meaning attached to them. Hence, discourses can serve to sustain or reproduce institutions. Discourses, of course, do not only reproduce institutions. Conflicting discourses might question the legitimacy of a dominant discourse. The (slow) progress in the acknowledgement of land rights of indigenous people in Latin America is a case in point. For a long time, indigenous peoples were (and often still are) being perceived as backward, as not contributing to the wealth of the nation. Infringements of their rights were (and often still are) not punished giving way to atrocities of all kind. The processes of constitutional reform in many Latin American countries opened up space for the inclusion of indigenous concerns. With differing degrees the constitutions of many Latin American countries now include provision for ownership or possession of land by indigenous peoples. These gave rise to practical measures to secure indigenous peoples land rights (Griffiths 2004).

Science assumes a particular role in the process of making meaning. When agents make meaning out of texts they implicitly or explicitly make claims on the validity of the text. They refuse to grant credibility to texts they find unintelligible or do otherwise if they believe the statements to be true. If the concepts advanced by a text acquire the status of generally accepted truth, questioning them is likely to be perceived as irrational by others. If a concept is considered to be true, the contingency and arbitrariness

of the process of forming the concept moves out of sight. Haugaard (2003, 102f) highlights that "the reification of knowledge through science is (...) the modern equivalent of God or tradition in premodern societies and it is important to recognize that this mode of reification is everywhere" (power created by reification). As institutions depend on shared understandings, reified knowledge can assume an important role in stabilising or reproducing them (Sayer 2000, 13ff; Haugaard 2003). There are many examples of how environmental planners phrased the outcomes of the interaction between local land users and nature in ways, which reflect their assumptions and priorities. The requirement of expressing the relationship between nature and resource users in scientific terms delegitimizes knowledge that is phrased in different terms. In effect, traditional knowledge is often not considered valid, as it is not expressed in quantified terms (cf. Sletto 2008).

While acknowledging the role of discourses in reproducing institutions, discursive institutionalism also highlights the ability of agents to critically reflect on institutions. Schmidt coins the term "foreground discursive abilities", for this "ability to think and speak outside the institutions in which they continue to act" (2008, 315). Discourse in this understanding refers to deliberation, exchange and reasoning among agents with the aim at changing institutions. Approaching discourses from this perspective comes close to Bromley's (2006) most recent theorising on institutional change. At the core of his theory is the agents' who ask for and give reasons (ibid, 142). Agents exchange their interpretations of the world (what Bromley calls "expressions") and the desired future states ("imaginings"). A decision will be taken once the agents have found "sufficient reason to alter specific institutional arrangements in the interest of modifying particular economic outcomes" (ibid, 220). What are the prospects for the chronically poor to get their "imaginings" being acknowledged in these processes of exchanging reasons? It depends. Phillips, Lawrence, et al. (2004) elaborate on the factors determining whether a text[48] becomes embedded in discourses (which then might result in institutional change). They find that actors are in different positions to actually produce texts that are likely to be met with resonance. "Texts that are produced by actors who

are understood to have a legitimate right to speak, who have resource power or formal authority, or who are centrally located in a field are more likely to become embedded in discourse than texts that are not" (Phillips, Lawrence et al. 2004, 643f). As societal structures, the systems of thought privilege some over others. Research on communal forest governance in the Brazilian Amazon provides empirical evidence. It shows that governance solutions developed by smallholder communities do not find resonance in the discourses referred to by loggers neither by those referred to by environmental NGOs (Medina, Pokorny et al. 2009b).

To sum up the argument, discourses influence the process of institutional change in two ways: by influencing the process of how agents make meaning and formulate projects of action and by putting agents in differential positions to produce texts that might result in institutional change. Both influences can be important sources of power and disempowerment of the chronically poor in processes of institutional change. In this regard, chronic poverty scholars emphasise the role of scientists in affecting policy processes through influencing the prevailing discourses (Hickey and Bracking 2005, 855).

3.5 Towards Theorising the Role of Power in Institutional Change

The history of the concept of power is closely intertwined with the concept of causality (cf. Clegg, Courpasson et al. 2006, 207ff). This attempt at theorising the role of power in institutional change therefore takes a reflection on causality as its point of departure. It reconstructs the concept of causality that underpins much of the writing on power and suggests a different conceptualisation capable of incorporating the many ways power is created identified above. Robert Dahl's (1957, 202f) seminal definition of power reads: "*A* has power over *B* to the extent that he can get *B* to do something that *B* would not otherwise do." The exercise of *A*'s power is the cause of *B*'s behaviour. Dahl – a prominent figure in the behaviouralist movement – calls for political analyses that seek to "explain the empirical aspects of political life by means of methods, theories, and criteria of proof that are acceptable according to the canons, conventions, and assumptions of modern empirical science" (Dahl 1961, 767). The conceptualisation of causation as regularities between events (causality as "constant conjunctions" or successionist view of causation) is a corollary to this (cf. Isaac 1987, 5ff). "The only meaning that is strictly causal in the notion of power is one of regular sequence: that is, a regular sequence such that when *A* does something, what follows, or what probably follows, is an action by *B*" Dahl (1965, 94). As a result, the empirical focus of power is overt conflict only. However, there are less obvious but at least as important forms of power. These forms of power do not enter research conducted in a behaviouralist tradition.

The "generative concept of causality" (Ekström 1992, 113)[49] approaches thinking about causes from a different perspective. Its core is summarised by the following quote "What causes an event has nothing to do with the number of times it has been observed to occur and nothing to do with whether we happen to be able to predict it" (Sayer 1992, 110). A causal claim in this understanding is "not about a regularity between separate things or events but about what an object is like and what it can do and only derivatively what it will do in any particular situation" (ibid, 105). Human beings, for example, have the causal power to

strive for cooperative resource governance irrespective of whether they decide to employ it. Causal powers can be attributed to social elements regardless of whether they have been followed by a particular event. Whether the exercise of causal powers by agents lead to a desired event depends on the context, i.e. other agents – and other social elements (see section 2.3 and 2.4) – operating at the same time. An event is contingent upon other social objects (with their causal powers). Nobody would call into question the law of gravity only because she has observed an airplane flying. Events are the effect of "multiple determination" (Elder-Vass 2007d, 472). Understanding an event, therefore, necessitates an analysis of the social elements (and their causal powers) co-operating to produce an event. For example, although the rubber tappers in the Brazilian state of Acre hold a marginalised position politically, the assassination of Chico Mendes and the following national and international pressure on the Brazilian Government opened up new ways to get traditional people's claims for land rights regularisation recognised (cf. Silva 1994). While the causal powers (the ability to produce events) of agents and institutions are elaborated above, speaking of causal powers of discourses might be contentious. This relates to the discussion on whether reasons can be considered as causes or not. Those who oppose the notion of "reasons as causes", often do so referring to the absence of regularity between reasons and actions. That is, they refer to the successionist view of causation rejected earlier (Sayer 2000, 96). Through their influence on the process by which agents construct meaning and form reasons of action, discourses become causally efficacious. This conceptualisation is in line with other scholars who oppose far-reaching definitions of discourses as practices. They call for an acknowledgement of other social elements alongside discourses in causing events (cf. Fairclough, Jessop et al. 2002); a point shared by those arguing for a discursive institutionalism (Schmidt 2008).

Power, building on the generative view of causality, is a capacity, not its exercise.[50] To hold a causal power means that I do have the *power to* do something irrespective of whether I decide to employ it. This includes the capacity to impose my will on others (as the definition above suggests). That is, *power over* is a

subset of *power to* (Lukes 2005, 73f). Power can be exercised by influencing legal rules or by being in the social position of ignoring legal rules altogether. Power could also stem from attempts at changing the institutions of a society. The gender struggle and associated rights to resources by women is an example in this regard. The definition of power relates to a discussion of the role of institutions on human behaviour. In institutional economics, scholars often highlight the constraining role of institutions. If power is employed to change institutions (presumably in the interest of the agent), the resulting institutions fulfil an enabling role for some instead of being uniformly constraining (cf. Bromley 1989a, 27a). Mosse's (2004, 62) assessment that it "(...) is political systems (...) that determine the interests and identities that shape the democratic process. Political systems have their own logic, which may or may not enhance the political capabilities of the poor," mirrors this finding.

Table 3-1 provides an overview of the different sources of power identified above. When two or more social elements with their causal powers operate to produce the same effect, the situation can be called "over-determined" (Sayer 1992, 108). The marginalised position of the chronically poor in influencing processes of institutional change can be attributed to such an over-determined situation. If, for example, the social position influenced by several social structures and the prevailing discourses in society together put the poor in a marginalised position, their abilities to influence institutional change are likely to be very limited. Their situation of experiencing "significant capability deprivations" probably extends for longer periods of time. They become (or remain) chronically poor. Some sources of power are particularly efficacious when operating in conjunction with other causal powers. Take the example of coercion, or violence as its extreme form. Violence, despite its brutishness, can be a very efficient way of exercising power, as the abundance of examples of land theft demonstrates (see, for example, Keck 1995). In particular, if the one exercising power is embedded in a web of social relations that allows him or her to exercise coercion without needing to fear punishment.[51]

The majority of the ways of producing power outlined above refer to the social construction of power. The examples of violence and brute force point at a further aspect of creating power, which requires further elaboration: the material of power. The examples of resource ownership, physical properties of the resource, and the physical location of the resource user serve to underline this point. First, Knight convincingly makes the point that resource ownership is a crucial source of power. Often, however, resource ownership is the result of entrenched societal structures. The two are interdependent. As actors do need resources at their disposal to exercise power (to employ a resource use strategy) at a particular moment in time, a separate treatment is nevertheless necessary. Depending on the type of resource, a significant amount of resources might be necessary to actually exploit and derive benefits from it. Béné (2003, 960) forcefully make this point in his discussion of the term "open access" in fisheries. He concludes "(...) the fact that the most profitable gears are usually the most expensive to purchase and to operate, and that the most productive fishing spots (...) are usually either 'privaterized' or their access requires high bribes and/or fees induces that fisheries, defined in terms of costs of entry, are far from open." This analysis applies to other resources as well. The capital intensive extraction of timber serves as a different example (Sunderlin, Angelsen et al. 2005, 1390). Corruption is another case in point (Robbins 2000).

Second, the physical properties of the resource influence the conditions that allow resource users to actually benefit from resource extraction (Hagedorn 2008). The physical properties of the resource influence which ways of creating power might come into play. The extraction and marketing of timber (because of the weight of the withdrawn resource unit and the associated difficulties of transporting it) need to involve agents who have considerably different characteristics than those of the smallholder family. Even if the community should own a small lorry and a boat that would allow for transporting timber (in profitable quantities) to market centres, a particular family needs to engage with many other families in order to withdraw and benefit from the resource unit. This need to engage with others opens up more possibilities of power influencing a particu-

TABLE 3-1: WAYS OF CREATING POWER: AN OVERVIEW OF MECHANISMS OF POWER & APPLICATION TO NATURAL RESOURCE USE.

Way of creating power	Basis of power on which the capacity rests	Examples regarding natural resource governance[52]
Institutions establishing or sustaining social structures as sources of power		
Power created by social order	Social structures allocate power to social positions	• Property rights (acknowledged by law, custom or convention) (Schlager and Ostrom 1992)
Power created by system bias	Social structures preclude certain actions	• Duties that the non-rights holder has regarding the rights holder and the resource (Bromley 1992, 2) • Strategies by traditional rural elites to hinder or obstruct redistributive land reforms (Kuhnen 1982; de Janvry and Sadoulet 1989)
Power created by tacit knowledge	Socialisation (within particular social structures) influences our habits (through reconstitutive downward causation)	• Control of access to resources by others is perceived as natural, e.g. women's rights to land (Agarwal 2002, 24; Jackson 2003, 465f)
Power created by discipline	Socialisation (within a certain group) influences our habits (through reconstitutive downward causation)	• Environmental department officials pressing for "rational" forest use in terms of currently dominant scientific findings (Holmes-Watts and Watts 2008, 441)
Discourses as a source of power		
Power created by systems of thought	Systems of thought make ways of thinking and acting possible & others impossible (or very costly)	• Attitude towards indigenous forest people: from being perceived as backward to being granted property rights to the resources they hold (Colchester 2007) • Acceptance of corruption (Robbins 2000)
Power created by reification	Science reifies knowledge	• Prohibition of indigenous land use practices by reference to scientific knowledge (Sletto 2008)
Agential capacities as a source of power		
Power created by coercion	By the use of physical force or the threat of using it A makes *B* to do something *B* would otherwise not do	• Land theft (Keck 1995)
Power created by deliberation	Asking for and giving of reasons	• Bargaining for sustainable resource governance (Ostrom 1990)
Physical/material conditions influencing the ways of creating power: for example, resource endowments, attributes of the resource (Hagedorn 2008), or physical location		

Based on Haugaard (2003), adapted, and expanded by the author.

lar family's options to benefit from the withdrawal of a resource unit.[53] The marketing of a relatively lightweight non-timber forest product (like Brazil nut) does not necessarily require the smallholder family to engage with other agents. Hence, the possibilities of power influencing the extraction and the distribution of benefits are relatively smaller. The fact that the extraction of light weight non-timber forest products (like rubber) was for a long time organised in structures of debt peonage underlines the importance of the social but does diminish the point that physical properties of the resource matter. Third, the physical location of the resource user matters. The distance to the next town, for example, influences whether agents need to enter relationships of dependency, as the sole source of "services" is the logging company present in the area.

3.6 Conclusions

The overall argument of the chapter is that chronic poverty research sheds light on the factors that contribute to the marginalised position of chronically poor in natural resource governance. Chronic poverty research considers social structures and discourses as social elements influencing the social position of the chronically poor alongside analytical attention paid to agential capacities. It offers a broader perspective on power in institutional change than analyses conducted from an individualist perspective. The generative view of causality allows blending these different sources of power in a coherent frame. By highlighting the joint operation of social elements (with their causal powers), it offers an explanation of the marginalised position of the chronically poor in processes of institutional change. They often find themselves in an over-determined situation. This raises the question of whether analytical frameworks rooted in individualist perspectives on institutional change will actually be able to grasp the various ways power works. There is, for example, a long way to go to move from positions as "anonymous slots that are filled by participants and to which specific action sets are assigned at junctures in a decision process" (Ostrom 2005b, 193) to social positions as they are conceptualised here.

So, what is there to be learned for those who aim at implementing common pool resource governance regimes that incorporate the views of marginalised resource users? It is necessary to understand the factors that lead to perpetuated marginalisation of parts of society. One way is to deconstruct the various ways power works. Such an understanding offers a range of strategies for the empowerment of marginalised groups. These encompass, for example, the deconstruction of discourses that sustain legal rules that contribute to marginalisation and attempts to alter the institutional fabric of society. In general, these considerations lead to a strategic approach to natural resource governance. Questions of alliances between the chronically poor and other societal actors become central (cf. Silva 1994). In this context, chronic poverty research emphasizes the importance of social movements in attaining social change (Bebbington 2007). They hold the potential to politicise a debate on governance which might be phrased in technical terms primarily. To achieve this, historically shaped relations of inequality need to be overcome. Power matters to achieve natural resource governance that incorporates the needs of those who most urgently depend on it.

Illegality characterizes many logging operations. Logging within the area of the Extractive Reserve Verde para Sempre, Porto de Moz.

4. A Political Ecology of Frontier Dynamics in Western Pará

4.1 Introduction

Deforestation in the Brazilian Amazon continues to be a Brazilian and global policy concern. Although the deforestation rate has fallen significantly in comparison to the beginning of the last decade, it endures on high levels. In 2010, the deforestation rate was 6,451 km^2 and the first figures of 2011 show an increase in the deforested area of 26% in August 2010 to April 2011 in comparison with the period August 2009 and April 2010 (Instituto Nacional de Pesquisas Espaciais 2011). In addition to deforestation, rainforests become degraded through the construction of logging roads or selective logging. In the international debate, the destruction of ecosystems, the loss of biodiversity (Fearnside 2005) and the associated Greenhouse gas emissions (Malhi, Roberts et al. 2008) are prime concerns related to these processes. Despite of their severity, the social implications often do not receive the same attention. Deforestation and logging often lead to grave conflicts over access to natural resources that increase livelihood vulnerability of small settlers, indigenous and traditional people. These conflicts also threaten the physical integrity of those involved. An analysis of land conflicts in Brazil during the period 1997 – 2010 reveals that with the exception of three years (1997, 2000 and 2001) more than 50% of the assassinations occurred in the Brazilian Amazon region.

Deforestation and logging do not only have severe social and ecological implications. They also do not lead to sustained wealth of those living at the frontier. Many families continue to live under precarious situations at the fringes of the urban centres of many Amazonian municipalities or in the rural areas. About 46% of the population lives in extreme poverty (United Nations Development Programme 2003). In rural Pará this figure reaches about 60% (Verner 2004, 16). While certain development indicators improve in the early stages of transforming rainforests to other uses, pre- and post-frontier indicators are similarly low (Rodrigues, Ewers et al. 2009). An inequitable distribution of wealth aggravates this situation. The average Gini index of income distribution in 2008 in the Brazilian Amazon is 0.517 (Instituto de Pesquisa Econômica Aplicada 2011), the average Gini index of land distribution in 2006 is 0.792 (Instituto Brasileiro de Geografia e Estatística 2006, 109). Land concentration is likely to be even more pronounced. The illegal acquisition of land (*grilagem*) and the registration of land in the name of family members (The World Bank 1992, 172) or other agents (*laranjas*) (see, for example, International Advisory Group to the Pilot Program to Conserve the Brazilian Rain Forest 2004, 5) escape the statistics.

Explanations of land use change in general and tropical deforestation in particular highlight that the underlying reasons for deforestation are diverse (Rudel and Roper 1996; Rudel and Roper 1997; Leach and Fairhead 2000; Scouvart, Adams et al. 2007). They argue further that the reasons are rather to be found "at the underlying level, public and individual decisions largely respond to changing, national- to global-scale economic opportunities and/or policies, as mediated by local-scale institutional factors" (Geist and Lambin 2002, 149). This is a welcome departure from explanations that associate deforestation primarily with population growth and poverty (cf. Mather and Needle 2000). As a correlate of this

discussion, the applicability of general theories of deforestation is increasingly questioned. This critical discussion also includes political ecology (cf. Lambin, Turner et al. 2001, 266). Again, to the degree that theories aim at this objective, this position can only be embraced. Ontological considerations on causality show that social phenomena can be explained but not predicted (Sayer 1992; Little 1993).

In lieu of general theories, Lambin, Turner et al. (2001, 266) suggest to search for "regional 'generalities' of land-use and land-cover change that promise to improve understanding and modelling of critical themes in global change and sustainability studies." This chapter suggests that a political ecology of deforestation in Western Pará provides such a "regional generality." At the outset of this chapter, there are several lines of reasoning in support of this decision, which will be further substantiated later on. First, not wanting to question the significance of early political ecological contributions to understand deforestation (for example, Foweraker 1981; Schmink 1982), political ecology has developed further (see, for example, Forsyth 2003; Blaikie 2008; Bryant and Goodman 2008; Neumann 2008; Rocheleau 2008). Hence, it is questionable whether political ecology – whose boundaries are difficult to define anyway (cf. Blaikie 1999, 144) – actually pursues the objective to develop a generally applicable theory of deforestation. Second, the analysis of power in understanding resource use continues to be one of the hallmarks of political ecology (Bryant 1998). This is, third, highly relevant, as deforestation is also a process of appropriating valuable resources. In rural societies, in which agriculture or extractive activities are important economic activities, this process is unlikely to be erratic. In particular, if it occurs in societies characterised by severe inequalities, such as the Brazilian Amazon. Proceeding like this, this chapter maintains that one of the key concerns of political ecology remains valid: the focus on social relations in understanding resource use (cf. Neumann 1992). This is not to say that the relevant social relations are all the same in regions characterised by deforestation. However, it is a reiteration that social relations and the social positions that agents hold in these relations are important sources of power (Isaac 1987; Isaac 1992).[54]

This relational perspective does not only foster understanding of resource use, it is also key to comprehend the persistence of marginalisation of large parts of the rural society (cf. Green and Hulme 2005, 871). The relational understanding of resource use and poverty posits political ecology in relation to the question of structure and agency. In fact, many scholars within political ecology adopt a dialectical perspective on structure and agency (see, for example, Forsyth 2003). According to this conceptualisation, social structures are not cast in stone; they are malleable. However, they exert significant influence over agential scope of action. Hence, the objective of this chapter is to identify the social relations of the rural society in Western Pará that give rise to observed resource use patterns and the distribution of material resources. The chapter follows an inductive research approach that is described in the following section (4.2). This section also describes social structures – and social relations as one of their constituting elements – as the focus of the research presented here. The inductive research approach also structures the remaining sections. It sets out by describing prevailing resource use practices in Western Pará (4.3). This description serves as basis to derive social structures that contribute to the observed resource use pattern (section 4.4). The concluding section 4.4 outlines some theoretical and practical implications.

4.2 A Political Ecology Research Approach

If certain resource use phenomena persist in space and time, an approach is needed to capture agents' systematically different scope of action. Research presented here rests on the premise that social structures influence agents' scope of action regarding resource use. In this understanding, an observed resource use pattern, therefore, allows to draw conclusions on the social structures influencing resource use. To operationalize the concept of social structures, this chapter builds on Elder-Vass' (2007a; 2007b) conceptualisation of social structures.[55] It is a dialectical perspective on structure and agency that establishes causal powers of structures without denying agents' capacities to overcome them. Social structures are composed of agents, a relationship between them, and properties that result because of

this relationship. These properties are called "emergent" as they cannot be reduced to its constituent parts, which are the agents. It is because of them that social structures possess causal powers in their own right. The allocation of social positions within social structures is the key emergent property of social structures under consideration here.

To move analytically from land-use practices to social structures the paper follows Wuisman's "logic of discovery" (2005). This logic acknowledges that the different modes of inference deduction, induction, and abduction alone cannot account for the process of scientific discovery. The "logic of discovery" suggests that scientific discovery begins with an unexplained fact. In this paper, the unexplained fact C is the widespread occurrence of the illegal land use practices (illegal acquisition of public land and illegal selective logging). From this a cause A is abductively hypothesised (in this case, a social structure) that, if it were actually operating, would explain the fact. Bromley (2008, 2, my emphasis) presents the "abductive syllogism" in the following form: "The surprising fact, C, is observed: But if A were true, C would be a matter of course, hence, there is reason to suspect A is true." To build hypotheses at the level of social structures, an adaptive theorising approach (Layder 1998) was followed. This approach implies an ongoing dialogue between empirical findings and theoretical sources. Whereas the empirical findings directed the selection of theories, the abductively formed hypothesis represents a move from the consequent (effect) to the antecedent (cause) and, hence, it is necessary to analyse whether the hypothesised cause is actually operating – whether the social structure is in place. The second step in the cycle of discovery therefore involves operationalising the hypothesis. In the case at hand this implies identifying the elements of the social structure as described above. This step represents the deductive element of the "logic of discovery." Lastly, in the third step, an induction based on the empirical findings is made whether the observed fact can actually be understood and explained by the hypothesized cause (whether it fits with the elements deduced from the hypothesis).

Research followed the call to focus on "pathological" cases; cases in which social conditions are being challenged as they reveal what might normally be difficult to analyse (Danermark, Ekström et al. 2002, 104f). Field research in Western Pará focused on forest tenure processes. Forest tenure reform represents an attempt to secure the land rights of small settlers and traditional people (*populações tradicionais*).[56] Illegal logging and the illegal acquisition of public land (*grilagem*), the two resource use practices described below, gave rise to calls for forest tenure reform. From this perspective, they represent "pathological" cases, as they challenge the social context, which allows for the omnipresence of these resource use practices.

Data was collected during three field visits, which took place from 2006–2008 and in total 10 months of field presence. The main research methods applied are interviews (open-ended questions which aimed at generating narratives) that I recorded, participant observation, and participatory research exercises (primarily, participatory mapping). A systematic review of secondary sources complements primary data gathered during fieldwork. My interview partners were inhabitants of the areas subject to forest tenure reform, their Brazilian civil society partners, representatives of national NGOs, Brazilian researchers, and public officials. I conducted 69 interviews. About 80% were hold with representatives from the first two categories of interview partners. During my stays I worked, as far as possible, together with the local social movements. The findings obtained through participant observation mainly draw on this joint work. I discussed first tentative explanations with my research partners. Based on these discussions, I developed more specific explanations.

Data analysis began with paraphrasing the interviews remaining true to the language they used. In a next step, I produced case study reports in which I classified the data according to themes (e.g., agents, their strategies and relations among each other). Analysis proceeded by comparing these empirical findings with the deductively derived elements of the hypothesised social structure.

4.3 Grilagem and Illegal Logging in Western Pará: two emblematic resource use strategies

Intersected by the Transamazon highway (*Transamazônica*) (BR-230) and roughly framed by the highway Cuiabá-Santarém (BR-163) in the east and the river Xingu in the West, the region south of the Amazon encloses much of Pará's remaining rainforest. The seeming abundance of land and other natural resources continues to attract landless migrants, logging enterprises and large agricultural producers. They join an already highly diverse society, which

besides these groups encompasses several indigenous tribes (*populações indígenas*) as well as traditional people (Sobral Escada, G. Vieira et al. 2005; Fearnside 2008).

Their combined land-uses make the region one of the most active agricultural frontiers in the Brazilian Amazon. In the period 1990–2007 deforestation rates per year varied between 3,780 km² in 1991 and 8,870 km² in 2004. On average Pará contributed 36% to overall deforestation in the Legal Amazon (*Amazônia Legal*) region during this period (Table 4-1).

TABLE 4-1: DEFORESTATION RATES IN MATO GROSSO, PARÁ, RONDÔNIA, AND AMAZÔNIA LEGAL (1990–2007)

Deforestation Rates in Mato Grosso, Pará, Rondônia, and Amazônia Legal 1990–2009										
	90	91	92	93	94	95	96	97	98	99
Mato Grosso	4,020	2,840	4,674	6,220	6,220	10,391	6,543	5,271	6,466	6,963
Pará	4,890	3,780	3,787	4,284	4,284	7,845	6,135	4,139	5,829	5,111
Rondônia	1,670	1,110	2,265	2,595	2,595	4,730	2,432	1,986	2,041	2,358
Amazônia Legal	13,730	11,030	13,786	14,896	14,896	29,059	18,161	13,227	17,383	17,259
	00	01	02	03	04	05	06	07	08	09
Mato Grosso	6,369	7,703	7,892	10,405	11,814	7,145	4,333	2,678	3,528	1,049
Pará	6,671	5,237	7,510	7,145	8,870	5,899	5,659	5,526	5,607	4,281
Rondônia	2,465	2,673	3,099	3,597	3,858	3,244	2,049	1,611	1,136	482
Amazônia Legal	18,226	18,165	21,651	25,247	27,772	19,014	14,286	11,651	1,2911	7,464

(Instituto Nacional de Pesquisas Espaciais 2011).

Mainly from the municipalities Altamira, Novo Progresso, Santarém, São Felix de Xingu, Trairão and from the Transamazon highway agriculture advances further into the forest. Logging roads that criss-cross the region facilitate access. They cut through indigenous lands and conservation units (Asner, Broadbent et al. 2006).

Key agricultural activities that lead to deforestation are cattle ranching and soy plantations (Fearnside 2008; Malhi, Roberts et al. 2008). Soybean production in Pará mainly takes place in the Santarém region but is also expanding to municipalities at the north of the river Amazon like Alenquer, Monto

Alegre, Oriximiná, and Prainha (Fearnside 2007, 605). Despite of this regional focus, soy is increasingly becoming a driver of deforestation in other parts of Pará as well. Associated planned infrastructure investments attract migrants and lead to land speculation (Fearnside 2002a; Fearnside 2007). Further, cattle is being relocated to Pará to transform former pasture into soybean plantations in other regions of Brazil (Nepstad, Stickler et al. 2006, 1598; Smeraldi and May 2008b, 13b). Agricultural production responds to changing world market conditions. Recent studies find a correlation between soy bean price and deforestation in Mato Grosso; the state with the largest soy production in the Brazilian Ama-

zon (Morton, DeFries et al. 2006). Other studies confirm world market influence on cattle production (Nepstad, Stickler et al. 2006). Since Pará was declared a foot-and-mouth disease free region in 2004, exports surged. In terms of weight, Pará increased its exports by 7,800% from 2004–2008 (Smeraldi and May 2008a).

Case studies analysing the agents of deforestation in the region underline the general assessment that large property holders are the principal agents of deforestation in the Brazilian Amazon.[57] Godar (2008) analyses four municipalities along the Trans-amazônica (Anapu, Brasil Novo, Medicilândia, and Pacajá) characterised by colonisation schemes which were implemented from the 1970s onwards. His study shows that 77% of the deforestation occurs on agricultural holdings larger than 100ha. Deforestation on plots of up to 100 ha is 28 ha on average. Field research on land use by traditional populations provides further evidence along these lines. About 85% of the families deforest up to 30 ha.[58]

The acquisition of forested land for agricultural purposes does not lead to a more equitable distribution of land. In 1960, agricultural holdings of less than 100ha represented 88.73% of all agricultural holdings and occupied 25.63% of the area under cultivation. In 2006, after about four decades of settlement policies in Pará, agricultural holdings of less than 100ha represent 82.21% of all agricultural holdings and occupied 18.38% of the area under cultivation. That is, the proportion of agricultural holdings of less than 100ha declined about 10%, while the proportion of land that is covered by them declined about 30%. These trends occurred although the area under cultivation increased from 1960–2006 for about 400% (Instituto Brasileiro de Geografia e Estatística 1996; Treccani 2001, 431; 2006, author's calculation).

Land conflicts are more pronounced in the Brazilian Amazon region in comparison to the rest of Brazil. The same applies to the comparison of Pará with the other states *(unidades de federação)* that comprise the Brazilian Amazon. Table 4-2 provides data on the land conflicts in the Brazilian Legal Amazon as reported by the Pastoral Land Commission *(Comissão Pastoral da Terra, CPT).*[59]

TABLE 4-2: LAND CONFLICTS IN THE LEGAL AMAZON.

Land Conflicts in the Brazilian Legal Amazon 1997–2008		97	98	99	00	01	02	03	04	05	06	07	08
Land conflicts	Amazon	160	125	171	112	265	278	460	359	519	421	388	283
	Pará	60	37	56	53	115	110	136	104	183	151	138	101
	%	38	30	50	47	43	40	30	29	35	36	36	36
Death threats	Amazon								194	192	182	207	64
	Pará								98	91	118	75	35
	%								51	47	65	36	55
Attempted assassinations	Amazon								31	29	35		26
	Pará								22	16	8		8
	%								71	55	23		31
Assassinations	Amazon	14	24	14	8	14	26	57	20	24	32	14	20
	Pará	12	12	9	5	8	20	33	15	16	24	5	13
	%	86	50	64	63	57	77	58	75	67	75	36	65

Source: Comissão Pastoral de Terra (2010).

The first row gives the total number of land conflicts in the Legal Amazon region (including Pará). The two following rows highlight the total number as well as the percentage of land conflicts that occurred in Pará. The table demonstrates the gravity of these problems in Pará. With the exception of the year 2007, 50% or more of the assassinations in land conflicts occurred there.

4.3.1 Grilagem

Brazil lacks a central land register (Barreto, Pinto et al. 2008, 12). This opens up many possibilities for illegally acquiring public land (*grilagem*). According to the White Book on Grilagem published by the Brazilian Federal Land Reform Agency (*Instituto da Colonização e Reforma Agrária, INCRA*), *grilagem* is defined as an illegal act that transfers public lands into private hands.[60] Grilagem is a ubiquitous problem in the Brazilian Amazon. INCRA's White Book on grilagem attributes an 85% share of the area subject to grilagem to the Amazon region (Instituto da Colonização e Reforma Agrária 1999).[61] A recent study finds that private land registries issued titles above the size of 2,500 ha (areas larger than 2,500 ha are subject to authorization by the National Senate) which sum up to roughly 490,000,000 ha or about four times the actual size of the state of Pará (Comissão Permanente de Monitoramento Estudo e Assessoramento das Questões Ligadas à Grilagem 2009). Only the construction firm "Construtora Cecílio do Rego Almeida" (CR Almeida) alone claims to be the owner of 6 million hectares in the "Terra do Meio,"[62] one of the last areas in Western Pará that holds large connected areas of primary rainforest (Amorim da Silva 2007, 145ff).

The process of grilagem begins with the identification of an area of interest by a so-called "empreendedor", a financially well endowed agent whose fortune derives from, for example, logging, ranching, or retailing.[63] Then, the "grileiro" acquires control over the area of interest. Normally, this is not done by the "empreendedor" but by a "preposto" who is hired for this particular purpose. Depending on whether the area is physically occupied by other inhabitants, the preposto applies different measures to gain control over the area. In case it is not occupied the preposto delimits the area and controls access to it by putting up fences or gates on access roads. If the area is already occupied, the preposto obtains control over the area by buying it, producing false land documents, such as invalid old land use (*sesmarias*) or rubber concessions (*seringais*). Intimidation of inhabitants is another frequently occurring practice.

Although the resident population sometimes cooperates with the grileiros (in particular in very remote areas where grileiros offer otherwise absent employment opportunities), land sales do not always occur voluntarily. There are several ways by which smallholders got evicted from their land. In the municipality of Anapu, for example, a rancher bought a lot from a settler. By the omission of fencing this lot, his cattle also grazed on the neighbouring lots destroying the crops planted there. Distress sale of lots by the neighbouring farmers followed subsequently. Distribution of grass seeds to create pasture on the land of smallholders by plane was a different measure to force the sale of land. At another occasion (municipality of Porto de Moz), grileiros included the lot of a river dweller in the contract in which the latter sold the commercially valuable timber that located on his lot. High illiteracy rates facilitate such fraudulent procedures.

Appropriation of the areas often occurs as well through less subtle forms of violence, such as intimidation (by, for example, a grileiro approaching the river dweller in company with several armed men "asking" him to sell the land), death threats or destruction of homesteads (Instituto Socioambiental 2005). Although those who suffer from grilagem report prepostos for their acts, local police often do not investigate the charges. Time and again, the military police[64] (*policia militar*) even acts on behalf of the grileiros. Members of the military police of the state of Pará appeared on the payroll of CR Almeida's company Incenxil and are paid by those who call themselves owners of the land for their services rendered, such as the expulsion of those who occupy the area subject to grilagem (Instituto de Pesquisa Ambiental na Amazônia 2006, 27f). The Federal Inquiry Commission which accompanied the investigations into the assassination of Sister Dorothy Stang found that the military police acted on behalf of grileiros. Within the area of the Sustainable Development Project (*Projeto de Desenvolvimento Sustentável, PDS*)

Virola-Jatobá military police invaded lot 124 in 2004, intimidated inhabitants, and destroyed their houses. At another occasion, the commissioner of the superintendence of the civil police of Altamira (*Superintendência de Policia Civil de Altamira*) facilitated the operation of a private security firm which was acting on behalf of grileiros (Senado Federal. Comissão Externa "Dorothy Stang" 2005, 15, 19). Torres (2005, 293f) provides a similar report from the municipality of Castelo dos Sonhos, where the military police knowingly protected the land claims of a rancher who illegally occupied public lands. This type of collaboration of the military police is not restricted to the process of grilagem. Guarding the transportation of illegally cut timber is another example.

Lastly, the grileiro obtains the legal documents for the area. This process often begins at the local notary's offices (*cartórios*). The employees or owners of these notaries' offices often register the areas without checking the validity of the claim or without cross-checking with other land titles registered in other notaries' offices. This process might even involve knowing compliance by those responsible for the registration. Then, the grileiro hands in this land register at the responsible federal (*Instituto Nacional de Colonização e Reforma Agrária, INCRA*) or state agency (*Instituto de Terras do Pará, ITERPA*) with the aim to obtain a certificate which cadastres the land (*Certificado de Cadastro de Imóvel Rural, CCIR*). Already the document proving that the process of obtaining a land cadastre has begun (*protocolo*) serves to access credit and to enter into other commercial operations (di Sabatto 2001, 23; Instituto Socioambiental 2006).

Several lines of evidence lend credence to the point that overwhelmingly financially well-endowed agents practice grilagem. The process of grilagem involves costs which are difficult to bear by smallholders who often find it hard to use their little cash for travelling to the closest town let alone to Belém, the capital of the state of Pará. The same applies to the necessary contacts within the land agencies which are difficult to establish by smallholders. An INCRA study published in 1999 confirms these considerations for the Legal Amazon region in general. In December 1999 INCRA notified all those who registered land areas of 10,000 hectares and more to

present the necessary land documents. Those supposed owners who did not report back are considered to have illegally acquired the land they registered. According to this study, 207 landholdings in Pará are subject to grilagem (or 0.28% of the total number of land holdings). They represent 34.4% of the total area registered as private land holdings in Pará (di Sabatto 2001, 6).[65] Case studies confirm this general pattern. A report of the rural labour union and by the catholic church of Porto de Moz on grilagem within the municipality of Porto de Moz lists municipal politicians, local and regional logging companies as well as owners of retail stores as the principal agents of grilagem (Sindicato dos Trabalhadores Rurais and Paróquia de São Braz de Porto de Moz 2001). Grilagem within the area which is the Extractive Reserve "Riozinho do Anfrísio" (municipality of Altamira) was practised by groups which come from Mato Grosso (principally Sinop) and Southern Brazil as well as logging companies from neighbouring municipalities (Amorim da Silva 2007, 149). Other case studies support this finding for Western Pará in general (Greenpeace 2003, 22ff, 34ff; Sobral Escada, G. Vieira et al. 2005; Instituto de Pesquisa Ambiental na Amazônia 2006, 27, 40).

4.3.2 Illegal Logging

Grilagem has close ties with the illegal extraction of timber. Ownership of an area is a precondition to apply for a timber management plan. In the absence of a management plan, the extraction of timber occurs illegally. Hence, one of the key motivations for acquiring false land titles is to access logging grounds (di Sabatto 2001, 23; Instituto de Pesquisa Ambiental na Amazônia 2006, 33). Comprehensive information on the extent of illegal logging and the actors involved is difficult to obtain. An analysis of the years 2000–2002 that covers the federal states Acre, Mato Grosso, Pará, Rondônia, and Roraima finds that an area equivalent to 60–123% of the reported deforested area per year is subject to selective logging (Pará: 51–102%) (Asner, Knapp et al. 2005, 480). Estimates on the extent of illegal logging vary between 60–80% (Sabogal, Lentini et al. 2006, 24; Volpi 2007, 15; Greenpeace 2008, 5). A recent study on the state of Pará finds that 89% of the area subject to selective logging was exploited illegally between May 2007 and December 2008 (Monteiro, Cardoso et al. 2009).

Several factors contribute to this high degree of illegality. The federal institute for the environment (*Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis, IBAMA*) which is responsible for monitoring timber extraction lacks the human and financial resources to operate in a vast region like the Brazilian Amazon. Currently, IBAMA has about 1,400 officials working in the Legal Amazon region to monitor an area of roughly 5 million km² (Amigos da Terra 2009b). Further, the infrastructure is inadequate to operate in this vast region. IBAMA in Altamira, for example, does not have a helicopter. Even if the national monitoring system that detects deforestation in real time signals a hot spot, IBAMA does not have the means to act. At locations that would be crucial for monitoring timber transport, IBAMA does not have a base (Fearnside 2007, 611).

In addition, there are frequent reports of corruption of IBAMA officials (Instituto de Pesquisa Ambiental na Amazônia 2006, 51f), which are even confirmed by the organisation itself (Amigos da Terra 2009a). Besides their informants within IBAMA, loggers also pay people to monitor access roads. When IBAMA arrives, they inform the loggers to enable them to hide machinery, block access roads or perform other activities that prohibit the proper execution of the supervision operation by IBAMA. Another aggravating factor is the often slow response to reports by IBAMA. In December 2007, for example, logging companies invaded the PDS Virola-Jatobá and withdrew about 5,000 m³ of timber. It took two months until IBAMA together with the federal police inspected the area. At that time, the loggers had already left.

When action is being taken to actually restrict illegal logging, the logging sector can often successfully acts against it. In 2004, the Ministry of Agrarian Development (*Ministério do Desenvolvimento Agrário*) decided to abolish logging concessions of those enterprises which did not hold legal title to the land subject to exploration. Subsequently, logging enterprises blocked the federal highway BR-163 and the Government abandoned the plan (Senado Federal. Comissão Externa "Dorothy Stang" 2005, 9). In Guarantã de Norte (Mato Grosso, at the border with Pará) the local mayor announced that he will be more proactive regarding environmental questions.

A few months later the head of the National Fund for the Environment (*Fundo Nacional de Meio Ambiente*) was taken hostage by loggers in the very same town. He was not released until the mayor agreed not to create two further reserves (Fearnside 2007, 606f). Threats against officials who conduct efficient monitoring missions are frequent as well (ibid, 606, 611).

Even if IBAMA imposes a fine on a malfeasant for an environmental crime (such as illegal timber extraction or deforestation), only a very small fraction of the fine is actually paid. Barreto, Mesquita, and Mercês (2008, 13) arrive at the figure of 2.5% of the value of the fines imposed which has actually been collected.[66] One reason for this is lengthy judicial processes in which malfeasants can enrol the State. Barretto, Araújo, and Brito (2009, 13) recently analysed impunity of environmental crimes committed in federal Conservation Units in Pará covering 46 cases. They found that only 14% resulted in a conviction (ibid, 25).

4.4 On the Underlying Social Structures

The organising principle of this section is the analytical steps of the "logic of discovery" as outlined earlier. This section advances explanations – in terms of underlying social structures – for the resource use practices described above. Two social structures are at its core: clientelism and the selective state. Each of these subsections proceeds by first describing the elements of the particular social structure and then provides empirical evidence in support of the hypothesised social structure.

4.4.1 Clientelism

The patron-client relationship is an asymmetric reciprocity relationship between individuals or groups of different economic, social, or political standing. Besides reciprocity and unequal status, scholars of clientelism highlight the following constitutive characteristics of patron-client relationships: personalised ("face-to-face") and flexible relationships (Powell 1970; Scott 1972). Reciprocity distinguishes patron-client relationships from other relationships, such as coercion or authority. It implies that both patron and client provide something of value to the other. The patron usually benefits more from the relationship, hence its asymmetric character. The relationship between patron and client is personal and leads to trust between the two agents. Due to the variety of ties and obligations that characterise a patron-client relationship, this relationship is highly flexible. It involves the "whole person" as opposed to an "impersonal-contract bond" (Scott 1972, 95). In the political sphere, clientelism involves political support of the patron by the clients in exchange for benefits like jobs or small infrastructure investments (Roniger 2004, 354). Applying the emergentist terminology outlined earlier, the social structure clientelism comprises the following elements: two types of agents each offering something which the other needs. They enter a relationship from which one of the agents benefits more. The causal mechanisms that tie the two together are dependency on each other to acquire desired benefits and reciprocity.

The poverty indicators provided earlier demonstrate that many rural regions in Pará are characterised by an impoverished smallholder population and a small segment of the rural society which has prime access to tangible assets and owns much of the wealth. At the same time, the presence of the State is often limited. This does not only refer to the enforcement of human or environmental rights but also to the availability of basic social services. Access to education, health services, or even the transport system is often very limited. In these situations, loggers and ranchers are often the only actors who have the financial resources to provide communities with some of these services. Frequent examples are the construction of access roads, the transfer of sick family members to the hospital, or the distribution of tangible assets such as gasoline or a small generator. Besides these services, ranchers and loggers offer some employment opportunities. Due to the lack of public services, families remain dependent on those who can privately afford to offer these services. As a result, smallholder families become dependent on economic elites. Although beneficial in the short run from the point of view of the families who enter these relationships, the relationship remains asymmetrical in the long run. In exchange, families, for example, accept the withdrawal of commercially valuable timber from their land. Ranchers and loggers also establish relationships with community leaders who do then articulate the requests of the aforementioned agents within the communities. Many of the traditional families who already live in the area which might become the PDS Ademir Federicci in the municipality of Anapu depend on the ranchers and the logging enterprise present in the area. They do not act against these groups, although the logging company illegally claims to be the owner of the commercially valuable hardwood and ranchers foreclose access to hunting grounds or areas formerly used to collect non-timber forest products.

Another variant of this relationship occurs between loggers and settlers in land reform projects (*projetos de assentamento*) established by INCRA. A key challenge for the settlers within the agrarian reform settlements is poor access to services (for example, health, education, or production related services such as credit). The settlers are being used by the logging enterprise to apply for a timber management plan. During the required inventory irregularities take place and species are being incorporated in the

management plan that do not exist in the area subject to the plan or not in the particular volume. These management plans do then serve to legalise (*esquentar*) logs withdrawn elsewhere.

Other studies corroborate the prevalence of clientelistic relationships for other regions of Western Pará. An analysis of the frontier dynamics in the São Felix de Xingu region finds: "Often economically and socially dependent on the large grileiros these groups [small settlers] are extremely vulnerable to political instrumentalisation" (Rede Geoma 2004, 6).

These types of dependency relationships also occur between politicians and smallholders. During political campaigning periods, politicians, for example, construct schools or install generators for the communities. In one of the communities in the municipality of Porto de Moz, for example, these ties are maintained although the mayor that provided these services some years ago nowadays illegally appropriates the land of the community. Political clientelism also appears in the form of buying votes, which is an omnipresent phenomenon in the region.

Returning to the emergentist terminology, through relationships such as those described above the economically better-off agent acquires a social position that allows him to practice desired activities. This emergent property might take the form of the ability to carry out the intended illegal resource use strategies without having to fear resistance by small settlers or traditional people. They enter these clientelistic relationships to access minimal social services provided by loggers or ranchers. There is another reason for the widespread existence of these relationships. Clientelistic relationships have a long history in the Amazon (Bunker 1984; Hurrell 1991) and in the regions of origin of poor migrants from the Northeast that settle in the Amazon (Roniger 1987). Many smallholders have already been socialised within these clientelistic relationships. The existence of somebody who is superior to oneself has become somewhat natural. The self-attribution of an inferior position by smallholders vis-à-vis economically better-off actors during my interviews provide a vivid account of this phenomenon.

4.4.2 The Selective State

Illicit resource use practices signify a violation of property rights. Although small settlers and traditional people often do not hold a title of their land, they do not settle illegally. Often, they live on the land by rights of possession (*direito de posse*) (on posse, see Foweraker 1981, 112–114). Due to the lack of title, the land is still registered as public land. Hence, the term grilagem is also applicable in these cases. Property rights can be defined as "the capacity to call upon the collective to stand behind one's claim to a benefit stream" (Bromley 1991, 15). At its core is the relation between a rights holder, a duty bearer, and a benefit stream subject to the right. Two aspects of property rights are key here: (i) the relation between actors regarding a benefit stream and (ii) the reference to a third party. A right is only a right, if it is accompanied by corresponding duties (ibid, 16ff). Similarly, without a third party protecting a claim to a benefit stream, a right is likely to be weak. To have a right or to be obliged to carry a duty are social positions allocated within the relations constituting a property right.[67] Violation of property rights becomes possible when the entity responsible for enforcing them does not fulfil its role.

Due to the close ties between economic elites and municipal administrations, economic elites obtain a social position that allows them to influence political decision-making and to use the State apparatus for their purposes. Returning to the emergentist terminology, one type of agent is the economic elite operating within the municipalities and the other type of agent might be a private agent (such as a smallholder) or the general public (in case of the violation of land rights hold by the state). The relationship emerges (the underlying causal mechanism), because the entity that might enforce property rights is acting on behalf of the economic elite. The following paragraphs first provide an account of the selective State on municipal level and then turn to selective access to other organs of the State.

The Selective State on Municipal Level: A Representation of Vested Interests

There is ample evidence for the close ties that exist between municipal politicians and economic elite. Often, members of the economic elite act as officials within the municipal administration. Participatory mapping exercises in Porto de Moz reveal municipal politicians as claimants of substantial areas and involved in the illegal extraction of timber at the right hand side of the river Xingu. Some of this timber is cut in the federal conservation unit called "National Forest Caxiuana." The former mayor of Porto de Moz supported the operation of large logging companies in the municipality. Many of these operations infringed upon the land and the forests used by the traditional people living in the area. In exchange, the logging companies financed his election campaigns. One of the members of the civil society of Porto de Moz describes the situation like this: "At that time, timber decided the elections." In Medicilândia, an ex-president of the rural workers trade union (*Sindicato dos Trabalhadores Rurais, STR*) receives death threats from a council member who is involved in illegal logging. The ex-president has frequently reported these illegal activities.

The co-operation between loggers and ranchers and municipal administrations became most obvious when the smallholders began to strive for forest tenure reform. Except for Medicilândia, the mayors and the large majority of the council members in the municipalities in which the case studies are located openly acted against forest tenure reform. In 2002, the mayor of Prainha organised a transport of some 600 people living in the urban areas of the municipalities Monto Alegre and Prainha to disturb a meeting intended to discuss the creation of the Extractive Reserve "Renascer." Only because of the protection by the military police (which participated in order to protect the IBAMA officials present at the meeting), were those arguing in favour of the creation able to leave the locality securely. Also in 2002, a group that included city council members and their relatives attacked members of the civil society of Porto de Moz. Due to the work of the Federal Inquiry Mission to accompany the investigations into the assassination of the nun Dorothy Stang, Anapu is a very well documented case in this regard. The mission concluded that "the thesis that there is a net of supporters for the one who ordered the killing (*mandante*) is nearly unrejectable" (Senado Federal. Comissão Externa "Dorothy Stang" 2005, 32). A key public official within the municipality of Anapu is mentioned in the report as being part of the "net of supporters."

There are two reasons for the permanence of the influence of the logging and ranching sector on municipal administrations. First, there is the structure of party financing. Brazilian legislation allows for a mix of public and private party financing. In times of elections, private party financing assumes high importance, as a good part of public financing is indirect, like free time for advertisement on public broadcasting (Costa 2008, 125). Campaigning relies very much on personal visits of the electorate by the candidate. In rural areas of the Amazon, this activity is quite costly. Given that principal economic activities in many municipalities are ranching and logging, private party financing by these sectors is a key source of income for the political parties. At the same time, electoral authorities are not able to control receipts and spending of the parties. In practice, only a small fraction of the private donations are declared which makes exchanges of favours likely (ibid). Second, the creation of new municipalities is partly responsible for the continuing influence by these economic groups on municipal administrations. The new constitution of 1988 devolved the authority to establish new municipalities from the federal to the state level. In effect the number of municipalities rose substantially. A quarter of all Brazilian municipalities that existed in 2000 were established in the period 1988–1997. In the Legal Amazon the increase was still more pronounced. 41% of the municipalities that existed in 2000 were created during the aforementioned period (Toni 2006, 38f). Often, those who became members of the municipal administrations had strong ties with the logging or the ranching sector. Their position within theses administrations then allowed them to access federal fiscal transfers to the municipal governments (on fiscal transfers to municipalities, see Kaimowitz 2002). This further strengthened their position and allowed them to broaden their resource use activities (for the example of Anapu, see Instituto de Pesquisa Ambiental na Amazônia 2006, 31ff).

Toni (2007) corroborates these findings in his analysis of the professional background of elected mayors in the municipal elections 2000 and 2004. He found that about 62% of the elected mayors for whom he could obtain information on the professional background were ranchers or loggers (ibid, 8; author's calculation). In a different study, he concludes (2006, 39): "In fact, many Amazonian municipalities are directly controlled by loggers operating in illegality, ranchers responsible for large areas of illegal deforestation, grileiros and their prepostos."[68] The representation of these groups within the city councils influences national level agencies' attempts at enforcing environmental legislation. In 2008/09, IBAMA implemented the so-called operations "Boi Pirata 1 and 2" to withdraw cattle from illegally deforested areas in the federal conservation units "Estacão Ecológica da Terra do Meio" and "FLONA de Jamanxim". These met heavy resistance by local politicians who organised demonstrations against the operations and openly voiced threats against the IBAMA officials. Resistance to these operations by politicians is not restricted to the municipal level. Politicians at the federal level associated with these sectors argued against these operations as well (Macedo 2008; Bonanome 2009). The group of agricultural lobbyists, the so-called "Bancada Ruralista", comprises 20–25% of the members of the Brazilian Congress (The Economist 2009).[69]

Selective Access to Other Organs of the State

Superior access to State authorities is not restricted to the municipal administrations only. It also extends to other organs of the State. The underlying principle – absence of a third party to call upon in case rights are being violated – remains.

Smallholders living in or close to the areas subject to illegal timber extraction reported that even if they report the illegal activities, IBAMA officials are not able to arrest anybody. The explanation given by them is that IBAMA officials are bribed by loggers to inform them beforehand, if an IBAMA operation is about to take place. Furthermore, loggers are often even informed who reported their activities, making a report very risky. Members of the civil society commented that if IBAMA is to actually conduct an effective supervision mission, it needs to make use of federal police from other states and to use helicopters that are registered outside the region in order to avoid that information on the operation leaks out to logging companies. Research revealed two causal mechanisms responsible for the selective access: corruption (see, for example, Instituto de Pesquisa Ambiental na Amazônia 2006, 51f; Amigos da Terra 2009a) and ties between public officials and politicians. The latter can emerge because of a process that is called "apadrinhamento politico." A politician (who then becomes the *padrinho*) protects and fosters a public official and assists him or her in acquiring an influential position within the administration. In times of need, the padrinho can then count on the public official.

Similar trends can be observed regarding INCRA and ITERPA activities. Whereas the implementation of land reform projects proceeds slowly, members of the economic elite at times enjoy preferential treatment by officials of these entities. ITERPA officials are being accused of selling land parcels within the municipality of Santarém despite the fact that the communities living in the area have long requested ITERPA to regularise their lands (Instituto de Pesquisa Ambiental na Amazônia 2006, 37). An analysis conducted by Greenpeace (2007) revealed that the regional superintendence of INCRA in Santarém (*Superintendência do INCRA*) has entered so-called

"Private-Public Partnerships" with logging enterprises. These foresaw the implementation of settlement projects of the type PDS in areas of interest to logging companies. The logging companies agreed to construct access roads to the areas and construct basic communal infrastructure. In exchange, they could exploit the timber of commercial interest in these areas with the permission of the responsible INCRA office. In the process, no family was actually settled in these areas. Furthermore, by proceeding like this, INCRA violated its own regulations for constructing settlement projects. As in the case of IBAMA, selective access is also associated with the exercise of corruption (Instituto de Pesquisa Ambiental na Amazônia 2006, 49ff). The Santarém case points to another causal mechanism at work. INCRA often lacks the necessary funds to carry out its activities. An indicator for its performance is the number of families settled. These families enter the national land reform statistics already at the moment they are being registered by INCRA *(relação de beneficiário da reforma agrária, RB)*. This does not imply that they have actually been settled. This context may give rise to the motivations of INCRA officials to enter agreements such as the one described above.

There are also indications of selective access to the judiciary and the associated organs responsible for the proper investigation of crimes. The Instituto de Pesquisa Ambiental na Amazônia (2006, 42) gives account of the first process against CR Almeida that was initiated in 1999. The respective file disappeared for one year in the responsible court and reappeared a year later with a decision in favour of CR Almeida. Selective access to the judiciary also occurs in the case of human rights violations. In the period 1972–2005, 772 smallholders, landless people and lawyers and civil society members affiliated with these groups were assassinated in Pará. Only three of those who ordered the killings *(mandante)* were convicted in the same period. In 2005, in several municipalities in older frontier regions like Marabá (37 assassinations), São Geraldo de Araguia (49 assassinations), and Xinguara (76 assassinations) none of the assassinations was finally judged upon. The same holds true for São Felix do Xingu (47 assassinations) at the eastern border of the "Terra do Meio." Further, there were 30 murderers who were sentenced but the police did not deploy any means to

actually arrest them (Sauer 2005, 43, 45f). This is not a recent phenomenon in rural Pará. An assessment by Amnesty International (1988, 63) of the violence in rural areas of Brazil and the actions of the State against it finds: "(...) that the number and frequency of the cases strongly suggest that these obstructions [the non-adherence to the regulations for investigations] are systematic and not eventual or sporadic and that they are part of a deliberate policy to impede the effective application of the law." About ten years later, in 1997, the Inter-American Commission on Human Rights concluded in its assessment of land ownership and the rights of rural workers "Reliable information that the Commission has obtained indicates that the judiciary of the state of Pará operates so as to facilitate impunity and the continuation of organized crime in southern Pará" (1997, chapter 7, paragraph 42).

4.5 Conclusions

Political ecology suggests a relational understanding of resource use. One way to operationalize this understanding is to focus on the social structures that give rise to observed resource use phenomena. These social structures are important sources of power and disempowerment. Two resource use practices are characteristic of frontier dynamics in Western Pará: the illegal acquisition of public land (*grilagem*) and illegal logging. They are responsible for high levels of rural violence, environmental destruction and lead to the concentration of resource access in the hands of few. This chapter advances that the social structures clientelism and the selective State are characteristic of Western Pará. Together these social structures systematically place small settlers and traditional people in an inferior social position vis-à-vis loggers and large ranchers. These findings hold some lessons on explanations of frontier dynamics in Pará and measures to curb deforestation.

In particular in the Brazilian discussion, the frontier dynamics described above are often attributed to the absence of the state (*ausência do estado*) (see, for example Machado 2009). While this term properly describes the general lack of responsiveness of the organs of the State to claims by small settlers or traditional people, the term is analytically inadequate. The State is not absent; it deploys its means highly selective. The role of municipal administrations described above is one example of this selectivity. These municipal administrations, which apply their resources in support of the logging or ranching sector, are everything but absent. It is further insufficient to capture these phenomena under the heading corruption (cf. Bulte, Damania et al. 2007) – although corruption plays a role. The decisions taken within the different organs of the State reflect the balance of power and the significant influence that large agricultural producers and, more regionally focused, loggers exert in Brazilian politics. This should not be limited to a question of corruption but should rather be described as situation of elite capture of the state apparatus.

The findings presented here provide ample support for the relational approach to understanding resource use suggested by political ecology. Those who find political ecology a less promising analytical approach in frontier (Lambin, Turner et al. 2001, 266) or post-frontier settings (Browder, Pedlowski et al. 2008) tend to define the focus of political ecology in a rather restrictive way. They build on early political ecologists (such as, for example, Schmink 1982; Schmink and Wood 1992) and tend to equate political ecology with a focus on "capitalist penetration" or how "capitalist-based structures" influence land-use change. However, more recent writings on political ecology emphasize the variety of social structures. "Because of the fragmented nature of control (...) people cannot be divided neatly into classes, as in a traditional Marxist frame. Various types of power relations around a given set of benefits and beneficiaries must be analysed to understand these webs of access" (Ribot and Peluso 2003, 159). This implies more localised theories of frontier dynamics, as called for by Browder, Pedlowski et al. (2008, 1488). However, it is questionable whether "local agency, institutional histories, and the actions of individual people" that "create unique local contexts in which the driving forces of change are played out with considerable variability between places" (ibid) will generally lead to a more equitable distribution of power and resources. The evolution of property in Pará cautions hopes in this regard.

Although not elaborated here, political ecology also offers a way to conceptualise the high level of violence in the Brazilian Amazon and Pará in particular. Peluso and Watts (2001, 5) suggest to "see violence as a site-specific phenomenon rooted in local histories and social relations yet connected to larger processes of material transformation and power relations." An analysis of land conflicts in Western Pará from this perspective seems to be an analytically promising avenue. The intersection of a history of impunity of crimes committed in land conflicts with the surge in beef exports offers, *prima facie,* preliminary evidence along these lines. This need not be restricted to murder. There is also a spatial overlap of the "arc of deforestation" and the occurrence of labour in slave-like conditions (Reimberg 2009).

In the context of Western Pará, forest tenure reform becomes an urgent policy priority (cf. Larson, Barry et al. 2010a). The recognition of property claims by small settlers and traditional populations would be a first step towards a reordering of rural social relations. Through forest tenure reform the state would begin to assume its responsibility for the marginalised parts of the rural population. Like other types of agrarian reform, forest tenure reform is likely to require the sustained support by the State to succeed. As the Instituto Pesquisa Ambiental na Amazônia (2006, 42) in its assessment of *grilagem* concludes: "[T]he fight against illegal land appropriation (*grilagem*) and violence in rural areas can not be seen as a short term policy (...). What is at stake is, (...) the construction of a public space based on democratic relationships or the continuation of the tenurial, political, and institutional chaos that prospers thanks to an economy of depredation of natural resources." Political ecology has a lot to offer in understanding the reasons for deforestation and, therefore, the obstacles to reform.

Local power constellations reflect in the struggle for the recognition of resource rights. Logging activities in Pará.

5. Struggles for Recognition in the Brazilian Amazon: an agrarian perspective on resource governance in Western Pará

5.1 Introduction

Since Elinor Ostrom wrote her seminal book "Governing the Commons" (1990) much analytical attention is paid to the collective governance of land and other natural resources.[70] Research conducted in this vein shows that common pool resources – resources characterised by rivalry in consumption and the difficulty to exclude users – can be sustainably governed by their users. Hardin's famous metaphor of "the tragedy of the commons" has been proven to be a rather particular case amongst many others (Ostrom 2007). Scholars advance certain conditions suggesting the cases in which collective governance of common pool resources is likely to be successful. Among them are clearly defined boundaries of the resource and the ability of its users to defend these boundaries against outsiders (Ostrom 2005b, 259, 262). As Dietz, Ostrom, and Stern (2003, my emphasis) summarise "locally evolved institutional arrangements governed by stable communities and *buffered* from outside forces have sustained resources successfully for centuries (...)." Although the aforementioned article is titled "The Struggle to Govern the Commons" (ibid), an analysis of how and under which conditions resource users are able to achieve this "buffer from outside forces" is missing. This is a puzzling omission, given the manifold examples of dispossession of smallholders from economically valuable (common pool) resources. Eviction of rubber tappers in Brazil and their subsequent struggle for recognition of their claims to resources by the state is one among the well-documented examples (Almeida 2002). Vulnerability of smallholders "does not just fall from the sky" (Ribot 2009), neither does its opposite. Analyses of common pool resource gover-

nance omitting these processes run the risk of producing a truncated account of what is at stake when smallholders are to become rights holders over common pool resources.

Accordingly, there have been calls to consider power more prominently in the analysis of common pool resource governance (Haller 2007; Hara, Turner et al. 2009). Some authors propose a more explicit treatment of the role of power within well-established analytical frameworks in governance research (cf. Mwangi and Markelova 2009), yet others argue for a different perspective on common pool resource governance. Sikor (2006) and Mollinga (2007), for example, advance a relational approach to the analysis of common pool resource governance. Property rights scholars have long pointed out that property is not just a physical object but a set of relations between members of a society regarding an object (Von Benda-Beckmann 1995, 312) or a benefit stream (Bromley 1991, 15). Further, property is about societally recognised claims (cf. Sikor and Lund 2009). In the absence of property, actors nevertheless access resources (Ribot and Peluso 2003). Hence, establishing secure rights for smallholders to land and other natural resources often requires remoulding the relations between smallholders, other agents, and the State. This implies that governance is also about the distribution of land and power in rural societies (cf. Borras Jr and Franco 2010).

The analysis of rural social relations and their change is the hallmark of agrarian change scholarship.[71] Building on the insights offered by this school, the chapter argues that an agrarian change perspective yields valuable insights into common pool resource

governance which are often not dealt with in studies of collective action for communal resource governance.[72] The chapter builds on case studies of forest tenure reform in Western Pará in the Brazilian Amazon. To understand the process of agrarian change the chapter advances a conceptual map of power (section 5.2). The subsequent section 5.3 briefly introduces the methodology followed. Section 5.4 describes case study findings. The presentation of findings follows stylised phases of forest tenure reform: mobilisation for forest tenure reform, taking the struggle to other fora, and momenta of responsiveness by the State. The process of agrarian change is then analysed from the perspective of power (section 5.5). Section 5.6 draws conclusions regarding communal resource governance.

5.2 Establishing Rights to Resources: a question of power[73]

Characterising the context of agrarian change, Borras and Franco (2010, 22f) highlight that "the rural poor and their allies are confronted by the challenge to change their situation within the very structures that perpetuate their problematic conditions." Agrarian reform is not in a deadlock, however. Democratic transitions, the gender struggle (Deere and León 1997), or the increased leverage of national and international non governmental organizations (Borras, Edelman et al. 2008) all provide opportunities for agrarian change (on the changing conditions of agrarian reform, see Herring 2000). Environmental discourses allow some to cast their property claims in terms of environmental protection. This framing increases the resonance of their requests. A conceptual map for understanding power in processes of agrarian reform needs to reflect these various ways power is created. This is not to replace a structural-relational understanding of power – as it is often adopted in agrarian change scholarship – with a voluntaristic approach but to complement it.

A principal challenge to such an endeavour is the question of commensurability (cf. Clegg, Courpasson et al. 2006, 218f). Therefore, a conceptual map that attempts to incorporate different conceptualisations of power needs to establish a common point of reference. Haugaard (2003), for example, advances a framework developed from a post-modern perspec-

tive that takes the reproduction of meaning as its point of departure. The quest for a commensurable frame to combine different theories of power need not be an elusive one.

The chapter adopts a different approach that derives its assumptions from the philosophical school of Critical Realism (cf. Archer, Bhaskar et al. 1998). One of the key concerns of critical realist philosophy (and social theory) is a reflection on causality.[74] While the subject is debated within Critical Realism, key proponents share the following convictions. A conceptualisation of causality, which establishes causality by identifying regularities between events, is rejected (so called "successionist view of causation" or Humean account of causation). Instead they suggest asking "(...) what an object is like and what it can do and only derivatively what it will do in any particular situation" (Sayer 1992, 105). That is they assume a "generative view of causality" (cf. Ekström 1992). Discourses,[75] social structures, or institutions possess causal powers in their own right. These social elements co-exist and concurrently exert their influences. A particular event is *contingent* upon other social entities with their causal powers. This is not to reify social structures. Social elements exercise their influence through the agent. They do not act by themselves. Related to this is the question of whether power is an agency or a structural concept (cf. Mosse 2004). From the perspective advanced here, only agents hold the capacity to act. However, the sources of agential power also originate from other social elements. Three social elements are considered here: individual agents with their particular causal powers, discourses and ideas, and institutions and social structures.[76]

There are at least three important implications of this assumption of causality. First, power is a capacity not its exercise. To have the capacity to act is to have the *power to* do something. This includes the capacity to get others to do something they would otherwise not do (*power over*), but it is not exhausted by it (cf. Lukes 2005, 73f). Second, understanding the dynamics of common pool resource governance requires a "thick description" of the process, as it is an empirical question, which causal properties interact in changing governance (see section 5.3). Third, analyses of common pool resource governance need

to take into account the pre-existence of social structures and institutions to individual actions. Hence, it is necessary to go beyond methodological individualist approaches in explaining institutional change in natural resource governance.

If the analysis of institutions and social structures assumes such importance how do they shape agents' differential scope for action?[77] Two processes stand out: the allocation of social positions within social structures and the inducement of habitual behaviour. Within social structures agents obtain certain capacities to act that they would not possess if they would not possess this particular social position. An example is the interaction between traditional people living in a remote area without access to transport and a monopolistic trader. The monopolistic trader buys the produce of traditional people at very low prices. This capacity stems from the social position that the trader can assume, because of the dependence of the traditional people on him. Other examples of social positions are gender roles discriminating against a particular sex or norms stigmatising certain groups in society. To turn the argument around, some agents also achieve social positions which significantly enhance their capacities to act. Think of, for example, members of the agrarian elite. The web of social relations in which they are embedded often allows them to obstruct progressive redistributive policies (cf. Kuhnen 1982, 338; Angeles 1999). Hence, social positions capacitate some agents to pursue particular actions and at the same time constrain others agents' scope of action.

"Institutions are systems of established and embedded social rules that structure social interactions" (Hodgson 2006, 18, emphasis in original). Ongoing exposure to constraints associated with particular institutions gives rise to habitual behaviour of agents (Hodgson 2007a). Habits can be defined as "the propensity to behave in a particular way in a particular class of situations" (Hodgson 2004, 652). They are particular ways of acting that agents acquire in the process of socialisation. Habits are inscribed in agents' tacit knowledge, knowledge that one cannot easily "put into words" (Haugaard 2003, 100). A focus on socialisation, habits, and tacit knowledge allows retaining the core of Lukes' idea of "false consciousness" while avoiding the problem of outsiders

determining what agents' real interests are (ibid, 101).[78] The existence of habitual behaviour draws attention to processes that might lead to the unconscious reproduction of institutions. Martha Nussbaum's work on gender provides compelling evidence. "Even when women appear to be satisfied with such customs, we should probe more deeply. If someone who has no property rights under the law, (...), who will very likely be beaten if she seeks employment outside the home, says that she endorses traditions of modesty, purity and self-abnegation, it is not clear that we should consider this the last word on the matter" (Nussbaum 2000, 42f).[79] In short, habitual behaviour can be a significant source of disempowerment.

Institutions and social structures are not the only social elements that influence the power of agents; their capacity to act. Discourses matter (cf. Arts and Buizer 2009). First, discourses influence how agents construct meaning (Fairclough, Jessop et al. 2002, 6f). The meaning attached to institutions is essential for sustaining them (cf. Searle 2005). Thus, discourses shape agents' capacities to mould institutions regulating access to land and other natural resources by facilitating or inhibiting processes of institutional change. Of course, agents hold the capacity to critically reflect on discourses and their influence on institutions by asking for reasons (cf. Bromley 2006). Second, even if agents identify reasons for institutional change, there is no guarantee that their "giving of reasons" will alter discourses on institutions and institutional change. Their giving of reasons is more likely to become embedded in discourses, if they refer to other texts in the discourse (intertextuality) and other well-established discourses (interdiscursivity) (Phillips, Lawrence et al. 2004, 644f). Summing up, "discourses make certain ways of thinking and acting possible, and others impossible or costly" (ibid, 638).

These points are not to do away with agential powers of deliberation or agents' cognitive or physical capacities. Agents own a "prospective" capacity to imagine and other futures and formulate paths to attain it (Emirbayer and Mische 1998). When deliberating on institutional change, agents act strategically and deploy their bargaining power (Haller and Merten 2008). In their strategic actions, however,

agents are differently empowered or constrained by the various ways power is working. Agents' bargaining power varies. Understanding this variation requires going beyond individualistic approaches.

5.3 Understanding Institutional Change: a note on the research approach

In order to understand the manifold influences on processes of institutional change it is necessary to adopt a research approach that allows for openness. Research on which this chapter draws followed a case study approach, defined as "a way of organizing social data so as to preserve the *unitary character of the social object being studied*" (Goode and Hatt 1952 in Blaikie 2000, 215; emphasis in original). I followed a comparative case study approach (Yin 2003, 46ff), each of the cases being a forest tenure reform initiative (see table 1-2). Case study selection criteria are: (i) recognition of the property claims of smallholders leads to a re-distribution of access to land and other natural resources and (ii) those benefitting from the status quo contest the implementation of the forest tenure reform initiative. Four of these cases already led to the formal recognition of property claims. Despite of its formal creation, I do not consider the Sustainable Development Project (PDS) Ademir Federicci as a case in which land rights regularisation was achieved. Fieldwork revealed that as of September 2008 none of the intended beneficiaries was settled in the area. All forest tenure reform initiatives are located in so called frontier regions in Western Pará.[80]

Data was collected during three field visits, which took place from 2006–2008 and in total 10 months of field presence.[81] The main research methods applied are interviews (open-ended questions which aimed at generating narratives) that I recorded, participant observation, and participatory research exercises (primarily, participatory mapping). A systematic review of secondary sources complements primary data gathered during fieldwork. My interview partners were inhabitants of the areas subject to forest tenure reform, their Brazilian civil society partners, representatives of national NGOs, Brazilian researchers, and public officials. I conducted 69 interviews. About 80% were hold with representatives from the first two categories of interview partners. During my stays I worked, as far as possible, together with the local social movements. The findings obtained through participant observation mainly draw on this joint work. I discussed first tentative explanations with my research partners. Based on these discussions, I developed more specific explanations.

I used secondary sources to augment the empirical basis of my research. Further, the Extractive Reserve (RESEX) Renascer was decreed after my fieldwork had already ended. In this case, I obtained additional information on the process of reform after 2008 via telephone interviews with my research partners in Pará.

Data analysis began with paraphrasing the interviews remaining true to the language they used. In a next step, I produced case study reports in which I classified the data according to themes (e.g., agents, their strategies and relations among each other). In a subsequent step, I applied codes to the data that allow for a more detailed classification of parts of the data which I then related to the conceptualisation of power.

5.4 Struggles for Recognition: a review of five cases in Western Pará

The settlement history of Western Pará is long. Besides several indigenous tribes (*populações indígenas*) who inhabit the area, settlers moved to the Amazon during earlier economic booms such as the extraction of natural rubber at the beginning of the 20th century. Even though these economic activities often became economically unattractive, settlers remained and accommodated their lifestyle to their environment. Subsistence agriculture and extractive activities form the basis of these so called traditional people (*populações tradicionais*). The proverb "God is great but the forest is greater" (*Deus é grande mas a mata é maior*) captures the necessity to adapt ones lifestyle to the Amazonian environment that those early settlers experienced. The proverb's validity expired when military government's from 1964 onwards initiated a colonisation scheme for the Amazon. Besides concern in the integrity of Brazil's borders, the military regime intended to ease pres-

sure by social movements for agrarian reform in the Northeastern and Southern parts of the country by opening up the Amazon for "agrarian reform" and colonisation (Ianni 1979, 47f). A settlement programme replaced redistribution of agricultural land in areas characterised by highly unequal land distribution. The State also attracted private investments primarily in cattle ranching, by providing, for example, subsidised credit (cf. Binswanger 1991). Whereas the support for smallholders soon ceased, enterprises or large-scale producers continued to receive massive support by the State (Treccani 2001, 184). The newcomers to the region did not start on an equal footing. Nevertheless, the spontaneous settlement by landless people continues up to the current day (cf. Fearnside 2008). The colonisation programme which fundamentally shaped the social and environmental development of Pará from the 1970s onwards implied different relations between the State on the one hand and small settlers, traditional people, and large agricultural producers on the other hand.

Although the smallholder population which is at the core of this chapter (small settlers and traditional people) does not hold title to the land they live on, their settlement is not illegal. Brazilian legislation establishes that people can settle on unclaimed public land. If they live on the land and cultivate it (cultural efectiva and moradia habitual) for a year and a day, they acquire the right to land through its possession (posse). In Western Pará, the size of the plots claimed by smallholder families is 100 hectares. To turn posse into a title a legal process applies (regularisation of posse). Generally, this process is difficult to follow for a smallholder family forcing them to live without regularisation of their land by the State. Needless to say that this process does not pose much of a constraint to financially well-endowed agents (Foweraker 1981, 112f).

When Western Pará experienced a further inflow of logging companies and large ranchers from the 1990s onwards, the recognition of smallholders' rights to land by the State had not taken place on a broad scale. Infringements of smallholder's rights and land conflicts ensued (cf. Sauer 2005). Withdrawal of logs from smallholders' lands without their consent and expulsion of smallholders from their

lands are some of the consequences (cf. Treccani 2001). The municipalities covered here are no exception in this regard. This situation gave rise to struggles by the smallholders and affiliated social movements for forest tenure reform.

The process of forest tenure reform can be divided in three stylised steps. First, the struggle for recognition implies that smallholders inhabiting the area subject to reform need to agree on a particular modality to regularise their land. Brazilian legislation foresees a range of modalities of forest tenure reform. Modalities differ, among other things, with regard to whether titles are given to a collective or individuals or whether smallholders actually obtain the right of alienation (for an overview over the options, see Carvalheiro, Treccani et al. 2008). Second, smallholders need to closely follow up on their request, as the responsible State agencies usually do not have the capacity to address all the claims (ibid). Smallholders need to establish ties with the administration at state or federal level to push their claims forward. Third, the responsible organ of the State needs to take a decision on whether or not to accept the request and start taking steps to implement forest tenure reform. The following description of forest tenure reform – the process of establishing property rights to land – follows these three broad steps.

5.4.1 Municipal Politics: mobilising for institutional change

Mobilisation for institutional change involves activities such as land literacy or assistance to the founding of community organisations. In the cases covered here, those arguing for forest tenure reform within the municipalities had to confront two principle challenges. One, they had to raise awareness on the long-term impact of the prevailing land use practices on livelihoods in a social context often characterised by dependency relationships between loggers or ranchers and smallholders. Second, they had to operate in a municipal political context strongly influenced by the very same actors whose land use strategies infringed upon the land of smallholders. Under these conditions, mobilisation for institutional change followed varied pathways in the five case studies. First, this section describes these different trajectories and then, second, analyses the strate-

gies of the proponents of and the opponents to forest tenure reform.

Trajectories of Forest Tenure Reform

In the late 1990s, pressure on smallholders' land increased substantially in Porto de Moz. At that time, the social movements of Porto de Moz could already look back on a history of resistance to other agents appropriating resources pertaining to the communities. At the beginning of the 1980s, the fishing grounds in Porto de Moz increasingly became the target of so called "geleiras." Geleiras are fishing vessels equipped with ice (*gelo*) to allow storing fish. In comparison with the amount of fish caught by communities, the size of the catch by geleiras was significantly bigger. Depletion of fishing stocks resulted which negatively influenced the livelihoods of the traditional people for whom fish forms an essential part of their diet. Catholic priests sympathising with liberation theology played a vital role in this resistance. They established "Comunidades Eclesiais de Base" that served as a starting point for the political mobilisation of the communities. This opposition finally led to the creation of fishing accords (*acordo de pesca*) stipulating rules for fishing. The accords prohibit, inter alia, access by the geleiras to the fishing ground regulated by the accord. By the end of the 1980s and towards the beginning of the 1990s, timber extraction intensified. Mainly from the municipality of Breves, small loggers arrived which began opening up logging roads in the forest. This practice led to land conflicts, which in turn created the first demand to protect the land against intrusion. At the beginning of the 1990s, communities demarcated four so-called community areas (*áreas comunitárias*) to protect land and the natural resources located on it. However, these community areas never obtained legal recognition by State agencies.

A high degree of involvement of various social movements and members of the communities affected by illicit resource use practices characterise the case of Porto de Moz. An example is the broad participation in the several seminars on natural resource use in the municipality of Porto de Moz which took place in 1995. Further, in the mid-1990s, the Committee for Sustainable Development in Porto de Moz

(*Comitê de Desenvolvimento Sustentável de Porto de Moz*) was founded. It serves as an umbrella organization for the community associations of the municipality. The Committee even receives external financial support by the German Development Service (DED). When the pressure on land and forest resources intensified, the social movements organised what became known as the "fechamento do rio." Disappointed by the lack of response by state agencies to their several claims to halt illegal resource use, a decision was taken to make their claims being heard. From September 19 to September 21, 2002, smallholders from Porto de Moz and social movements of the region blocked the river Jauruçu. Greenpeace provided support to the "fechamento." This river served as the main exit route for timber that was illegally withdrawn in the area that is now the RESEX Verde para Sempre. As an effect of this blockade, several boats transporting illegally cut timber were intercepted and reported to the federal environmental agency IBAMA. National media covered the "fechamento" increasing the outreach of this activity.

Regarding mobilisation, the situation in Medicilândia was very different concerning the Sustainable Development Project (*projeto do desenvolvimento sustentável, PDS*) "Ademir Federicci." First, organised civil society was less diverse in Medicilândia than in the other cases and did not fully support forest tenure reform. The key organisation is the Rural Workers Union (*sindicato dos trabalhadores rurais, STR*). Its members held diverging positions regarding forest tenure reform. There were those who actively strove for establishing a PDS. However, in 2008, when fieldwork ended, they held a minority position. Those who were sceptical of its implementation focused on the settlement aspect of the PDS. They advanced that it is difficult to settle people in a region distant to the municipal capital, as service provision would be very costly. Access roads were of poor quality and difficult to use in the rainy season. The needs of the traditional people already living in the area were not equally reflected in their accounts. A member of congress of Brazil's Workers Party, who was closely allied with the heads of the STR, supported this sceptical assessment. Further, the church – a strong supporter of the implementation of the RESEX Porto de Moz – was less involved in the land rights

struggle. The few members of the STR working for the implementation of the STR needed to shoulder the time consuming and costly work of raising awareness alone. Second, the people already living in the area subject to future forest tenure reform were not well informed on the process or the implications of the envisioned modality. Discussions sometimes even revealed lack of awareness that there was a process of forest tenure reform underway.

Moving further north to the municipality of Prainha and the RESEX Renascer, the situation was again different. When the first proposal for establishing the RESEX Verde para Sempre emerged, the two RESEX were proposed as one connected area. Contrary to the original proposal, only the RESEX Verde para Sempre was decreed in 2004. The discussion of the original proposal contributed to awareness raising and mobilisation in general. During the meetings with IBAMA in 2007, about 80% of the population living in the area of the RESEX Renascer had already voiced their support for establishing the RESEX. Forest tenure reform received strong support from the rural labour union of Prainha. Further, a representative organisation for the communities living in the area covered by the RESEX was founded. Catholic priests in Santarém provided further support to mobilisation. In comparison to the case of the PDS Ademir Federicci, support by social movements for mobilisation of the smallholders rested on a broader alliance of organisations. Leading representatives of the social movements in Prainha unequivocally supported forest tenure reform.

As the case of the RESEX Renascer, the RESEX Riozinho do Anfrísio forms part of a larger proposal covering an area called "Terra do Meio." The term Terra do Meio refers to a region located between the highway BR – 163 in the west and the river Xingu in the east. It covers about 7.9 million hectares in the municipalities of Altamira, São Felix de Xingu, and Trairão. About 80% of the area is located in the municipality of Altamira. Indigenous lands[82] border the Terra do Meio in the south, the north, and the northeast. Their demarcation dates back to the beginning of the 1980s. It was a response to invasions by loggers extracting mahogany. Later, these indigenous lands provided some protection of the Terra do Meio as they made access to the area more

difficult. Towards the end of the 1990s, the Terra do Meio suffered from more invasions leading to an increase in the number of land conflicts. To address this situation, a broad alliance of social movements began to reflect on possible solutions to these threats to smallholder livelihoods. Among others, the alliance comprised the Pastoral Land Commission, the prelacy of the Xingu, and the Foundation Live, Produce, Preserve (*Fundação Viver, Produzir, Preservar; FVPP*).[83] The Brazilian NGO Instituto Socioambiental (ISA) provided further support. The result of the ensuing discussions was a proposal to create a mosaic of conservation units (*mosáico das unidades de conservação*). A fully elaborated study on this mosaic commissioned by the federal ministry for environment was finalised in 2003. In the case of Riozinho do Anfrísio the decision in favour of the modality RESEX rather reflected the discussions of the aforementioned agents. Mobilisation of the communities was limited before the process of forest tenure reform began. The proposal to establish a RESEX was then discussed with the respective communities living in the area. Some communities claimed that they were not consulted in the discussion process. Despite of this neglect, the majority of the smallholder families living in the area supported the RESEX proposal when IBAMA conducted the studies necessary for the implementation of the RESEX.

Similar to the case of Verde para Sempre, the social movements of Anapu could look back to a long history of struggles over access to land. The colonisation plans for the Amazon designed under military rule distinguished two types of areas. One in which settlement schemes for landless settlers were to be implemented and the other destined for large agricultural enterprises, primarily cattle ranching. The region in which the municipality Anapu is located belonged to the latter type of area. From the mid-1970s onwards, the federal Government conceded land on the basis of so-called alienation contracts (*Contratos de Alienação de Terras Públicas*) to ranchers. The recipients often did not physically occupy the land and the land was occupied by others. Spontaneous settlement by landless people occurred alongside occupancy of the area by other ranchers or loggers. A tenurial chaos evolved which facilitated the illegal acquisition of public lands. Land conflicts ensued. Analyses conducted by the national land

reform agency INCRA in 1980 and 1981 found that many of the alienation contracts did not comply with the regulations stipulated therein and requested to devolve the land to federal jurisdiction. In this context, the social movements began struggling for secure land rights for the small settlers living in Anapu. Only in 1996, INCRA began to set up the first settlement projects *(projetos de assentamento)*. Lack of support led to distress sales of land and the failure of the settlement projects. Ensuing disappointment with the traditional settlements led the social movements to search for a different agrarian reform modality. At the end of the 1990ies, the modality of a PDS emerged as a potential solution to this impasse. This modality foresees small individual lots and a large consecutive area which harbours primary forest to be managed jointly. This modality was believed to have a higher chance of success, as the timber located in the consecutive area could be used by the settlers to generate additional income. In 2002, INCRA established the PDS Anapu I and II (known as PDS Esperança) and PDS III and IV (referred to as PDS Virola-Jatobá). However, the respective areas were largley occupied and exploited by ranchers and loggers who took legal action against INCRA. The demarcation of the PDS did not take place leaving the smallholder population living in the area under the very same conditions than before the creation of the PDS. In spite of this new disappointment, their struggle continued until 2005 when first steps were taken to implement the PDS.

The long history of mobilisation for land rights regularisation in Anapu rests on a broad alliance of social movements. The key organizations within the alliance are the rural labour union of Anapu, the pastoral land commission *(Comissão Pastoral da Terra, CPT)*, and the Catholic Church of Anapu. The members of these organizations have close ties with the communities. These well established contacts led to a high degree of mobilisation within the communities living in the area subject to forest tenure reform. A very prominent person in this mobilisation was Sister Dorothy Stang, a nun originating from the United States naturalized Brazilian who worked for the rights of small settlers since the opening of the Transamazon highway.

On the Strategies for Fostering and Impeding Institutional Change

The assassination of Dorothy Stang on February 12, 2005 and the death threats she had been exposed to before serve as a starting point for the analysis of the strategies employed by the different agents.

In all five cases described above, forest tenure reform begins with the organisation of smallholders and awareness raising efforts. These activities depend on members of the social movement visiting the communities on a regular basis. In the course of this mobilisation some representatives of the social movements become more exposed than others. This happens primarily because of the positions they assume in the movements. The president of a rural labour union and the president of an association of inhabitants *(associação dos moradores)* are examples. Leading representatives (or their family members) of the social movements involved in the quest for land rights regularisation suffered from death threats in all five cases. Sometimes, threats were even announced in the municipal chambers by council members, displayed publicly on placards, or even distributed by radio. In most of the cases, the threats became more intense after first steps towards forest tenure reform were taken. In the example of Porto de Moz, this happened after the "fechamento do rio." To understand the danger of such a threat, it is necessary to take into account the judicial and public security situation in which they occur. From 1972 to 2005, 772 assassinations occurred in the context of land conflicts. In only three of these cases were those ordering the assassinations *(mandante)* finally judged upon (Sauer 2005, 43ff).[84] Moreover, analyses of the role of the military police – the police under the jurisdiction of the state of Pará – in land conflicts find that its members often act on behalf of those committing the crimes (Treccani 2001, 264ff). The investigation into the assassination of Sister Dorothy confirms this general finding for the case of Anapu (Senado Federal. Comissão Externa "Dorothhy Stang" 2005). The day before her assassination occured, Dorthy Stang sought protection by the police to enter the PDS Esperança. This protection was not granted. Death threats limit the outreach of representatives of social movements. In the case of Porto de Moz, prominent members of the social

movements did not leave their houses anymore after 5 o'clock in the afternoon.

In the cases of Porto de Moz and Prainha, destruction of the property of social movements accompanied violence against persons or the threat of it. In both cases, small motorboats which are necessary to reach the communities were destroyed. In Prainha, the building of the association of fishermen was set on fire. Due to their limited financial capacity and the difficulty in replacing much needed infrastructure, actions such as these can severely restrict the ability of the social movements to carry out their activities.

There is a further challenge to mobilisation within the municipal political context.[85] Municipal politicians are often themselves involved in illicit resources or allied to those exercising them. The municipal administration – the representation of the State closest to the smallholders – in these circumstances does not defend the rights of smallholders. Apart from the omission to protect their rights, members of municipal administrations openly acted against forest tenure reform. Municipal administrations are often a key employer in Amazonian rural municipalities. In the cases analysed here, leading officials within the administration used this position to exert pressure on their employees. This practice proved to be an effective way to influence public opinion against reform. Members of municipal councils also openly acted against land rights regularisation. After the "fechamento do rio" took place, council members were part of the group which tried to lynch the co-ordinator of the Comitê do Desenvolvimento Sustentável de Porto de Moz. The investigation of the assassination of Dorothy Stang finds that the hypothesis that there was a net of supporters of the one ordering the assassination is "nearly unrejectable" (Senado Federal. Comissão Externa "Dorothy Stang" 2005, 32). The report identifies a key public official as a member of this net of supporters. The influence of economic elites within the federal environmental agency IBAMA and the land rights agency INCRA made smallholders' position even more difficult. It often restricted their ability to become heard within these Government agencies.

Dependency relationships between municipal administrations and smallholders were another challenge to mobilisation. The absence of public services characterises large areas of the municipalities covered by this chapter. Under these circumstances, the allocation of a service – such as building a school or installing a generator – serves to establish ties between public officials and recipient families. These ties make mobilisation a difficult task. When members of municipal administrations oppose forest tenure reform, smallholders fear that their support of the reform would leave them without access to the scarce services they have at their disposal.

Dependency also occurs in relationships between private agents and smallholders. Particularly in areas very distant to the municipal centres, ranchers or loggers are often the only agents who are in a position to offer some services to the communities. This might encompass activities like taking an ill family member to a hospital, job offers (for example, guard or employee in a sawmill), or the distribution of working material otherwise difficult to obtain. In exchange, the private agent offering the service can access natural resources such as the timber located on the land pertaining to a smallholder. A statement of a civil society member of Anapu describes this type of relationship: "The lack of a street, the lack of an agricultural production policy, the lack of a credit policy for smallholders, (...) in this desert there, in this abandoned place (...). He [a smallholder] needs to have his land cleared. In exchange, he gives away the timber located on his lot." The extent to which private agents can operate to their liking provide another indication of the degree to which the state operates selectively in rural areas. Within the area that will eventually be covered by the PDS Ademir Federicci the logging company operating in the area put up a gate restricting access to the community Pontal that is located in the area.

Similar to the situation described above, dependency of smallholders on private agents turns mobilisation into a challenging task. First, it facilitates co-optation of smallholders by loggers or ranchers. The absence of public services presents a strong argument in favour of co-operation with loggers or ranchers. Mobilisation within a community in which a respected member forcefully argues against forest

tenure reform, becomes very difficult. Second, several members of the social movements commented that families living in regions characterised by a strong presence of these actors are very receptive to their reasoning. The assessment "Where we [member of a social movement] need hundred words, they [member of the economic elite] need one word" captures this tendency. In this context, spread of misinformation was a frequently applied strategy. Opponents of reform told inhabitants that they would not be allowed to plant their fields or to raise chicken or own dogs. They coined the term "settlement of hunger" *(assentamento de fome)* to describe the modalities for land rights regularisation. Third, as in the case of the relationship between smallholders and municipal politicians, smallholders fear loosing access to the limited support systems offered by these agents.

Further, these dependency relationships can lead to a situation, in which smallholders attribute a positive role to the agents exploiting resources pertaining to the community. The statement of one of my interview partners in the community Pontal (area destined for the PDS Ademir Federicci) is illustrative in this regard. Despite of the fact that the logger operating the sawmill exploits the valuable timber species in the area[86] and forecloses access to timber and land by smallholders living in the area, he stated: "The sawmill is like our father." Members of social movements in other cases confirmed this kind of attitude for the areas they are working in. Mobilisation for institutional change in these contexts is a challenging task.

Besides counteracting mobilisation efforts of the social movements, there is another strategy that opponents to forest tenure reform employed. My interview partners referred to it as "making the settlement unviable" *(inviabilização do assentamento)*. This strategy implies the increased harvest of valuable timber or deforestation of large areas. Based on the analysis of satellite images, Velásquez, Villas Boas, et al. (2006, 1066) find that in comparison to the 2002–2004 period deforestation in the RESEX Riozinho do Anfrísio increased by about 200% in the 2004/05 deforestation period. That is the period shortly before the RESEX was decreed.

In summary, the findings above highlight two challenges that smallholders needed to overcome in mobilising for institutional change. First, economic elites often strongly influence municipal politics. Municipal administrations, under these circumstances, become allies of those agents opposing reform. Under these circumstances, smallholders do not receive support for their demands by the representation of the State that is closest to them. Second, dependency relationships between smallholders and loggers or ranchers frequently occur. This exacerbates problems of mobilisation, as smallholders within these relationships rely on those very agents who appropriate resources pertaining to them.

5.4.2 Taking the Struggle to Other Arenas: The Link to the National Level

The mobilisation of communities described above and their submission of a request of forest tenure reform are necessary steps in the process of forest tenure reform. In the cases reviewed, they were not sufficient, because the responsible agencies of the State receive a large amount of requests. They are, therefore, only able to respond to a few of them at a given point in time. Smallholders therefore need to draw attention to their particular request.

Along the Transamazon highway, the social movements have a history of trying to hold the State accountable. The Foundation Live, Produce, Preserve (FVPP) is a pivotal organisation in the region. It serves as an umbrella foundation for several social movements in the region. The FVPP employed several strategies to try to make the State respond to their requests. One instrument was public events, such as the so-called "Outcry of the Transamazon" *(Grito da Transamazônica)* or "Outcry of the Land" *(Grito da Terra)*. Besides calling for attention, these events intended to achieve a participatory discussion with public officials on topics such as education, health, agricultural production, or smallholders' land rights. Another means to make Government entities act were reports made to them on illicit land use practices or the precarious situation in which many smallholders find themselves. In the year 1999, the Grito already called for the creation of conservation units and forest tenure reform to counteract the illicit resource use practices prevailing in the region.

From 2002 onwards, the FVPP together with the Pastoral Land Commission focused on the implementation of the RESEX Verde para Sempre, the PDS in Anapu and the mosaic of conservation units in the Terra do Meio.

To voice their claims at other administrative tiers, the social movements drew on their close ties with Brazil's Workers Party (*Partido dos Trabalhadores, PT*). Many members of the social movements are at the same time PT party members. Members of Congress and of the State assembly of Pará defended forest tenure reform in parliament and assisted in establishing contacts with officials in the administration. In particular after the election of President Lula da Silva, PT politicians served as intermediators between members of the social movements and public officials.

In 2002, the regional movements acquired a new partner. The Federal Ministry of Environment contracted the Instituto Socioambiental (ISA) to conduct the aforementioned study on a mosaic of conservation units to be implemented in the Terra do Meio. Based in Brasília and São Paulo, ISA had already well-established contacts to politicians and public officials. Furthermore, international environmental NGOs intensified their activities in the region from 2000 onwards. The Environmental Defence Fund was involved in the discussion of the mosaic of conservation units in the Terra do Meio. Greenpeace conducted two studies that demonstrated the extent of illegal resource use practices and the violations of human rights and environmental legislation (Greenpeace 2001; Greenpeace 2003). National and international repercussion followed their publication, as they were translated into English, accompanied by an annex on the link between illegal logging in Pará and timber consumption in the USA (Greenpeace 2004), and distributed via the internet. The study commissioned by the MMA and conducted by ISA further confirmed the findings described in the studies published by Greenpeace. The increasing involvement of environmental NGOs coincided with the approval of the National System of Conservation Units in 2000 (*Sistema Nacional de Unidades de Conservação*) and activities of the Pilot Programme to Protect Brazilian Rainforests (PPG7). The National System of Conservation Units encompasses so-called sustainable use conservation units (such as Extractive Reserves) acknowledging collective use rights hold by communities within these conservation units. This involvement of environmental NGOs increased the outreach of smallholder's claims. In addition, these NGOs had the financial means to protect some of the more exposed members of the social movements by moving them from their home municipalities to a different locality. However, environmental NGOs also influenced the selection of the modality of forest tenure reform. Whereas, in the case of Porto de Moz, the proposal to create an Extractive Reserve received substantial support by the involved NGO, the proposal formulated by communities to establish so-called "communal areas" did not advance. The influence of environmental NGOs also extends to the priority given to the areas selected for forest tenure reform in the Terra do Meio. My interview partners commented that the RESEX Riozinho de Anfrísio was selected as a priority area, because of the integrity of the forest.

Social movements did not only count on support by non-governmental organizations. State attorneys of the "Ministério Público Federal," a federal ministry responsible for ensuring that federal laws are applied properly, supported reform as well.

5.4.3 Momenta of Responsiveness: responses by the State vis-à-vis smallholders' demands

Forest tenure reform does not necessarily progress up to the state of implementation, even though all the necessary preparatory steps might be finalised. Often, this is attributed to insufficient financial resources. Besides the lack of financial means hindering implementation, there is scope for political influence on the implementation of reform. According to a figure devolved by The Economist (2009), the group of agricultural lobbyists (so-called "bancada ruralista") comprises 20–25% of the members of the national Congress. This group has a history of impeding progressive land policies in Brazil (cf. Mendes 1992).

There are two principal routes for influencing decisions on forest tenure reform on the national level. First, there is the party affiliation of leading public officials within the agencies responsible for implementation of reform. Second, proposals to establish a RESEX have to follow a consultative process within Government. This opens up ways for political influence. In the cases of the RESEXs Verde para Sempre and Renascer, transfer of land from the jurisdiction of the state of Pará to the jurisdiction of federal entities further increased complexity of forest tenure reform.

The case of Renascer demonstrates how this kind of political influence can play out to the detriment of smallholders' property claims. In November 2006, that time Governor of Pará Simão Jatene intended to create two state conservation units in the area claimed by proponents of the RESEX Renascer. The type of conservation unit chosen would have permitted the continuation of the prevailing resource use practices in the area. Among the political allies of Jatene is one of the largest logging companies operating in the region. Upon an intervention by the Ministério Público Federal the proposal was halted by a judiciary sentence in January 2007. Even the change in Government to the Workers Party (PT) which has stronger ties with the social movements of the region did not accelerate the process of reform. PT in Pará relies on a coalition with the Partido do Movimento Democrático Brasileiro (PMDB) whose politicians are often linked to the interests of the logging and ranching sector. Members of the social movement of Prainha commented that they did not receive much support from members of the PT for their quest for land rights regularisation at the end of 2006. They attributed this little support to the fact that there were election times and large logging companies operating in the area.[87] The preparatory studies for the RESEX Renascer were finalised in December 2007 and the request to establish the RESEX was submitted for the President's signature in May 2008 (Instituto Socioambiental 2008). It took until June 2009 to finally establish the RESEX. This delay occurred irrespective of the fact the judiciary sentence of January 2007 foresaw a period of 30 days for the establishment of the RESEX Renascer. When it was finally demarcated, its size has been reduced about 50% excluding the area in the south of the RESEX harbouring a large consecutive area of primary forest.

The political context was different when the decisions on the RESEXs Verde para Sempre and Riozinho do Anfrísio were taken. After the election of Lula da Silva in 2002, many politicians who had a personal history of working within social movements assumed leading positions within the administration. Marina Silva, a former colleague of Chico Mendes in the quest for forest tenure reform in the state of Acre, became Minister of the Environment. The head of the secretary of the Amazon and the coordinator of the secretariat of "agroextractivismo"[88] had personal ties to leading members of the social movement in Altamira. President Lula himself received members of the social movement of Pará to discuss their concerns. In effect, public officials within the State agencies got proactively involved in the process of implementing the two RESEXs.

Advances in the regularisation of smallholders' land in Anapu occurred after the assassination of Sister Dorothy Stang. After her killing, Federal Government deployed the army and ordered heavy presence of the Federal Police and other agencies such as IBAMA and INCRA. This led to the eviction of logging companies from the area and the enforcement of human rights and environmental legislation in the municipality. Members of the social movements of Anapu commented that the two PDS were only implemented on the ground after her killing. Among other steps in the implementation of the two PDS, two land parcels subject to judiciary decision in the PDS Virola-Jatobá were judged upon in favour of the settler population after the homicide.

In summary, President Lula's first term in Government (2003–2006) and the increasing influence of the social movements represented a momemtum of responsiveness to smallholders' claims. The outcry that followed the assassination of Dorothy Stang had a similar effect. However, the political negotiations for President Lula's second term in Government in 2006 did not open up new political space to respond to smallholders' claims. Fundamental advances in smallholders' access to land and other natural resources seem to require extraordinary momenta of responsiveness by the State.

	Mobilisation			Link to other arenas	Momenta of responsiveness
	Alliance of social movements	Experience of the communities in struggles for recognition	Ties between the social movements an the affected communities		
PDS Ademir Federicci	–	–	+/– (some members of the STR)		
RESEX Renascer	+	+	+	+	–
RESEX Riozinho do Anfrísio	+	–	+/– (established during the process of land rights regularisation)	+	+
RESEX Verde para Sempre	+	+	+	+	+
PDS Virola-Jatobá	+	+	+	+	+

The case of the PDS Ademir Federicci in Medicilândia demonstrates the necessity of mobilisation for institutional change which is easier to achieve when several social movements operate together. A comparison between the case of Riozinho do Anfrísio with the other successful cases of forest tenure reforms highlights the decisive role that civil society organisations external to the communities can assume. Despite of low levels of community organisation before the inception of forest tenure reform, the initiative was nevertheless successful. Table 5-1 summarises the description of the phases and the factors influencing institutional change.

5.5 Navigating the Sources of Power in Institutional Change: a discussion

This section analyses the trajectories of the five forest tenure reforms applying the conceptual map of power outlined earlier. The presentation of the analysis follows the stylised phases of forest tenure reform presented in section 5.4: mobilisation for institutional change, taking the struggle to other arenas, and momenta of responsiveness by the State.

At the beginning of the process of forest tenure reform, smallholders and social movements needed to mobilise for change. A key obstacle was the influence of ranchers and loggers on decisions taken within municipal administrations. Actions by the police in favour of those violating legislation or support to those practicing illicit resource use strategies were outcomes of this influence. Through their ties with the municipal administration and other public authorities, economic elites operating in the municipality acquire a social position that allows them to use natural resources the way they do.[89] Smallholders, to the contrary, cannot call upon municipal administrations to enforce their rights. Smallholders and economic elites occupy distinct social positions that are emergent properties of the relations in which they are embedded. These social positions are interdependent. Due to the preferential access of economic elites to municipal administrations, smallholders occupy a marginalised position in municipal politics.

Further obstacles to mobilisation for institutional change arise because of the dependency of smallholders on loggers or ranchers for the acquisition of goods or services which they cannot obtain on their own. This dependency relationship is constitutive of another social structure which I will refer to as clientelism here. A clientelistic relation can be defined as an asymmetric reciprocity relationship between individuals or groups of different economic, social,

or political standing (Powell 1970; Scott 1972). Through the institutional setting constituting clientelism, the economic elites obtain a social position which facilitates influencing the decisions taken by smallholders. This results in additional obstacles to mobilisation.

There is a further aspect of social structures as sources of power. Clientelistic relationships prevail in much of rural Pará. Their history dates back to the beginnings of Amazonian colonisation. The debt peonage system *(aviamento)* established by the early rubber barons is one example (Bunker 1984). Further, clientelism is an ubiquitous phenomenon in the rural areas of Brazil from which many of the migrants moving to the Amazon originate (such as Maranhão) (Roniger 1987). It is therefore likely that many of the smallholders were socialised within clientelistic relationships. Embedded social rules like those associated with clientelism can induce habitual behaviour. As shown above, habitual behaviour can be a significant source of smallholders' disempowerment or, vice versa, of the power of their patrons. The findings presented above and the historical embeddedness of clientelistic relationships and the rural Amazon suggest that the opponents of land right regularisation could draw on this source of power in their attempts to obstruct forest tenure reform.

The combined influence of these social structures (ties between municipal economic elites and municipal administrations and clientelism) leaves smallholders in an over-determined inferior social position. However, successful mobilisation for institutional change demonstrates that the over-determined position, which is further sustained by habitual behaviour of some, is not cast in stone. Those arguing for institutional change were able to convince fellow smallholders of the benefits of land rights regularisation. They were able to jointly reflect on their positions and achieve a joint understanding of the need for land rights regularisation. In the cases of the RESEX, this is most clearly evidenced by the democratic decision in favour of establishing the reserve which forms part of the legal requirements for establishing a RESEX. Those arguing for forest tenure reform also achieved joint action in favour of reform. The "fechamento do rio" and the resistance

by the settlers in Virola-Jatobá after its official creation in 2002 are examples in this regard. Notwithstanding their marginalised position, smallholders retain their ability to reflect on the current position, prospectively formulate other courses of action, and act strategically upon them (cf. Emirbayer and Mische 1998; Bromley 2006; Haller and Merten 2008). Collective action by smallholders in this context is about recognition of their rights vis-à-vis other agents by the state (cf. Johnson 2004, 418). It is a means applied in a distributive conflict. The cases reviewed here suggest that achievements in land rights regularisation require this type of collective action.

At municipal level, opponents of reform drew on another agential source of power: coercion through violence or the threat of it. It is a tactic applied in all the cases. There is an aspect of coercion worth emphasizing, its relation to the social structural context in which they occur. It is questionable whether death threats would be an equally forceful means, if more assassins and their "mandantes" would be convicted in Pará. Impunity of homicides – in particularly of those ordering the crime – is a fertile ground for death threats and their execution.

In taking the struggle to other arenas, social movements drew on established ties with the PT and built new alliances with environmental NGOs. Both relationships allowed social movements to gain access to people or fora otherwise foreclosed. In the conceptualisation offered here, this access represents an emergent property of a social structure. Representatives of smallholder movements acquire a social position (which provides access to public officials and politicians) by entering a relationship with other types of agents. Apart from power created by the allocation of social positions, there is another important source of power that comes into play here: discourses. In the cases discussed here, discourses are a source of power in two ways. First, the environmental discourse and Brazilian and international concerns regarding environmental destruction within the Amazon provide the context in which environmental NGOs operate. Schmink and Wood (1992, 16) observe a general "greening of the discourse" in the Amazon. The United Nations Conference on Environment and Development in Rio de Janeiro

1992 gave rise to the Government of Brazil's Pilot Programme to Conserve the Amazon and the Atlantic Rainforests of Brazil, supported by the G7 (hence, its acronym PPG7). Discourses provide legitimacy to the operation of these organizations that are crucial mediators in the attempt of social movements to make their claims heard at other administrative tiers. That is, in building their alliances, social movements drew on discourses as a source of power.

Second, environmental discourses allowed phrasing smallholders' property claims in environmental terms.[90] Alluding to their "sustainable" resource use practices, their way of managing resources appeared as one solution to the global policy concern tropical deforestation. The ability to link one's expressions with well-established discourses (interdiscusivity) enhances the probability that these expressions are taken up and lead to institutional change (cf. Phillips, Lawrence et al. 2004, 644f). In the smallholders' struggle for recognition, environmental discourses enhanced their ability to link their property claims to global concerns. They were a means in taking their struggle to other arenas and, hence, a further source of power smallholders drew on.

In Porto de Moz, the influence of environmental NGOs led to a situation in which the modality of forest tenure reform elaborated by the smallholders themselves (the "community areas") was replaced with Extractive Reserves. Extractive Reserves foresee more influence of IBAMA on resource use decisions by the inhabitants of the area. From the point of view of smallholders, alliances with environmental NGOs can have unintended consequences (cf. Medina, Pokorny et al. 2009b).

The conceptual map of power suggests a generative view of causality as a useful basis for the conceptualisation of power. This generative view of causality highlights that social elements possess causal powers irrespective of whether they are exercised or not. Social elements with their specific causal powers coexist and their joint operation causes events. Whether a causal powers of a social element leads to an event is contingent upon other elements with their causal powers operating at the same time. This co-existence of elements with their causal powers offers an explanation of the dependence of recogni-

tion of smallholders' property claims by the State on "momenta of responsiveness." The cases suggest that it needs extraordinary circumstances to break the influence of the logging and ranching sectors on political decisions regarding the distribution of land taken in Brasília. The RESEX Renascer suffered from severe reductions in its size in the absence of those momenta of responsiveness. This is not without historical precedence. The demarcation of the first Extractive Reserves in the state of Acre followed the assassination of Chico Mendes and the ensuing national and international uproar (Silva 1994). In this context, it is also worth remembering that the decision against altering the agrarian structure in southern and northeastern Brazil stood at the outset of the colonisation of the Amazon in the 1970s. There is not only historical precedent; there are also similar contemporary processes in different localities. The case of the conservation unit FLONA Bom Futuro provides a recent example from Rondônia. Its is being reduced because of the influence of regional politicians who hold an interest in the area (cf. Millikan and Monteiro 2009).

There are two concluding comments to this discussion. First, the strategies of opponents and proponents of reform highlight that power also has a material basis. Without the necessary financial means, to give a deliberately simple example, printing and distribution of pamphlets becomes impossible. The distribution of material benefits is not only an epiphenomenon to institutions or discourses; it becomes a source of power in its own right. Second, concerning the sources of power after the creation of the RESEX and the PDS, recognition of smallholders' property claims by the State implies that the State assumes responsibility to protect smallholders' claims once contested. Smallholders become rights holder. This social position arises because of the state assuming its responsibility vis-à-vis the smallholder population. That is, the state assumes a crucial facilitating role in creating and maintaining the necessary conditions for communal resource governance.

5.6 Conclusions

At the outset, this chapter suggests that processes leading to the necessary conditions for communal resource governance can be quite different from those processes of institutional change highlighted by "collective-action scholarship." The five cases reviewed in this chapter support this assessment. Fierce distributive – and often violent – conflicts replace self-organisation for the collective benefit as drivers of institutional change. Institutional change needed to begin in a context characterised by resource use decisions dominated by economic elites well entrenched in municipal and higher level politics. This elite – to only comment on one of the characteristics of users conducive to self-governance as outlined by Ostrom (cf. 1999) – is not dependent on forest conditions in a particular locality. Valuable timber can be logged elsewhere in the Brazilian Amazon and standing forest only impedes cattle raising. To the extent that those benefitting from these illicit activities live in other parts of Brazil and are able to reinvest profits in other economic activities (Repórter Brasil 2008), salience on the resource is even further reduced. There is a further comment regarding the role of the State with respect to self-governance of common pool resources. Within "collective action scholarship" the state often appears as an agent who restricts collective action by resource users (Ostrom 2005a, a). The findings presented here emphasize that the state sometimes need to assume a pro-active role in making collective resource governance possible. This is not to say that collective resource governance by its users is impossible. However, the cases highlight that a sole focus on collective resource governance without a description of the processes that create the enabling conditions runs the risk of producing a misleading picture of what is at stake when marginalised segments of the rural society are to become holders of rights over valuable natural resources.

The chapter further suggests to approach processes of institutional change that are at the core of this chapter through an agrarian perspective focusing on the distribution of power and the social relations between the different societal groups. This perspec-

tive allows an explanation of the smallholders' marginalised position within the rural society. Moreover a focus on the different sources of power permit an explanation of how smallholders overcame this marginalised position. The conceptual map of power proves useful in explaining the processes of forest tenure reform.

Concerning agrarian change in the Brazilian Amazon and the prospects for broader access to natural resources by its smallholder population, the cases reviewed here caution optimism. It needed a wide array of factors to bring about forest tenure reform. Their replicability in all those localities in need of land rights regularisation is unlikely. Overcoming smallholders' political and social marginalisation requires challenging deep-rooted social relations. As Borras and Franco (2010, 23) observe, "the rural poor and their allies are confronted by the challenge to change their situation within the very structures that perpetuate their problematic conditions." This is the situation in which Amazonian smallholders find themselves.

The findings might also contribute to a discussion on the role of environmental movements within this struggle. From the point of view of smallholders, alliances with these groups can yield biased outcomes. On the one hand, alliances with environmental NGOs offer leverage and links to other arenas essential to further forest tenure reform. On the other hand, environmental NGOs have their own objectives which they try to achieve through this alliance. As the case of community areas shows, environmental movements are more powerful than the communities when it comes to deciding on modalities of forest tenure reform (Medina, Pokorny et al. 2009a).

The results of this chapter may not be a surprise to scholars of agrarian change. However, they might contribute to a critical appraisal of the communal resource governance debate (cf. Campbell, Mandondo et al. 2001). This critical appraisal is also necessary from a policy point of view. Some of the results of "collective action scholarship" are presented in a manner which makes them susceptible to policy uptake (cf. Mollinga 2001). The conceptualisa-

Misinformation by the opponents of reform was among the core strategies to steer public opinion against tenure reform. Sign in the area of the PDS Virola-Jatobá saying "We do not want the PDS".

tion of natural resource management by "collective action scholarship" already influences what donor agencies think (for example, IFAD 2001, 187ff) and do about forest management (cf. Sunderlin 2006). If translated too easily into development policy,[91] the lack of attention to power, distributive conflicts, and the sometimes enabling role of the State might also characterise policy initiatives and "development projects." Policies or "development projects" building on an apolitical conceptualisation of resource governance might already imply substantial risks for the communities involved. Furthermore, development policy is frequently driven by fashion (see, Rauch 1996b, for an example on participation). Its changes in policy prescriptions often resemble pendulum swings rather than amendments to the course. Insuf-

ficient attention to the limitations of "collective action scholarship" might then lead to a situation in which "the baby communal resource governance may be thrown away with the bathing water" in the future. Such a decision would be to the detriment to smallholders and the conditions of tropical forests alike.

It requires access to further resources to translate land rights into livelihood benefits. Information event for a grant giving organization (Porto de Moz).

6. Truncated and Fragile Victories: Forest Tenure Reforms in the Brazilian Amazon

6.1 Introduction

There is an increasing interest in the role of rights in development. A reflection of this interest is 'rights-based approaches to development', which gained prominence in several donor organizations (for a critical review, see Cornwall and Nyamu-Musembi 2004). Regarding access to resources, secure property rights to resources are increasingly advanced as a key to achieve poverty reduction and sustainable resource use (cf. di Gregorio, Hagedorn et al. 2008). Forest tenure reforms are part of this global trend. In a welcome departure from earlier policies, governments around the world started to devolve rights to forest dependent communities. From 2002–2008 the size of public lands designated for the use of forest dependent communities rose by 38%, the size of the area owned by communities rose by 19% during the same period (Sunderlin, Hatcher et al. 2008, 8; own calculation). These reforms hold the potential to counter encroachment of forest-dependent people's lands by others which is continues to be a ubiquitous phenomenon around the world (Chomitz 2007, 81ff). However, paralleling the discussion on 'rights-based approaches to development' in general, scholars investigate how far the allocation of rights can overcome the societal context that gave rise to forest tenure reform. Several studies highlight the difficulty of overcoming existing power relations through the allocation of rights to those who are marginalised by these relations (see, for example, Moser 2004, 39ff; Pettit and Wheeler 2005, 5). One of the conclusions from this analysis is the emphasis placed on accompanying measures that are necessary to effectively better the lives of the intended reform beneficiaries (Cousins 1997; Colchester 2007, 33).

Even if forest dependent peoples' rights to land can be enforced, it is uncertain whether these rights translate into tangible livelihood outcomes (Sikor and Nguyen 2007; Larson, Barry et al. 2010b, 87). Analyses of land reforms show that lack of access to other resources (Rauch 1996a, 183f) or the institutional context (Cousins 1997) often prohibit that reforms achieve their stated objectives. Again, the keyword is the social context of reform.

Forest tenure reform represents a first recognition of forest-dependent communities' property claims. The recognition of claims and the allocation of rights, however, often remain severely competed. As Hunt (1993, 247) observes: 'Rights take shape and are constituted by and through struggle. (...) Rights can only be operative as constituents of a strategy of social transformation as they become part of an emergent 'common sense' and are articulated within social practices. (...) They articulate a vision of entitlements (...).'[92]

In the Brazilian Amazon, the social context that makes tenure reform an urgent necessity at the same time poses severe challenges to it. Forest-dependent people – be they traditional people,[93] indigenous people, or small settlers – often live on their land by rights of possession (posse). Despite of being legally recognised (Foweraker 1981, 112), this right is in practice often not enforced. This leaves forest-dependent people vulnerable to illegal logging on their land and to expulsion by others (Instituto de Pesquisa Ambiental na Amazônia 2006). A high degree of violence accompanies these land conflicts. During the period 1998–2010 and apart from the years 2000 and 2001, 50% or more of the assassinations in the context of

land conflicts in Brazil occurred in the Amazon region (*Amazônia legal*)[94] (Comissão Pastoral de Terra 2010, own calculation). Impunity of crimes further aggravates the situation. During the period 1972–2005, 772 assassinations of civil society members and smallholders occurred in land conflicts in Pará. Only three of those who ordered these killings were convicted in the same period (Sauer 2005, 43). Those practicing illegal resource use activities often have close ties with politicians, public officials, and the judiciary at different administrative tiers. These facilitate the continuation of their illegal practices and often make it difficult for forest-dependent people to call upon state agencies to protect their rights.

This paper investigates how the allocation of rights influences resource use and the allocation of benefits deriving from this use. It builds on three cases of forest tenure reform in Western Pará in the Brazilian Amazon. Rights, in particular those allocated to marginalised parts of the society, require an ongoing struggle to remain. Therefore, the paper adds to earlier studies by asking how tenure reform influences the capabilities of forest-dependent communities to remain involved in the on-going struggle for recognition.

6.2 From Rights to Access: How do rights turn into livelihoods?

How does the allocation of property rights influence resource use and the distribution of benefits from that use? This section advances a conceptual map to approach this question. It sets out by discussing property and property rights and then locates them in the broader array of ways to accessing resources. Section concludes by examining how rights translate into substantive livelihood outcomes.

A property right is a societally recognised claim to a resource. Claimants can be individuals or groups. This recognition entails the allocation of corresponding duties to those who do not hold the property right and the definition of a collective to enforce the property right in case it is challenged. Property is different from other ways of using resources, because it is a societally sanctioned claim (Bromley 1991, 15; Von Benda-Beckmann, Von Benda-Beckmann et al. 2006, 2; Sikor and Lund 2009, 1). There are at least

two implications from this definition of property right. First, it requires clarification as to who is meant by society. For the purpose of this article, I translate 'societally acknowledged' as acknowledgement by the authorities of the state under whose jurisdiction the areas subject to tenure reform fall.[95] This does not exclude that groups of users receive the right to agree on further rules on their own but establishes that this right stems from state authorities. This legalistic perspective holds another advantage. It permits distinguishing legal from illegal resource use. This distinction does not confer or negate legitimacy. It is, however, an analytically useful distinction as legality or illegality might influence the benefits that derive from resource use. Second, a further important implication of this conceptualisation of property is that property is about social relationships and not about things. Property rights establish social relationships and allocate social positions within these relationships. These social positions are the rights holder, the duty bearer and the agency on which the right holder can call in case his or her rights are contested.

Acknowledgement of property claims is often contested. As Sikor and Lund (2009, 1) observe, the 'central dynamic [regarding access to resources, J.W.] is created by people's attempts to secure rights to natural resources by having their access claims recognised as legitimate property (...).' The state recognises property claims by establishing legal rules.[96] These are different from institutions, which can be defined as 'systems of established and embedded social rules that structure social interactions (Hodgson 2006, 18).' Hence, these legal rules can be conceptualised as rights in theory. These *rights in theory* do not necessarily turn neatly into *rights in practice.* As Pettit and Wheeler (2005, 5) observe '(...) how the fulfilment of rights must confront the underlying interests behind the causes of exclusion. While there are specific objects of rights struggles (...), the process of achieving these substantive and specific goals in practice involves a process of confronting the embedded power relations that have perpetuated the negation of these rights in the first place.' Hence, rights require a translation process. This process might involve legal action 'to assure enjoyment of the right' and 'political action at the cultural level to achieve acceptance of the right' (Miller, Veneklasen

et al. 2005, 59). A possibly imperfect translation does not imply that recognition at this layer is irrelevant (cf. Sikor and Lund 2009, 6). Societal recognition of a property claim might open up new ways of holding others accountable (cf. Newell and Wheeler 2006, 6). However, this recognition might have occurred under very particular circumstances (for example, during the formulation of a new constitution after the end of military rule); circumstances that might have changed afterwards. This temporary aspects of rights draws attention to the fact, that rights, in particular those of otherwise marginalised groups in society, are fragile and need to be sustained by an on-going struggle.

To answer the questions '(...) When, how, and for whom do rights make a difference?' (Newell and Wheeler 2006, 20), it is necessary to put them in the wider social context. Along these lines, Ribot and Peluso (2003) suggest to expand the 'bundles of rights' notion associated with property rights to a notion of 'bundles of powers', that reflects the 'social and political-economic contexts that shape people's abilities to benefit from resources' (ibid, 173). An analysis from this perspective, is important to 'understand why some people (...) benefit from resources, whether or not they have rights to them (ibid, 154).' Following the conceptualisation above, rights allocate de jure social positions. The de facto social positions, however, shape people's access, people's 'ability to benefit (ibid).' Access analysis not only offers a coherent conceptualisation of ways of accessing resources that are not sanctioned by rights, it also offers a way to approach the question of what people can do with their rights.[97]

There are different sources of power that affect agents' de facto social positions. First, there are the institutions and legal rules of society. Institutions pre-exist agential action and have powers that cannot be reduced to the agents (Hodgson 2000b; Hodgson 2007a). The agents, second, have different characteristics (e.g. command over resources) which influence their scope of action (di Gregorio, Hagedorn et al. 2008). Third, discourses provide legitimacy to resource use practices and deny this legitimacy in the case of other resource use practices (Arts and Buizer 2009). Fourth, the physical environment and the properties of a certain good matter (Hagedorn 2008).

The latter, for example, influence whether a resource user needs to engage in collective action for resource appropriation and use. Together these factors shape agents' de facto social position. They influence whether an agent enjoys access. Their influences coexist; they might contradict or reinforce each other. If several influences combine that put agents in a weak de facto social position (for example, if gender roles, ethnic belonging, or caste combine), agents might find themselves in an 'over-determined' (Sayer 1992, 108) social position.

Ribot and Peluso (2003, 159f) suggest 'access mechanisms' as heuristics to analyse access. 'Access mechanisms' are the 'means, processes, and relations by which actors are enabled to gain, control, and maintain access to resources' (ibid). Besides property and illicit access they encompass access to technology, capital, markets, labour, knowledge, authority, identities, and social relations. In the conceptualisation offered here, 'access mechanisms' are themselves the effect of the four sources of power described above. 'Access mechanisms' are often selective and can mutually reinforce each other. Legal rules for forest management that require smallholders to follow the same bureaucratic procedures as large logging companies (Pacheco, Barry et al. 2008, 42) demonstrate selectivity in 'access to authority.'

This discussion serves to structure the presentation of empirical findings. Analysis begins with the de facto social positions before tenure reform. The de facto social positions shape access to resources irrespective of the allocation of property rights. This analysis establishes the reference point for an assessment of the influence of forest tenure reform on livelihood outcomes. Then, the allocation of property rights through forest tenure reform is presented juxtaposing legal provisions with the actual extent of implementation. This part builds on the notion of 'bundles of rights' distinguishing use form control or decision-making rights (Meinzen-Dick and di Gregorio 2004). The former encompass the right of admission (to enter an area) and the right of withdrawal. The latter include the right to management (to improve the resource), the right to exclude others from using the resource, and the right of alienation (Schlager and Ostrom 1992).[98] Finally, the paper investigates the post-reform situation along three

lines: (i) access to natural resources after reform, (ii) wider societal change through forest tenure reform and the implications of forest tenure reform on the ability of communities to continue their struggle, and (iii) livelihood outcomes.

6.3 A Case Study Approach to the Analysis of Forest Tenure Reform

The paper builds on the analysis of two different modalities of forest tenure reform implemented by Federal Government: Extractive Reserves (*reservas extrativistas, RESEX*) and Sustainable Development Projects (*projeto de desenvolvimento sustentável, PDS*).[99] Despite of their differences the following reasons justify their joint analysis. First, if implemented in frontier regions[100] of the Brazilian Amazon, they both result in a redistribution of access to land and other natural resources. This occurs as resources in frontier contexts tend to be used irrespective of the allocation of property rights. Second, they both grant collective rights to land and other natural resources. A contract is signed between the responsible implementing agency and the association of inhabitants (*associação dos moradores*). This contract

then grants usus and usus fructus rights to the members of the association. Third, the concession of rights by the implementing agency is subject to a management plan (*plano de manejo;* in the case of Extractive Reserves) or use plan (*plano de utilização;* in the case case of PDS). The environmental agency (IBAMA) has to sign both types of plans. In effect, there are several steps to fulfil before the inhabitants can start to use the natural resources that they have traditionally been using or that pertain to the area subject to reform (Instituto Nacional de Colonização e Reforma Agrária 2000; Ministério do Meio Ambiente and Instituto Brasileiro do Meio Ambiente e de Recursos Naturais Renováveis 2003; Ehringhaus 2006, 270ff). Table 6-1 provides an overview of the three tenure reform projects that form the basis of the paper and the municipalities in which they are located. Analysis primarily addresses property rights to land and timber. The reasons are the importance of land for agriculture based livelihood strategies. Further, timber holds interesting lessons on forest tenure reform, as the rights to timber have not been fully devolved to the communities in the three case studies.

TABLE 6-1: OVERVIEW OF THE CASE STUDIES.

Overview of the Case Studies								
Case study of forest tenure reform						Municipality		
Name	Type	Size (ha)	No. of families	Established in the year	Communities referred to in the text	Name	Poverty rate (2000)	Gini index (2000)
Riozinho do Anfrísio	Extractive Reserve	736,350	50	2004		Altamira	37.6	0.63
Virola-Jatobá	Sustainable Development Project	24,000	200	2003/ 2005		Anapu	61.6	0.64
Verde para Sempre	Extractive Reserve	1,290,000	2,500	2004	Arimum, Juçara	Porto de Moz	68.57	0.62

Sources: Size of the area and no. of intended beneficiaries: IBAMA (2005), Calvi (2006, 67f), and Amorim da Silva (2007, 194ff);

Poverty rates and Gini index: UNDP (2003)

Data was collected during three field visits, which took place from 2006–2008 and total 10 months of field presence. Main research methods applied were interviews (open-ended questions which aimed at generating narratives), which I recorded, participant observation, and participatory research exercises (primarily, participatory mapping). My interview partners were inhabitants of the areas subject to reform, their Brazilian civil society partners, representatives of national NGOs, Brazilian researchers, and public officials. I conducted around 69 interviews of which I led roughly 80% with representatives from the first two categories. Civil society groups played a crucial role in facilitating my field access. Therefore, they had an important gatekeeper function. The gatekeeper function shaped access to different groups within the forest tenure reform projects. In effect, I often found it more difficult to interview those who have closer ties with agents opposing forest tenure reform. Based on the insights obtained during the second field visit, I developed tentative explanations during the first phase of data analysis (which consists of data classification). Then, during my third field visit, I discussed these tentative explanations with my research partners. Based on these discussions, I developed more specific explanations.

Data analysis primarily consists of data classification. I paraphrased the statements of my interview partners remaining true to the language they used. In a next step, I produced case study reports in which I classified the data according to themes (e.g., reform process, reform outcomes). For the purpose of the analysis described in this paper, I used the theoretical background described above to generate codes which I applied to the theme 'reform outcomes.' Finally, I conducted a comparative analysis on the basis of these codes.

6.4 After the Land Struggle – Sustainable Livelihoods?

This section describes the pre-reform situation of the forest dependent communities and then turns to the property rights allocation by tenure reform. Subsequently, it provides an account of the post-reform situation along three lines: (i) access to land and other natural resources after reform, (ii) livelihood outcomes, and (iii) wider societal changes.

6.4.1 Pre-reform Situation: violation of the rights of forest-dependent people and their coping strategies

Case study: Virola-Jatobá

Similar to other municipalities along the Transamazon highway, colonisation under military rule (1964–1985) had decisive influence on the distribution of property rights to land in Anapu.[101] Unlike municipalities to the west from the town of Altamira, colonisation plans did not foresee an active role for small settlers in the region that is nowadays the municipality of Anapu.[102] From 1975 on, Government issued so-called 'Contracts of the Alienation of Public Lands' (Contratos de Alienação de Terras Públicas). These contracts covered areas of 3,000 to 5,000 hectares and were intended to serve the needs of large-scale cattle ranchers. Those who acquired these contracts did not always physically occupy the areas subject to the contract (Plataforma Brasileira de Direitos Humanos Econômicos 2003, 21). Spontaneous settlements on unoccupied land and fraudulent land practices to appropriate public land (grilagem) further increased the number of property claims. In the absence of an operational land registry system, a chaotic land tenure situation soon emerged.

Colonisation plans did not only bias against small settlers in terms of land allocation. Large ranchers also did receive substantial financial support (Mahar 1989; Binswanger 1991) which continued under democratic rule. Shortly after the foundation, the Superintendency for the Development of the Amazon (SUDAM) approved 10 livestock projects to be implemented in Anapu (Instituto de Pesquisa Ambiental na Amazônia 2006, 32f). Apart from ranching, Anapu increasingly attracted logging companies too. The number of sawmills operating in the municipality increased from 5 in 2000 to about 20 in 2002 (Plataforma Brasileira de Direitos Humanos Econômicos 2003, 21).

As a consequence to these land use practices, small settlers suffered from invasions of their land. Physical violence, destruction of property and expulsion

from their lands accompanied invasions. Among those reported for these crimes are recipients of the financial incentives by SUDAM (Plataforma Brasileira de Direitos Humanos Econômicos 2003, 23f). To counter these events civil society began to struggle for public settlement schemes. The federal land reform agency (INCRA) began to implement so-called settlement projects (*projetos de assentamento*) in Anapu from 1996 onwards. Apart from their creation on paper, Government did not apply the financial resources that would have been necessary to turn these into viable settlements. This inaction jeopardised the settlement projects and led to turnover of agrarian reform lots to the owners of large tracts of land in the municipality.

Against this background, those organisations which defended the interests of small settlers began to push the Federal Government to implement a different land reform model; the so-called Sustainable Development Projects (PDS). This was accompanied by a further intensification of predatory resource use in disrespect of settler's rights. In November 2002, INCRA established four PDSes in Anapu, PDS III and IV are known by the name PDS Virola-Jatobá. Again, Government quickly withdrew support for the settlers. In effect, illegal resource use practices continued in the areas that were now formally PDSes and the land struggle continued. A prominent figure in the struggle was the nun Dorothy Stang. She was assassinated in February 2005 on the order of a rancher claiming to hold land in one of the PDS. The national and international repercussion to this murder forced the Brazilian Government to act. It finally deployed the means to begin implementation of the PDS Virola-Jatobá.

Case studies: Riozinho do Anfrísio and Verde para Sempre

Logging operations that further advanced into forest areas and the expansion of large ranches also violated the rights of traditional people. Traditional people often live on lots (*lotes*) which are 500 meters broad 2,000 meters long. Usually, the lots face the river. The area proximate to the river is used for subsistence agriculture, the areas further away from the river for extractive purposes. The area behind the lots is commonly used, for example, for hunting or collecting non-timber forest products. Fishing contributes to meet subsistence needs.

Towards the end of the 1990ies, logging intensified in those areas which are now the RESEX Riozinho do Anfrísio and Verde para Sempre. Commonly, exploration of timber began at the areas more distant to the homestead but it was not limited to this. Impacts on traditional people's livelihoods were manifold. Families lost their land or the timber located on it. Many suffered from violence such as the destruction of their houses or death threats. Besides these immediate threats to their livelihoods, large-scale logging operations further negatively influenced the ability to benefit from natural resources. Logging companies prohibited entrance by traditional people to areas demarcated by them. This impaired access to non-timber forest products such as Brazil nut. Hunting opportunities diminished as game fled from the areas close to the logging operations and was hunted by employees of the logging companies as well. Lastly, logs were transported on large barges. The heavy motors necessary for their operation whirled up mud from the riverbeds. In effect, the water quality in the rivers worsened significantly. This led to diarrhoea, as water from the river is often used for all household purposes and filters are not always available.

The traditional people applied different coping strategies to react to this situation. In the areas that are more distant to the municipal centres, communities often co-operated with loggers, ranchers, or land thieves (*grileiros*). These agents provided the co-operating households with money, employment opportunities, or equipment that would otherwise be unavailable to the households (for example, weapons, chainsaws, medicine). Someone guarding landing strips could earn up to three minimum wages.[103] There are also instances in which loggers or land thieves took ill family members to hospital. These clientelistic relations are deeply entrenched in the history of many families and communities in the Brazilian Amazon (Bunker 1984; Hoefle 2000). Similar to the case of Virola-Jatobá, other communities began to struggle for their land rights. In the case of the RESEX Verde para Sempre, communities first demarcated so-called 'communal areas' (*áreas comunitárias*) intended to preserve some of the natural

wealth for the children. Loggers and ranchers did not respect the communal areas, nor were they recognised by the responsible state organs.

Finally in November 2004, the two RESEXes Riozinho do Anfrísio and Verde para Sempre were demarcated. Those struggling for forest tenure reform finally achieved their goal. A necessary condition for the creation is a majority vote of all the inhabitants of the area in favour of the creation. In both areas, this condition was met.

An Analysis of the Pre-reform Situation: On Agents' Social Positions

Forest-dependent people were in a de facto weaker social position in comparison to loggers and ranchers. They alone neither had the necessary 'access to capital' to implement their resource use strategies, nor did they have the leverage to make the responsible Government agencies act on their behalf. The latter would have been necessary, as these agencies did not act sufficiently to enforce forest dependent people's rights to natural resources. Forest-dependent people's 'access to authority' was very limited too. In the case Virola-Jatobá, the federal inquiry mission that accompanied the investigations into the murder of Sister Dorothy lists 29 letters sent in the year 2004 alone by settlers, civil society organisations and by a state attorney to the responsible entities in order to achieve their action. Besides single minor acts responding to the reports made, no measures were taken by Government agencies that would have addressed the gravity of the problem. Two further factors, which influenced access to authority, were the physical distance of the PDS to the responsible IBAMA and INCRA offices and the limited human and financial resources that these have at their disposal.

At the same time, those who were benefitting from the status quo exerted substantial influence within the municipal authorities. The aforementioned inquiry mission concluded: '(...) the thesis that there is a net of support of the one who ordered the assassination is nearly irrefutable' (Senado Federal. Comissão Externa "Dorothhy Stang" 2005, 32). Among these were some members of the political parties, who objected to forest tenure reform since

the very beginning. Sometimes, even the military police acted upon the requests of those who illegally claimed to own the land.

The situation in the municipalities of Porto de Moz and Altamira resembled the one in Anapu. The mayor of Porto de Moz at that time was himself running a logging company. Further, he proactively encouraged the operation of large logging companies within the municipality. The latter, in turn, financed his election campaigns. As one member of the Sustainable Development Comitê of Porto de Moz put it: 'Timber decided the elections.' This privileged 'access to authority' also included access to the judiciary system. The State Land Institute of Pará, for example, took the Company INCENXIL to court, which claims to be the owner of a substantial part of the land that now belongs to the RESEX Riozinho do Anfrísio. The file disappeared in district court and reappeared about a year later with a decision in favour of the accused.

Illegal loggers and large cattle ranchers' 'access to capital' was sufficient to enable them to implement their resource use strategies. Partly, even those involved in the illegal acquisition of public lands could obtain public financing to execute their activities (Instituto de Pesquisa Ambiental na Amazônia 2006, 33). There is a link between 'access to capital' and 'access to authority,' which additionally weakens the social position of forest dependent people in relation to other resource users. Financial resources are frequently used to bribe public officials; a practice that opens up highly selective access to authority.[104] This comparison of the agents in terms of their access mechanisms highlights that forest-dependent people were in a substantially weaker de facto social position. Those households who co-operated with loggers and ranchers maintained their access through those who illegally claimed to be the owners of the resource. This relationship allowed them to benefit somewhat from the resources.

6.4.2 Truncated Victories: allocation of property rights through forest tenure reform

This section addresses the allocation of property rights in the three case studies. First, it outlines the allocation as prescribed by law and then, second,

turns to the extent of implementation of forest tenure reform in practice. The analysis builds on the classification of property rights suggested by Schlager and Ostrom (1992).

In both types of forest tenure reform, RESEX and PDS, the state remains the owner of the land, it retains the right of alienation. According to legislation, the other property rights to land are allocated to the communities inhabiting the area. For subsistence purposes, property rights to timber and non-timber forest products (NTFPs) are allocated to the inhabitants on an unconditional basis. Property rights are different regarding extraction of natural resources for the purpose of marketing. The alienation of property rights to natural resources for marketing purposes is subject to a management plan. Table 6-2 provides an overview of the allocation of property rights as envisioned in the legislation and its extent of implementation.

Concerning property rights to land, the initial steps to implement forest tenure reform were accompanied by the heavy presence of the army, the federal police, and other federal agencies. These operations lasted about half a year in which those illegally occupying the areas subject to reform were expelled from the area. At the same time, those who were leading the land rights struggle and who were living under death threats before received personal protection. This significantly reduced land conflicts. In turn, the security of land rights increased. In the case of the PDS this also opened up the possibility for those landless settlers living in the municipality of Anapu to move into the areas subject to reform. However, there is an exemption to this general assessment of the allocation of property rights to land. Agents claiming land within the areas subject to forest tenure reform only need to leave the area once the process of land rights regularisation is finalised. This involves a judicial decision on whether the claim is justified. In case the claim is justified, the judicial decision also needs to stipulate the amount of compensation to be paid by the state for the acquisition of the land. As long as the land rights regularisation process is not finalised, the supposed owners are allowed to stay within the confines of the area. In all three cases, there are areas which are still subject to judiciary decision.

The situation is different with regard to property rights to timber. Regarding the two Extractive Reserves, legislation stipulates that there needs to be a management plan for the whole conservation unit before sub-plans on the use of particular resources can be developed. The management plans were not elaborated by the time fieldwork was finished in August 2008. Hence, property rights to timber remained with the state. However, the two communities Arimum and Juçara in the RESEX Verde para Sempre obtained a management plan granting the right to harvest a certain amount of timber. The settlers in the PDS Virola-Jatobá also have a timber management plan which covers a small part of the timber reserve of the PDS. All three timber management plans were elaborated with substantial donor support through the PROMANEJO project.[105] All the other communities in the two RESEXes do not hold the property rights to timber for marketing purposes. The same applies to the area within the PDS not covered by the current management plan.

In summary, forest tenure reforms in the three case studies are truncated victories. They are victories as Government state assumed responsibility for protecting the property rights to land of the forest-dependent people. The victories are nevertheless truncated, as property rights to timber – a crucial resource for many livelihoods – largely rest with the state.

TABLE 6-2: OVERVIEW OF PROPERTY RIGHTS ALLOCATION THROUGH FOREST TENURE REFORM IN THE PDS VIROLA-JATOBÁ, THE RESEX RIOZINHO DO ANFRÍSIO, AND THE RESEX VERDE PARA SEMPRE.

Property Rights Allocation Through Forest Tenure Reform: Legal Provisions and the Extent of their Implementation					
Rights holder	**Property Rights Allocation**				
		Withdrawal	**Management**	**Exclusion**	**Alienation**
State	As envisioned by law				• Land • Timber and NTFPs for marketing purposes
	Extent of implementation	• Timber and NTFPs for marketing purposes for all areas except those covered by the three management plans	• Timber and NTFPs for marketing purposes for all areas except those covered by the three management plans	• Timber and NTFPs for marketing purposes for all areas except those covered by the three management plans	• Land • Timber and NTFPs for marketing purposes
Forest dependent peoples' communities	As envisioned by law	• Timber and NTFPs for subsistence purposes • Upon approval of a management plan: Timber and NTFPs for marketing purposes	• Land (in accordance with environmental legislation; for example, concerning the extent of deforestation) • Timber and NTFPs for subsistence purposes • Upon approval of a management plan: Timber and NTFPs for marketing purposes	• Land • Timber and NTFPs for subsistence purposes • Upon approval of a management plan: Timber and NTFPs for marketing purposes	
	Extent of implementation	• Timber and NTFPs for subsistence purposes • Areas covered by the three management plans: Timber and NTFPs for marketing purposes	• Land (in accordance with environmental) • Timber and NTFPs for subsistence purposes • Areas covered by the three management plans: Timber for marketing purposes	• Land • Timber and NTFPs for subsistence purposes • Areas covered by the three management plans: Timber for marketing purposes	
Other resource users	Other resource users are not entitled to any property rights in the area subject to forest tenure reform.				

6.4.3 Fragile Victories: on the livelihood effects of forest tenure reform

Access to Natural Resources after Forest Tenure Reform

The federal agencies did not maintain their high level of presence, nor did they invest sufficiently to further implement the forest tenure reform projects. Regarding access to land this situation implies negative implications for the inhabitants of the areas. In the absence of final land rights regularisation, those who call themselves owners are allowed to stay within the confines of the area. Due to this unresolved legal situation, some ranchers continue to illegally expand their pastures.

In order to benefit from the land, other 'access mechanisms' are important. 'Access to capital' via credit is one. To obtain credit, inhabitants of the area need to be registered as beneficiary of agrarian reform. Registration processes slowly, however. Roughly 10% of the families in the PDS Virola-Jatobá applied for a loan which can be used for production purposes (PRONAF A). The process was not finalised when the fieldwork was concluded. Overall, inhabitants and representatives of civil society organisations working within the PDS assess the implementation progress as sporadic. 'Access to markets' partially improved through the construction of a road in the PDS. However, the municipality of Anapu did not assume its responsibility for maintaining the road and INCRA did not supervise its construction. Hence conditions for market access soon deteriorated again. In addition, means of transport are missing. In the two RESEXes, few boats were acquired to increase marketing opportunities of the communities by river transport. Further, some small projects provided technical assistance to communities and distributed seedlings and agricultural technology. Their outreach was limited.

Lack of enforcement facilitates invasions of the areas by other resource users, which occurred in all three cases. The RESEX Riozinho do Anfrísio suffers from invasions from the western border where many logging companies are operating along the federal highway BR-163 and settlement projects allow for the legalisation of illegally cut timber. Logging activities advance into the RESEX Verde para Sempre from the southern border (border with the municipality of Altamira) and south-western border (region commonly known as Macapixi). Similar processes occurred in the PDS Virola-Jatobá. For example, from December 2007 until February 2008, loggers invaded the PDS and withdrew about 5,000 m³ of timber. Only two months later did these reports yield action by the Federal Police and IBAMA. At that time, the loggers had already moved out again. These encroachments may jeopardise the long-term viability of the forest tenure reform.

Regarding access to timber by the communities, only three out of the 25 associations representing the communities have a timber management plan. The association of inhabitants of the PDS Virola-Jatobá obtained one, as did the communities Arimum and Juçara in the RESEX Verde para Sempre. In the PDS Virola-Jatobá and in the community Arimum timber extraction is done by logging companies under the supervision of the association of the inhabitants. In the PDS Virola-Jatobá, the association of the inhabitants decided to invest the money in communal infrastructure (such as schools). The reason is that in order to obtain individual benefits, the inhabitants have to be registered by INCRA. As INCRA had not yet registered all inhabitants, the decision was taken in favour of investments in infrastructure, which can be used collectively. In the community Arimum, the members of the association of inhabitants received individual benefits from the extraction of timber. However, not all community members are members of the association. The sale of the first extraction resulted in roughly 1,700 Reais per family (the monthly minimum wage is about 400 Reais per month). The community of Juçara opted for a communal management approach. Through the assistance of the PROMANEJO project they obtained a sawmill, training on the construction of furniture, and support for marketing. The operation of the sawmill terminated already. The alternative option

of selling sawn timber is complicated by transport requirements (transport by barge needs to be paid in advance), the quality of the sawn timber, and the knowledge necessary to operate on the timber market.

The communities who do not have a management plan are in the majority in the RESEX Verde para Sempre. Logging has been and continues to be an important source of cash income for many families. Decreeing the RESEX did not change this situation. Hence, families continue work in illegality. The difference to the situation before is the way the timber is sold. Before the creation of the RESEX the communities sold logs, now they sell sawn timber. The price of a cubic meter of sawn timber is roughly 330 Reais. From these need to be subtracted the cost of fuel and other equipment necessary for the operation of the chainsaw. According to those extracting timber in this manner, the profit is sufficient to cater for expenses for foodstuff that is not produced in the household (such as vegetable oil), but the activity does not yield large benefits. In their words 'Timber is only for those who do not have a different option.'

The sawn timber is then sold to intermediaries located in the municipality who sell it in Belém (the closest harbour to export timber) at prices of around 1,000 Reai/m³. The intermediaries then invest in obtaining the necessary documentation for the timber turning it 'legal' through corruption or other fraudulent practices (*esquentar madeira*) before selling it in Belém. Given the huge difference between the price paid to those who extract the timber and the price paid in Belém, a community tried to market their timber directly in Belém. Initially, their attempt was successful as they could identify a buyer. As the intermediaries of Porto de Moz received notice of the deal, they got in touch with the buyer in order to prevent it. Their efforts were successful and the deal was never completed.

On Agents' Social Positions After Reform

The de facto social positions of those involved in timber extraction differ whether they have a timber management plan or not. The management plan fundamentally alters the relationship of the communities to other resources users. Their de jure position enables them to move out of illegality and decide on the mode of timber extraction and their partners in it. But even with a management plan the de facto social position of the communities is still negatively influenced by other factors. The experiences in the PDS Virola-Jatobá and the communities Arimum and Juçara demonstrate this. Timber extraction tends to be capital and skill intensive (Sunderlin, Angelsen et al. 2005, 1390). Generally, communities lack both of them. The two successful cases Virola-Jatobá and Arimum compensated for this by outsourcing extraction to a logging company. Juçara, which opted for timber extraction by the community, did not succeed. A management plan makes a crucial difference in comparison to the communities who continue to work in illegality. These need to rely much more on the intermediaries present in the municipality and their ability to legalize timber. Dependency of the communities on the intermediaries characterises this relationship.

Livelihood Outcomes

The preceding sections already suggest a mixed picture concerning livelihood outcomes. On the one hand, vulnerability of those households or communities that suffered from infringements of their rights decreased through forest tenure reform. Personal security of those involved in the struggle in increased. Expulsion of ranchers and loggers from the PDS Virola-Jatobá allowed for settlement. Removal of logging companies from the areas that are nowadays Extractive Reserves allowed for the continuation of the livelihood strategies that were threatened by the presence of other resource users. Land conflicts decreased. For extractive livelihood strategies, forest tenure reform also had a positive influence on the resource base of the affected communities. Game returned, water quality bettered, and areas that were formerly inaccessible because of

the presence of the logging companies were re-opened for the extraction of non-timber forest products. For those communities or inhabitants who harvest timber on a legal basis, forest tenure reform also brought about tangible benefits. On the other hand, the vulnerability of those families whose livelihoods depended on the co-operation with loggers and ranchers increased. Some of them did not even plant their fields anymore, as they became used to buy what they needed. The slow pace of implementation of the RESEXes has not yet compensated for this loss. Forest tenure reform also reduced the extent of deforestation and environmental destruction within the areas subject to reform. This is not only an end in itself but also contributes to livelihood sustainability.

Social Change within the Municipalities

Forest tenure reform does not take place in an institutional vacuum. It is embedded in entrenched social relations and a local society characterised by high inequality. Given that the cases reviewed here are rather recent examples the following paragraphs are only indicative of further social change in the municipalities.

There are signs that forest tenure reform contributed to changes in the municipal society. First, in the smaller municipalities Anapu and Porto de Moz, the presence of federal agencies during the first steps of the implementation of the forest tenure reform also led to a better enforcement of human and environmental rights. In effect, civil society can nowadays operate more freely than it could before. Second, another outcome is the increasing relevance of civil society organisations in the municipal power play. In Porto de Moz, for example, political groups commonly associated with the interests of the ranching and logging sector increasingly try to exert influence within the civil society groups. This demonstrates the expanding influence of civil society. Third, a finding that is primarily valid for the case of Riozinho do Anfrísio. The traditional people living in the area obtained identity cards as an effect of forest tenure reform. Among other things, identity cards are a precondition for voting and for accessing services offered by the state.

However, there are also indications of the persistence of institutions detrimental to the livelihoods of forest-dependent people. This refers in particular to the endurance of clientelistic relationships. One example is timber extraction by those families working without a management plan. It resembles the 'aviamento' system established during the days of rubber extraction. The patron advanced the equipment for rubber extraction and other household goods at exaggerated prices and the rubber tappers paid with the rubber extracted. Usually, they remained in debt leading to an entrenched dependency relationship. The intermediaries of Porto de Moz do advance fuel and other equipment to those who extract timber. Fuel, for example, is sold for about 5 Reais, roughly double the price at which it is sold in the harbour of Porto de Moz. Those who extract and saw the timber receive their payment only after the intermediary has marketed the timber in Belém. Another example is access to services offered by social movements. Partly, access to these benefits is obtained via personal relations with members of the civil society. In one case, a leading figure of the civil society linked the distribution of food aid to meetings on the management of the area. Regarding this question, this representative had own interests, which he tried to push.

Further, forest tenure reform is implemented in a societal context in which financially well-endowed agents live alongside the largely impoverished declared beneficiaries of reform. Institutions and the lack of enforcement of legal rules often permit the continuation of illegal resource use practices of these well-endowed agents. The prevailing discourse among them legitimises their resource use practices by picturing Government intervention as inhibiting 'development.' Given their access to the diverse resources mentioned earlier, these agents do not have to rely on rights to realise their resource use strategies. Their de facto social position puts them in a powerful in relation to the forest-dependent communities. Communities often do not have a broad range of livelihood strategies. This might lead to a situation in which the forest-dependent communities opt for co-operation with the well-endowed agents. Such a co-operation can bear great risks for the smallholders. Experiences in settlement projects demonstrate that this co-operation often lasts as

long as there are natural resources to be exploited. Afterwards families are frequently being evicted from their land or need to migrate to other areas, as they find it difficult to make their living from that what remains after exploitation (Castro, Monteiro et al. 2002, 46).

The results of the federal election in 2006 show the extent of dissatisfaction with the implementation of the RESEX Verde para Sempre. People associate the establishment of the RESEX Verde para Sempre with President Lula's Workers Party *(Partido dos Trabalhadores)*. In seven of the eleven voting stations the party of the competing candidate won the first turn of the elections.[106] If the opinion of the inhabitants would have been the same at the day when the creation of the RESEX was decided, it is highly unlikely that it would ever have been established. This has implications for the credibility of the social movements also. During the struggle for forest tenure reform, Government agencies also promised increased coverage of public services in the areas subject to reform. The social movements also used this argument in their discussions on whether or not forest tenure reform should take place. The continuing absence of public services in the areas partly undermines the credibility of the social movements.

Given that these experiences are rather recent, time is still to tell how far forest tenure reform will lead to more sustainable livelihoods in the long run. It reduced vulnerability for many of the families living in the areas subject to reform. However, its contribution to new livelihood strategies and to a higher cash income for the majority of the intended beneficiaries is yet to materialise. As of now, the reviewed cases of forest tenure reform have to be characterised as truncated and fragile victories.

6.5 Conclusions

Although the reform of property rights to land is a crucial step in reducing the vulnerability of the majority of the communities, the reforms remains truncated in the cases presented here. This demonstrates the urgent need for the responsible Government agencies to invest in the further implementation of forest tenure reform. 'Access to authority' fluctuates as evidenced by the reports of invasions that do not lead to Government response. The lack of continued support jeopardises the potential of these projects to contribute to poverty reduction and to the protection of the environment. Future steps need to urgently address this situation. The devolution of rights to timber to the communities through the elaboration of the management plans is crucial. Of equal importance are measures to support those whose livelihood strategies were interrupted by the withdrawal of loggers and ranchers from the areas. Without these measures, it is also uncertain whether the contribution of forest tenure reform to reduced devastation of the forests will be upheld.

The cases reviewed here also raise the question of the different modalities of forest tenure reform. Are the modalities analysed here the most adequate for securing livelihoods and the protection of their resource base? Have the modalities designed as such that they can actually achieve their declared objectives? Are the declared objectives of reform their actual objectives? The answers to these questions are likely to be context specific and are beyond the scope of this paper. However, there are two points worth mentioning in this regard. First, reforms that make access to crucial livelihood assets by forest-dependent communities conditional upon the approval of Government entities, which partly have a track-record of not responding to their claims, are unlikely to achieve their stated objectives. Second, there are serious allegations that several PDSes were set up by the Superintendency of INCRA responsible for the region to facilitate access to logging grounds by logging companies (Greenpeace 2007).[107]

The findings might hold further implications regarding the following themes: (i) forest tenure reform and vulnerability, (ii) property rights and access, and (iii) legal reform and institutional change. First, regarding forest tenure reform and its influence on livelihood vulnerability, the findings emphasise the need to assess the multiplicity of livelihood strategies. In the absence of Government support, some families chose (or were forced to choose) to collaborate with agents whose resource use strategies are detrimental to their livelihoods in the long term. However, expulsion of these types of agents can increase short-term livelihood vulnerability. Although the majority decision in favour of the establishment of Extractive Reserves suggests that there were more families who suffered from ranching and large-scale logging operations, this result should not be underestimated. It highlights the fragility of forest tenure reform when the support to livelihoods continues to be sparse and sporadic.

Second, concerning the question of property rights and access, the results support the conclusion that property rights are one 'access mechanism' among others. For small famers to benefit from resources they are a necessary but insufficient condition. To translate rights into tangible livelihood outcomes, further 'access mechanisms' are necessary. In the cases reviewed above the ability to benefit is constrained by two factors: first, it is due to the lack of transfer of rights to timber to the communities. Second, the institutions and legal rules put the forest-dependent people in a weak de facto social position. These de facto social positions influence who can exercise which resource use strategy and the outcomes that they yield. These findings corroborate the results of other studies on the effects of the decentralisation of natural resource management. Analysing the outcomes of a forest devolution programme in Viet Nam, Sikor and Nguyen (2007, 2022) stress that the political-economic context in which devolution occurs influences who will benefit from it. Along similar lines, a review of forest tenure reform in Latin America shows that communities needed to overcome many obstacles in order to turn rights into actual benefits (Larson, Cronkleton et al. 2008).

This outcome points at the third question to be discussed here, the relationship between legal reform and institutional change. Institutions can be defined as 'systems of established and prevalent social rules that structure social interactions' (Hodgson 2006, 18). The definition highlights the social transmission of rules and the dependence of institutions on other institutions. Following this definition a decree establishing property rights to natural resources is not an institution but a legal rule. For a legal rule to develop into an institution, for rights in theory to become rights in practice, institutional change is necessary. A case in point is the attempt of one community to market its illegally cut timber itself. The institutions of the market for illegally cut timber are such that they discriminate against the participation of the communities. Loggers and ranchers that invade the areas subject to reform are a further indication that the rights of communities have yet to become institutionalised.

A study on the illegal acquisition of public land in the Amazon concludes: 'What is clearly at stake is the construction of a public space that is based on democratic relations or the continuation of the tenurial, political, and institutional chaos which prospers thanks to an economy of the destruction of the environment' (Instituto de Pesquisa Ambiental na Amazônia 2006, 42). The question then becomes how far does the reform of property rights – as a legal reform – contribute to institutional change, which assists forest-dependent people to escape from their marginalised, their powerless situation? Further, how does it influence the capacity of those agents involved in the land struggle to continue doing so? Given the recent nature of forest tenure reform, it is too early to give an answer to this question. Up to now, findings provide a mixed picture. On the one hand, the freedom of operation that civil society organisations in Porto de Moz and in Anapu have acquired might contribute to this institutionalisation. Their activities might contribute to enforcement and acceptance of the rights. On the other hand, it is equally clear that much remains to be done to further support the process of institutional change and to alter the social position of forest-dependent people. The re-surfacing of clientelistic relationships with intermediaries or members of the civil society might serve as an indication of the mag-

nitude of this task. Should Government continue not to deploy the necessary means to implement the forest tenure reform, the credibility of social movements might suffer more. This might have serious implications for the forest-dependent communities, as social movements have been the prime agents supporting them in the past.

Granting rights on paper might be easier than trying to overcome entrenched power relations. Adopting a chronic poverty perspective Green and Hulme (2005, 872) conclude that 'the question becomes not why are some people poor in society, but why some societies tolerate poverty as an outcome and for whom, and how this toleration becomes embedded within institutional norms and systems.' Paraphrasing their point one is inclined to ask 'property rights in theory are fine, but who assumes the duties to turn these rights into practice and establish and create the necessary conditions for people to benefit from them?' The answer to this question will influence whether legal reform will result in institutional change and sustainable livelihoods of the forest-dependent poor, in Brazil and elsewhere.

Burning of forest (Porto de Moz).

7. New Buzzwords, Old Challenges? Climate-resilient Development and Path-dependence in Property Relations in the Brazilian Amazon

7.1 Introduction

In many regions, adaptation to climate change is necessary or will become so in the near future. Greenhouse gases already emitted into the atmosphere and further emissions under the 2°C objective cause climatic changes despite of potential further mitigation efforts (Fankhauser 2009). It is an equally well-established fact, that the vulnerable segments of society and those countries least well equipped to respond to climate change are those worst hit (Huq and Ayers 2007). Mainstreaming adaptation into development aid is a corollary to this assessment. The World Bank (2009, 6f) devised a strategy called "Making Development Climate Resilient" to support its Africa Action Plan. UNDP (n.d.) strives at creating "carbon neutral and climate change resilient territories." OECD (2009) released a policy guidance report on how to integrate adaptation into development co-operation. This report aims to offer "information and advice on how to mainstream climate change into development" (ibid, 15). This mainstreaming takes two forms (cf. Ayers and Huq 2009, 683). First, it involves "climate-proofing" of investments. Similar to the mainstreaming of other policy concerns such as gender relations or considerations on environmental integrity, policies and programmes are subject to a check in how far climate change is considered. Second, it aims at "climate-resilient development", broadly defined as measures that address the underlying "drivers of [livelihood] vulnerability" (McGray, Hammil et al. 2007, 17ff; Tanner and Mitchell 2008, 2). Activities falling into this category encompass a wide spectrum. They might range from HIV/AIDS awareness campaigns to support to livelihood diversification, or efforts to strengthen the rights of women.

Climate resilient development underlies a notion of adaptation that is broader than the one established by UNFCCC (Schipper 2007). Correspondingly, it draws attention to a wide variety of factors that can cause livelihood vulnerability and peoples' capacity to respond to climatic change (cf. Ribot 2009). In addressing vulnerability in this conceptualisation, some scholars point at the importance of institutions in general (Adger 2000; Agrawal 2008; Tanner and Mitchell 2008) and property rights more specifically (Langridge, Christian-Smith et al. 2006; Prowse and Scott 2008; Lopez-Marrero and Yarnal 2010).

For natural resource dependent livelihoods, secure access to these resources is essential. Lack of access often becomes constitutive of livelihood vulnerability (see, for example, Beck and Ghosh 2000). Further, investments into sustainable resource use practices as one adaptation strategy are unlikely to occur, if property rights are insecure (Meinzen-Dick and di Gregorio 2004). Hence, measures to secure property rights are an essential component of climate resilient development.

Distribution of property rights to vulnerable groups within society often poses a tremendous challenge. Those benefitting from the status quo are often able to obstruct or impede progressive reforms (de Janvry and Sadoulet 1989; Binswanger, Deininger et al. 1993; Bardhan 2000, 226). Climate resilient development, then, faces the very same challenge as other efforts to enhance livelihood sustainability through the allocation of property rights to vulnerable groups.

The Brazilian Amazon is likely to suffer severely from climate change impact and many of its rural areas are characterised by high prevalence of extreme poverty (Verner 2004; The World Bank 2010). Therefore, in this chapter, smallholders' rights to land in the Brazilian Amazon are taken as an example to discuss the challenges posed to climate resilient development. It advances the hypothesis that the evolution of property relations in Pará, one of the states of the Brazilian Amazon, is a path-dependent process. If climate-resilient development is to become a reality, this path-dependency needs to be overcome. This implies an approach to development that is conscious of the prevailing power relations.

The following section 7.2 introduces and discusses the concept of path-dependency. It suggests that a focus on historically shaped social positions within society allows for an understanding of contemporary rights distributions and access patterns. Section 7.3 outlines the methodology. Subsequent section 7.4 traces the evolution of land rights in the state of Pará and shows smallholders' marginalisation in processes shaping rights and access. Thereby it demonstrates the path-dependency of these processes. Section 7.5 concludes regarding the options to achieve climate resilient development in the Brazilian Amazon.

7.2 Path-dependence in Property Relations

There are different definitions of path-dependence ranging from more encompassing to more restrictive interpretations of the term (Mahoney 2000; Rast 2009). North (1990, 100), an economic historian, advances a definition that became seminal. It provides an example of the former type of definition and reads "Path-dependence means that history matters. We cannot understand today's choices (...) without analysing the incremental evolution of institutions." Along similar lines, Sewell (1996, 262f) suggests that path-dependence means "what has happened at an earlier point in time will affect the possible outcomes of a sequence of events occurring at a later point in time." In this understanding, identifying path-dependence implies relating recent phenomena to causes that date back in time. While few would dispute that history matters in understanding contemporary

society, the definition does not necessarily provide clear indications of whether a sequence of events can be characterised as path-dependent. In response to this perceived weakness, other scholars advance narrower definitions of the term. Mahoney (2000, 510ff) provides a conceptualisation that includes the following two elements. The first is sensitivity of path-dependent sequences to events that happen early in the process under analysis. This element implies that a similar event that takes place later in a path-dependent sequence has no or a negligible effect although it might have yielded significant changes at earlier stages of the process. An example is the influence that agricultural policies have on agricultural development under varying initial land distributions (The World Bank 2003, 90). The second is inertia of those processes that make a sequence path-dependent. In other words, once a path-dependent sequence began, the processes that sustain the path-dependent sequence tend to stay in place.[108] Further, path-dependency tends to persist although the event that triggered a path-dependent sequence vanishes (Rast 2009).

An analysis of path dependence in property relations requires their definition. Following Benda-Beckmann (1995) and Bromley (1991, 15) this chapter adopts a relational understanding of property rights.[109] Holding a property right means having the "capacity to call upon the collective to stand behind one's claim to a benefit stream" (ibid.). The institution property right establishes a set of relations between somebody with a claim to a benefit stream, others, and a collective. The latter ensures that somebody's claim is protected in case others should contest it. The one whose claim is protected is a rights holder and others, who have to obey this right, are duty bearers. In the absence of a collective securing the right or if corresponding duties lack, a right looses its meaning (for a comprehensive description of property relations, see Bromley 2006). Path-dependency in property relations would then emerge, if the one holding the right can perpetuate his or her social position vis-à-vis other agents and the State. Of particular importance are those mechanisms for reproduction that allow the rights holders to extend their influence within the State, as it is the collective responsible for protecting and allocating rights to private agents. In terms of the distribution

of rights, path-dependence would imply that the one holding a right is able to maintain his rights to a given set of natural resources or to expand it, even if the institution that gave rise to the rights allocation has vanished.

Scholars of access point out that it is not only property rights that matter for accessing natural resources such as land. They distinguish property – understood as the "right to benefit" – from access – understood as the "ability to benefit" (Ribot and Peluso 2003; Sikor and Lund 2009). Establishing property might then as well occur outside of societally sanctioned processes. The "ability to benefit" might be sustained by a different set of institutions. Hence, the social position of a particular agent is the result of several institutions exerting their influence at the same time.

In a different context, Jessop (2008, 36) remarked that the "state system is the site of strategy. It can be analysed as a system of strategic selectivity, i.e., as a system whose structure and modus operandi are more open to some types of political strategy than others." Thus, a given type of state "(...) will be more accessible to some forces than others according to the strategies they adopt to gain state power." His analysis applies as well to the evolution of property. The institutional context sustaining property and access is more susceptible to some strategies to maintain a social position than it is to others. Hence, an institutional context "privilege[s] some actors, some identities, some strategies, some spatial and temporal horizons, some actions over others" (Jessop 2001, 1223). The institutional context concerning property is not a level playing field (see, Hay 1995, for the level playing field metaphor regarding the state in general). Agency in establishing property is unevenly distributed among agents. This suggests that agents are not locked into certain paths by external forces, as some authors seem to suggest. Agents actively create paths and the mechanisms for their reproduction are also the result of strategic action (Garud, Kumaraswamy et al. 2010). Acknowledgement of agential capacities to create or shape paths, in my understanding, does not imply rejection of path-dependence as a concept (pace Garud, Kumaraswamy et al. 2010).[110] If agential capacities to create paths are unevenly distributed, a process

might become path dependent for those who lack influence over this process. Path-dependency and path-creation are then different sides of the same coin.

Agency within path-dependent or path-creating processes is influenced by the institutional context that predates agential behaviour.[111] Institutions have causal powers that cannot be reduced to the agents adhering to an institution (Hodgson 2000b). In other words, the scope of action of an agent is the result of institutions jointly placing the agent in a social position.[112]

In summary, path-dependency in this conceptualisation is the result of agents obtaining social positions vis-à-vis other agents and the reproduction of these positions.[113] Social positions emerge as a consequence of the institutional setting. The analysis of path-dependence requires tracing the evolution of social positions and the institutions giving rise to and sustaining them. The institutions might change, as studies on the influence of agrarian elites on land reform policies show (cf. Angeles 1999). The evolution of property relations would is path-dependent, if characterised by sensitivity to institutions allocating social positions early in the process and inertia of these social positions in later periods of time. This does not necessarily relate to the social position of a particular agent. Building on Jessop, this also relates to a particular type of agent who can deploy the strategies that the State – as a system of strategic selectivity – is more open to.

7.3 Methodology

This chapter builds on research which adopts a two-pronged approach: First, insights in contemporary processes shaping property relations draw on case studies on smallholders' land rights in Western Pará. Second, secondary sources were used to reconstruct Amazonian colonisation under military rule. These secondary sources include academic works and grey literature, such as reports by the World Bank. The authors are listed in the respective sections.

The chapter draws on case studies in five municipalities in Western Pará to understand contemporary processes shaping property relations. The munici-

palities are located in so-called frontier regions; regions that hold large areas of primary forest cover that is increasingly becoming transformed into other land uses. In these five case studies, small farmers suffer from infringements of their rights by other agents. These infringements led to small farmers requesting recognition of their land claims by public authorities. Data was collected during three field visits which took place from 2006–2008 and in total 10 months of field presence. I conducted my field research during the campaigning periods for the elections to the national Congress and the parliament of Pará in 2006 and the municipal elections in 2008. This simultaneity allowed certain insights into the influence of different societal groups on political parties. Principal research methods applied are interviews (open-ended questions, which aimed at generating narratives) which I recorded, participant observation, and participatory research exercises (primarily, participatory mapping). My interview partners were members of civil society, representatives of national NGOs, Brazilian researchers, and public officials.

7.4 Property Relations in Pará from 1960 to 2008

To analyse path-dependency as conceptualised above, it is necessary to understand the evolution of agents' social positions. Therefore, this section 7.4 first outlines the colonisation programmes implemented under military rule. It then describes to the institutional context influencing the distribution of land as part of the colonisation programmes. A presentation of property distribution over time and contemporary processes of establishing property follows. The section concludes by describing contemporary factors that shape the influence of large agricultural producers on land allocation.

Up to 60% of the rural population of Pará lives in extreme poverty (Verner 2004, 16). Agriculture, timber extraction, and other natural resource related strategies are important to these peoples' livelihoods. For various reasons, many of them do not hold secure rights to the resources essential to their livelihoods. Insecurity might arise because they live on the land by rights of possession, not having the means to obtain a title (cf. Foweraker 1981, 138f).

This situation gives rise to rights infringements by other agents (cf. Paiva 2006). The high degree of land conflicts in Pará (cf. Sauer 2005) is an indicator of this insecurity. At the same time, the distribution of land in Pará is highly unequal. The Gini Index of land distribution is 0.822 (Instituto Brasileiro de Geografia e Estatística 2006, 109). The illegal acquisition of public land by private individuals further aggravates this situation (cf. Instituto de Pesquisa Ambiental na Amazônia 2006). In this context, climate resilient development strategies need to incorporate measures to secure the rights of smallholders to land and other natural resources.

Discussing smallholders' rights and access to land, this chapter will focus on the relations between them, large agricultural producers (principally ranchers), and the State. The distinction between smallholders and large agricultural producers is an oversimplification (for a more differentiated presentation, see Sobral Escada, G. Vieira et al. 2005). This simplification is nevertheless justified, as these two groups broadly correspond to different constituencies addressed by policy initiatives (cf. Schmink 1982, 342). This holds true in historical perspective and in recent times.

7.4.1 Amazon Colonisation Programmes under Military Rule (1964–1985)

Two processes stood at the outset of the colonisation of the Brazilian Amazon under military rule. First, there was a significant increase in the sale of land under the jurisdiction of the State of Pará. In the years 1924–1958, the State of Pará sold 384,370 hectares of public land to private individuals. From 1959–1963, the State of Pará sold 5,646,375 hectares which represents an increase of 1,469%.[114] According to Treccani (2001, 180), this land policy benefited those close to those holding political power in the administration of Pará during that time. Second, the Belém-Brasília highway was finalised in 1964. From that moment a road gave access to a region which had formerly been primarily accessible by boat. Intense migration from other parts of Brazil followed. These migrants arrived in a region in which large private landholdings were beginning to emerge as a defining feature of the rural society. This trend should intensify under military rule.

To understand the occupation dynamics that unfolded under military rule, it is also necessary to consider the factors that contributed to the military coup. In his attempt to stay in power, President Goulart – the last president before military rule – attempted to address the structural inequalities that characterised Brazil. Steps in this direction would have needed to alter existing relations of power (Bernecker, Pietschmann et al. 2000, 268)on which proved unfeasible. When he announced steps towards a redistributive land reform programme in early March 1964, this decision was part of the reasons which triggered the military coup later that month.

In 1966, the first president of the military regime General Castelo Branco initiated a national policy for the Amazon called "Operation Amazon" (*Operação Amazônia*). The heading "Integrate to not hand over" (*"Integrar para não entregar"*) captures the spirit of the operation. Other Amazonian nations, in particular Peru and Venezuela, had already began to foster occupation of Amazonian regions under their jurisdiction (Mahar 1989, 11). In a region with a history of border conflicts,[115] the military regime aimed to secure the integrity of the Brazilian territory. The operation intended to establish a favourable climate for private investments in colonisation. Primarily, the state made incentives available for cattle ranching which was seen as promising investment (Hecht 1985, 670ff). Faced with these incentives, private entrepreneurs were expected to carry out the actual task of colonisation. The Amazon Bank (*BASA, Banco da Amazônia SA*) and the Superintendency for the Development of the Amazon (*SUDAM, Superintendência de Desenvolvimento da Amazônia*) were founded to support the colonisation process and to channel resources to private investors. It was the type of colonisation strategy favoured by private entrepreneurs being developed under their "active participation" (Schmink 1982, 344). The São Paulo based Association of Amazonian Entrepreneurs (AEA), a lobby organisation of 200 of the largest economic groups in Brazil, promoted cattle ranching as the "vocation" of the Amazon. Additionally, "(...) several southern Brazilian land magnates already had substantial land investments in the Amazon, [for whom] this was an attractive means for valorising existing holdings" (Hecht 1985, 670). Since the inception of the incentive scheme until the year 1978, about 1 billion USD of SUDAM funds had been invested in cattle ranching. This amount equals 2.6 million USD per ranch (ibid, 671). In addition, investors received substantial fiscal support to implement their ranching projects (for a detailed description of policies, see section 7.4.2 below). This type of colonisation has been preceded and was accompanied by small settlers occupying the area (on the example of the BR-316 connecting Maranhão and Pará, see Treccani 2001, 164).

The colonisation scheme underwent alterations in 1970. That year, Brazil's Northeast suffered from a particularly pronounced draught (for precipitation data, see Rao, Satyamurty et al. 1986). Subsequent to his visit to the region, President Médici established a wide array of measures that were supposed to better the situation of the rural poor in Brazil's Northeast. One of the measures was the construction of the Transamazon highway. The highway should open up new settlement areas for landless labourers from the Northeast and other Brazilian regions. "Land without people for people without land" (*Terra sem homens para homens sem terra*) and "Man is the goal" (*Homem é a meta*) became the new mottos for colonisation. Besides the construction of the Transamazon highway, the National Integration Plan (*PIN, Plano de Integração Nacional*) foresaw the building of feeder roads and the foundation of small urban centres. The latter should provide the necessary infrastructure to the new settlers. As part of the settlement scheme, the national Government federalised vast tracts of land. To both sides of the highway a strip of land with a depth of 100 kilometres was transferred from the jurisdiction of the state of Pará to the jurisdiction of the national Government. In a context already characterised by overlapping property claims, this act further increased tenurial complexity.

The initial support that had been essential to settlers' success soon faded. From 1974 onwards, the national land reform agency INCRA significantly reduced its presence in the Transamazon region. There are several reasons for this policy shift: (i) bureaucratic and technical complexities that plagued colonization efforts (see, for example, Foweraker 1981, 136), (ii) Schmink (1982, 344) points out that the National Integration Plan was from the beginning intended to

provide political support to the regime when the unequal distribution of benefits of the development model of the military regime became obvious,[116] (iii) the increase in oil prices after 1973 which gave rise to calls for "economic" versus "social occupation" (Bunker 1985, 176; Hecht 1985, 672), and finally (iv) the allocation of funds to support the settlement of landless people attracted criticism of those who had benefitted from the earlier colonisation model. An interagency conflict between INCRA and SUDAM evolved (Foweraker 1981, 161). In the period 1971–1974, the PIN received 30% of the income tax revenues to provide fiscal incentives. A further 20% share was allocated to a land redistribution fund called PROTERRA (Mahar 1989, 25). This situation threatened the position of SUDAM as the leading agency in executing development programmes in the Brazilian Amazon. Claims by the AEA for a reversal of the colonisation efforts focussing on smallholders received support from the Minister for Planning. A series of concessions by Government resulted (Bunker 1984, 1050). Subsequently, INCRA shifted the regional focus of its smallholder settlement initiatives from Pará to Rondônia (Schmink 1982, 345).

A visit of Reis Veloso, at that time Minister of Planning, to the Transamazon region in 1973 already indicated the renewed focus of the State on private enterprises as agents of colonisation. The aim of the trip was to offer ten areas of 50,000 hectares each to a group of 20 entrepreneurs accompanying Reis Veloso. The land had formerly been under INCRA's jurisdiction destined for settlement programmes (cf. Foweraker 1981, 161f; Hecht 1985, 672f). POLAMAZONIA was the name of the new regional development programme launched in 1974. It focused efforts on those sectors deemed the most dynamic by the federal Government: mining, cattle, and timber. Regarding livestock production it included the objective of increasing the number of heads of cattle from 5 million in 1974 to 8 million in 1980 (Foweraker 1981, 156). Further, the Amazon Development Plan (of which POLAMAZONIA was a central part) offered 2.5 million hectares of land destined for private colonisation projects (Hecht 1985, 673). The lots in these colonisation projects were intended for prospective settlers from the South. The landless poor were often excluded.[117] Mining in the Carajás iron ore further increased the influx of migrants. When land

conflicts intensified in the south of Pará, Maranhão, and Tocantins in the late 1970s, Government established the Executive Group for Araguaia-Tocantins region (GETAT). It was intended to ease rural violence and was granted special powers to expropriate land, settle migrants, and to grant land titles.

In summary, colonisation programmes under military rule were primarily directed at large agricultural producers. They received substantial support to establish themselves in the region. In addition, those benefitting from this colonisation model were able to exercise influence on the colonisation model adopted by the State. Partly as an effect of this influence, the focus on small settlers was limited and took place during a comparatively short period of time. Despite of these unfavourable conditions, landless Brazilians from other regions continued to migrate to the Amazon. The following section 7.4.2 addresses the different policies and other factors directed at these two broad groups of agents.

7.4.2 Policies and other Factors Shaping Property Relations

This following description of policies and other factors shaping property relations addresses land policies, fiscal incentives, and the differential treatment of smallholders and large agricultural producers by public officials working in the land agencies. Measures taken by the military government to hinder the activities of those organisations trying to assist small farmers in obtaining secure rights to land are subject of a concluding note.

One possible way to classify policies regarding the distribution of public land under military rule is to distinguish policies allocating public land to private individuals from those which recognise claims by private individuals regarding public land. First, regarding land allocation, in areas destined for colonisation INCRA granted titles to plots of 100 hectares to each family settled. Section 5.4 already alludes to the allocation of large land parcels for the purposes of cattle ranching or private colonisation. From 1975 onwards, INCRA granted areas of 3,000 hectares to private individuals through so-called Land Alienation Contracts (*Contratos de Alienação de Terras Públicas, CATP*). Often, CATPs were regis-

tered in private land notaries as property which they only became after fulfilling certain stipulations tied to these contracts (like physical occupation of the area or certain activities to be implemented). If not fulfilled, the land returned to the hands of the state. If physically unoccupied, others often took advantage of the situation by establishing themselves in the area (cf. Plataforma Brasileira de Direitos Humanos Econômicos 2003, 21f). In short, the practice of issuing CATPs added further complexity to the land tenure situation.

Second, public land can pass to the hand of private individuals through the "direito de posse." If the "posseiro" (somebody settling on unclaimed public land) lives on the land and cultivates it for a year and a day, he establishes a right to the land through appropriation (Foweraker 1981, 112). After five years, the "posseiro" has the right to obtain a title for the land (Binswanger 1991, 823). During military rule the limit of land to be acquired via "apossamento" was 3,000 hectares (the Constitution of 1988 reduces this limit to 2,500 hectares). The size of the plot usually allocated to settlers was 100 hectares. In areas under the jurisdiction of GETAT, special regulations for land allocation applied. A claimant had the right to obtain a title for an area the equals three times the actually deforested plot (ibid). Given that small agricultural producers relying on family labour can deforest about 3 hectares/year (Fearnside 2001), this policy favours large agricultural producers. Moreover, the mission of GETAT was not to establish viable settlements but to ease land conflicts. Even GETAT staff recognised that the 50 hectares plots allocated to settlers were unviable. In case of land invasions by landless settlers, GETAT offered those whose property has been invaded a larger area located somewhere else. Sometimes, these invasions were even prompted by the owners themselves. For example, if the quality of pasture started to deteriorate, an invasion offered the possibility of obtaining fertile land in other areas (Schmink and Wood 1992, 178ff).

Besides "apossamento" as a legally acknowledged way of acquiring public land, land appropriation also occurs illegally (grilagem). These lands are then registered in private land notaries giving them appearance of legally acquired land. Two policies stand out

that enabled later legalisation of illegally acquired land: the "Medidas Provisórias" 005 and 006 dated June 6, 1976 and the possibility of purchase of land which titles are going to be declared void (instituto de recompra) opened up in August 1969 (Treccani 2001, 221ff). Regarding the former, the "medidas provisórias" allowed regularising lands of up tot 60,000 hectares that had been acquired irregularly but "in good faith" (Refkalefsky Loureiro and Nildo Aragão Pinto 2005). An example for such a situation is the purchase of a title which has been forged believing that this is a valid title. This legal provision is interpreted as legitimising grilagem (Treccani 2001, 221f; Refkalefsky Loureiro and Nildo Aragão Pinto 2005, 81). This interpretation seems justified as acquisition of land areas above the constitutional limit needs approval by National Senate. Concerning the latter, the state of Pará, via the "instituto de recompra," permitted the purchase of land titles already declared or to be declared void. The conditions tied to this possibility were (i) that the buyer was considered "suitable" by the secretariat for agriculture of Pará and that (ii) the buyer did not participate in or knew of frauds related to this title. According to Treccani (2001, 222), the article reveals its focus on large agricultural producers as it establishes a priority status of those "posseiros" who implement projects approved by SUDAM. A general disinterest in investigating the titleholders' good faith in title acquisition paired this article at the time it became law (ibid).

A range of fiscal incentives and credit lines were made available to large agricultural producers. Following Mahar (1989, 13), the most important of which were so-called "investment tax credits." They allowed Brazilian corporations to use up to 50% of the tax liability as investment capital, if invested in projects located in the Amazon approved by SUDAM.[118] Corporations could import equipment and machinery duty-free and were exempted from export taxes for regional products (Hecht 1985, 670). The average size of SUDAM supported ranches provides a crude indicator of impetus of this policy for further land concentration in the region. By 1983, the average size of SUDAM supported ranches was 23,600 hectares (Binswanger 1991, 825). Further, subsidised credit was available for cattle ranching. On average, 29% of the total amount of subsidised

credit per year was applied to livestock projects (author's calculation based on Mahar 1989, 21). Access to subsidised credit was and still largely is confined to those, who hold a title to their land (Binswanger 1991, 826). Given the superior position of large agricultural producers in obtaining a title, they also had superior access to subsidised credit.

There is another constitutive element in the evolution of property relations under military rule: the differential treatment of smallholders and large agricultural producers by INCRA officials. Despite of preferential treatment of enterprises in the allocation of land, there were nevertheless laws in place that protected the property claims by smallholders. The Brazilian Land Statute (*Estatuto de Terra*)[119] or the establishment of *posse* by smallholders are examples. Bunker (1985, 224ff) underlines that INCRA was required to treat all claimants as equal before the law in land conflicts. In practice, treatment was different. INCRA lawyers had to evaluate the validity of each claim. This implies, for example, following the chain of transfers of a particular title by obtaining the necessary documentation from the notaries offices. If there were breaks in the chain of transfers, INCRA lawyers could validate the claim, refuse it, or request further information. There were, however, no criteria guiding the decisions. In circumstances such as these, the like-mindedness of INCRA officials and claimants of large areas of land came into play (Schmink 1982, 348; Bunker 1985). A tendency of INCRA officials to decide in favour of the large claimants ensued.

When claims were based on effective occupation, there was a further factor discriminating against small farmers. The agronomists who had to visit the plot and assess the situation were mostly unfamiliar with family farming but trained in "modern" agriculture. Bunker (1985, 226) reports cases, in which crops deemed unsuitable for certain soil qualities led some agronomists to include that the land was not effectively occupied. This assessment occurred despite of the fact that the respective settler did not have access to land with the soil quality deemed appropriate by the agronomists.

In addition, the bureaucratic regulations within INCRA biased against small family farms. INCRA

staff was well aware that land notaries and even land registries of the State are often characterised by incomplete registries. Claimants who could analyse the registries at their own costs were in a favourable position compared to those who did not hat have this possibility. INCRA officials then often decided in favour of those offering extensive documentation, even if it was incomplete. In addition to staff attitude and bureaucratic regulations favouring large claimants, differential treatment of small and large claimants by INCRA officials also resulted from the influence of large claimants within the agency (Foweraker 1981, 20; Bunker 1985, 230ff; Binswanger 1991, 827; Treccani 2001, 201). Those benefitting from this influence were then able to acquire land, although it was occupied by others (Schmink and Wood 1992, 169).

There is a final note on the relationship between smallholders and the State in property relations. In the context described above, smallholders needed allies to assist them in obtaining secure rights to their land. In this regard, the Catholic Church provided support. Land literacy campaigns and assistance in smallholders' self-organization are examples of its activities. Schmink and Wood (1992, 183ff) provide a vivid account of the responses by GETAT to these initiatives that took place in the context of the election of a new president of the Rural Labourers Union in Conceição de Araguia in 1980/81. The president of the Union at that time was a Government candidate who did not speak out in favour of smallholders' property claims. An opposition movement gained strength and put forward its own candidate who was shot a month before the election (the gunmen, who openly voiced his responsibility for the murder, was not arrested, however). The replacement candidate nevertheless won the election, which was declared invalid for the lack of quorum. Although the quorum of the next election was not achieved either, it was declared valid. In this election round, the Government candidate had won. Besides forging election procedures State agencies also tried to cut support for the opposition before the election. These activities included the silencing of the radio station run by the Catholic Church, a slur campaign against prominent opposition representatives, and the exchange of land titles for political support.

In summary, the institutional context enacted under military rule was heavily inclined towards large agricultural producers. Rules for land allocation favoured them, as did the acknowledgement of illegally acquired land; an activity that is out of reach for the large majority of impoverished smallholders. Fiscal incentives facilitated the acquisition of land. Regulations for subsidised credit were biased against smallholders on two accounts. Access to subsidised credit required a land title which the large majority of the smallholders did not have. Recipients of subsidised credit could use these resources to occupy further land. In addition, the acquisition of titles was difficult for smallholders. Further, the attitude of public officials in land agencies often hampered smallholders[120] turning posse into a title.

7.4.3 On the Evolution of Property Distribution in Pará from 1964–2008

This section outlines the evolution of property distribution from 1964–2008. It is divided into two parts. The first part describes the effects that the policies implemented under military rule had on the evolution of property in Pará from 1964–1985. The second part outlines the contemporary distribution and reports on some recent trends.

Foremost, the Government – be it federal or of the State of Pará – found it difficult to put order into the occupation dynamics that followed federal infrastructure investments, mainly the construction of roads. The first of which was the Belém-Brasília highway (BR-010) that was completed in 1964. Estimates on the extent of migration to the area of influence of the highway vary between 320,000 to about 2,000,000 settlers (Mahar 1989, 12). Pará did not have the administrative capacity – nor the necessary infrastructure – to respond to this influx and the associated demand for land. Vast tracts of land were sold although the state did not have the means to verify the scope of the claims on the ground. Overlapping of titles and the illegal acquisition of public land ensued (cf. Foweraker 1981, 98f, 106f). In the majority of the cases, illegal acquisition of public land and the later recognition of these illegal land acquisitions resulted in smallholders losing access to the land they had farmed. Officials from the land institute of Pará (ITERPA) estimate that from 1963 to

1967 about 3,000,000 hectares of public land were illegally transformed into private property (cf. Treccani 2001, 200ff). Superimposition of titles also resulted from the federalisation of land along national highways in 1971 and the operation of private land registries that also followed the opening of the national highways (ibid). In this context, de facto occupation became an important factor supporting property claims (Foweraker 1981, 111). This places large agricultural producers into an advantageous position vis-à-vis small farmers. They have the necessary capital to construct access roads into the forest, can occupy larger areas, and deforest them. Schmink and Wood (1992, 172) even report of ranchers who constructed landing strips in the forest and flew in teams to clear land well in advance of road construction. Once a road under construction had reached the specific location, the land had already been taken. Processes like these re-enforced that land allocation was biased towards large agricultural producers.

The chaotic situation of land administration had a two negative effect on smallholders. On the one hand, it submitted them to a cumbersome bureaucratic procedure, which was, for the reasons outlined above, biased against them (Bunker 1985, 232). Even to begin the process, financial resources were needed that were usually beyond what small farmers could afford (Foweraker 1981, 112). Nevertheless, acknowledgement of their property claim remains the prime recourse against expulsion from the land. On the other hand, large agricultural producers could ignore INCRA regulations with impunity, unless they needed a title for the purpose of obtaining credit (Bunker 1985, 233).

Due to the lack of support small settlers in colonisation schemes (cf. Schmink and Wood 1992, 179; Treccani 2001, 184), they were forced to sell their land in times of need. Acquisition of land on the market, to the contrary, was very difficult for small farmers. Because of the various incentives available tied to land, the price of land not only reflected the discounted value of agricultural produce but incorporates a mark-up (Binswanger 1991, 826). Further, the price of land increased significantly also because of other state subsidies. It turned into the key instrument to obtain state subsidies. Its exchange value

instead of its use value determined the price (Hecht 1985, 672). This trend intensified substantially from 1974 onwards when Brazil's inflation jumped from about 15% in 1973 to 34,5% in 1974. Whereas the general price index increased about 200% from 1974 to 1975 in comparison to 1966 levels, the land price surged up about 1,300% (for the evolution of the land price in comparison to the general price index, see Hecht 1985, 672; for data on inflation rates, see Sachs and Zini 1996, 14).

Table 7-1 shows the evolution of the number of rural properties and the area covered by them during the period 1960–2006. This overview provides an account of how the processes described above manifested themselves. During the period 1960–1975 the area under agricultural use increased threefold. At the same time, the share of properties smaller than 100 hectare increased from 88.7% to about 90%. The share of the total area under agricultural use covered by landholdings smaller than 100 hectare decreased in the same period from 25.6% to 19.6%. The other side of the coin is land concentration in the hands of a few. In the year 1975, 1.4% of all properties (those larger than 500 hectare) cover 65.4% of the agriculturally used area. At the end of military rule in 1985, the number of landholdings larger than 500 hectare increased slightly and the share of the area covered by them declined. Nevertheless, 1.8% of all properties still encompass 60.5% of all agricultural land.[121] A detailed evaluation of the area under GETAT's jurisdiction by the World Bank (1992, 44) confirms this general picture. It concludes, "although GETAT distributed some 60,000 land titles covering seven million hectares, this served mainly to consolidate a pre-existing highly inegalitarian structure of property ownership in the region." Whereas 70% of the titles under 100 hectares issued from 1980–1985 occupy 21% of the area, the 8% of the titles covering more than 300 hectares occupy 51% of the 5 million hectares titled land. One landholding of 400,000 hectares even covers 6% of the area under GETAT's jurisdiction.

Under democratic rule, the Gini index of land distribution initially diminished to some degree, from 0.827 in 1985 to 0.814 in 1995 (Instituto Brasileiro de Geografia e Estatística 2006, 109). The area covered by holdings of less than 100 hectares nevertheless decreased (from 19.68% in 1985 to 19.22% in 1995). This trend continued. The agricultural census of 2006 reports an increasing share of holdings of less than 100 hectares (82.2% of all landholdings), which is accompanied by a decreasing share of the area occupied by them (from 19.2% in 1995 to 18.4% in 2006). An analysis of the landholdings smaller than 100 hectares reveals that land is also unevenly distributed within this segment. In this segment, 83% of all farms are smaller than 50 hectares. However, they only occupy about 50.3% of the land covered by farms smaller than 100 hectares. The Gini index of land distribution of the year 2006 shows re-concentration in distribution. It rose from 0.814 in 1995 to 0.822 in 2006 (Instituto Brasileiro de Geografia e Estatística 2006, 109). Preliminary outcomes of the most recent federal programme to issue titles to posseiros ("Terra Legal") point into the same direction. From June to September 2009, the programme issued titles summing up to 1,000,000 hectares. 11% of these titles cover 51% of the regularised area (Magalhães 2009).

Grilagem continues to be a ubiquitous phenomenon. The latest analysis of the extent of grilagem in Pará finds that an area equal to four times the size of Pará is registered in private land notaries (Comissão Permanente de Monitoramento Estudo e Assessoramento das Questões Ligadas à Grilagem 2009). Many smallholders continue to work their land without holding secure rights to it. The concurrence of these phenomena contributes to land conflicts which characterise many municipalities in Pará (cf. Paiva 2006).

In conclusion, looking at the evolution of smallholders' access to land during the period 1960–2008 little has changed. Concerning property, the year 2006 even witnessed an increase in the Gini index of land distribution. This process was made worse by the ubiquity of lack of land rights regularisation which has facilitated the illegal acquisition of land occupied by smallholders.

TABLE 7-1: EVOLUTION OF LANDHOLDINGS IN PARÁ FROM 1960–2006. SOURCES: FIGURES REGARDING THE YEARS 1960–1985 ARE TAKEN FROM TRECCANI (2001, 431) AND THOSE FOR THE YEARS 1995/96 AND 2006 STEM FROM INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (1996; 2006).

Pará 1960–2006: Evolution of Landholdings								
Size of plot		< 100	100–499	500–1,999	2,000–4,999	5,000–>5000	Not declared	Total
1960	Number	73,810	5,171	897	242	83	2,977	83,180
	%	88.73	6.22	1.08	0.29	0.1	3.58	100
	Area (ha)	1,346,353	1,053,421	767,398	799,563	1,286,537		5,253,272
	%	25.63	20.05	14.61	15.22	24.49		100
1975	Number	168,236	16,161	1,569	670	303	15	186,954
	%	89.99	8.64	0.84	0.36	0.16	0.01	100
	Area (ha)	3,173,432	2,413,774	1,490,017	2,096,316	6,993,194		16,166,733
	%	19.63	14,93	9.22	12.96	43.26		100
1985	Number	213,654	34,520	2,913	1,261	364	510	253,222
	%	84,37	13.63	1.15	0.50	0.14	0.21	100
	Area (ha)	4,865,820	4,890,514	2,914,429	3,781,791	8,275,292		24,727,846
	%	19,68	19.78	11.79	15.28	33.47		100
1995/1996	Number	169,273	32,135	3,478	894	419		206,199
	%	82,09	15.58	1.69	0.43	0.20		100
	Area (ha)	4,328,162	5,161,966	3,139,970	2,752,028	7,138,103		22,520,229
	%	19.22	22.92	13.94	12.22	31.70		100
2006[a]	Number	169,306	30,826	4,606[a]	1,198[a]			205,936
	%	82.21	14.97	2.24[a]	0.58[a]			100
	Area (ha)	4,130,143	5,404,201	4,743,815[a]	8,187,867[a]			22,466,026
	%	18.38	24.05	21.12[a]	36.45[a]			100

a: The 2006 agricultural census uses a different classification of property sizes. Therefore, the classifications used in the censuses 1960–1995/96 and the 2006 census do not match completely. The figures provided for the year 2006 in the row 500–1,999 refer to the properties of 500–2,499 hectares in the 2006 census and the figures given in the row 2,000–4,999 correspond with data on holdings above 2,500 hectares in the 2006 census.

7.4.4 Contemporary Factors Shaping the Evolution of Land Rights

This section distinguishes four types of factors that shape the influence of large claimants on decisions affecting property relations: (i) politicians affiliated with large claimants, (ii) the foundation of new municipalities, (iii) the administrative capacity of the land agencies, and (iv) the influence of large claimants within these agencies and within the judiciary.

Generally, political parties find it difficult to win elections without responding to the requests of economic elites. During the campaigning periods for the elections in the state of Pará in 2006 and the municipal elections 2008, this group exercised influence in all major parties. I will discuss their influence in the Brazil's Workers Party PT (*Partido dos Trabalhadores),* as PT has the strongest ties with civil society groups fighting for smallholders' land rights in Pará. Therefore, the PT is the political party in which such alliances are the least likely in comparison to the PSDB (*Partido da Social Democracia Brasileira*) and the PMDB (*Partido do Movimento Democrático Brasileiro)* of Pará, let alone the parties further to the right. However, political leverage of these groups also extends to the PT.

Ahead of the 2006 elections, a leading representative of the PT called a representative of a civil society group reminding him that their actions would put the election of the candidate of the PT for Governor of Pará at risk. The civil society group is working for land rights regularisation of an area occupied by traditional people. Several large logging companies were operating in the municipality covered by the work of this civil society organisation at that time. During the municipal election campaigns of 2008, the PT coalesced with the PMDB. In Anapu and Porto de Moz, PMDB included politicians who are involved in illicit resource use activities themselves. In Porto de Moz, PT coalesced with a PMDB politician, who is a member of a family that was long undermining efforts for land rights regularisation. At the time of the election campaign, his family was operating to avoid land rights regularisation of two quilombola[122] communities. In Anapu, PT formed a coalition with a politician, who was reliably reported for the illegal acquisition of public land and illegal

logging. The Federal Enquiry Commission to accompany the investigations into the assassination of the nun Dorothy Stang (2005) named him as one of the likely members of the net of supporters for the one ordering the murder.

Toni (2007, 14) confirms these findings in his analysis of the 2004 municipal elections. According to him, the election of the PT candidate as mayor of Medicilândia in 2004 has only been possible through a coalition with the more conservative parties.

The foundation of new municipalities also contributes to sustaining the influence of large claimants on municipal politics. From 1980–1996, the number of municipalities in Pará increased from 83 to 143. Founding a municipality allows access to federal fiscal transfers; resources, which are then often spent for the private benefit instead of the public good (Instituto de Pesquisa Ambiental na Amazônia 2006, 30ff). Often, these newly founded municipalities were offspring of small settlements surrounding a sawmill or a ranch. In his assessment of the potential impact of decentralization of environmental policies in the Amazon Toni (2006, 39) finds, "in fact, many Amazonian municipalities are directly controlled by loggers operating in illegality, ranchers responsible for large areas of illegal deforestation, land-grabbers and their henchmen."

Addressing the complex land tenure situation in Pará and protecting the rights of small family farms poses a huge administrative challenge. The example of land institute of Pará (*Instituto de Terras do Pará, ITERPA*) is illustrative in this regard. In 2006, for the first time, a member of the Workers Party was elected as governor of Pará. As part of the administrative restructuring, the president of ITERPA and his advisory staff were replaced with PT members who long worked in favour of smallholders' land rights. A policy paper on the role of land rights regularisation in democratising access to land followed in 2007 (Instituto de Terras do Pará 2007). For the first time, this policy officially acknowledges the gravity of the problem of grilagem as well as the "land tenure chaos" characterising much of rural Pará. In 2008, ITERPA was working in selected parts of eight of the 143 municipalities of Pará to put its new policy into practice.[123] The capacity of INCRA to address land

tenure insecurity in the 25% of Pará's territory that are under its jurisdiction is not sufficient either. The ubiquity of problems related to the lack of land rights regularisation serves as an indicator of this (for a survey on this question, see Paiva 2006).

Staff structure poses further constraints on progressive land policies favouring small farmers. Replacing the heads of agencies with officials sharing the goal of a more equitable land distribution does not imply that those officials working in the field are equally convinced of this cause. A part of the staff of the agencies might then be working to maintain the current situation instead of contributing to structural change envisioned by the heads of the respective agency. My interlocutors interpreted the observation that some land rights regularisation projects remain "shelved" (*projetos engavetados*) as a manifestation of this influence. Leading positions in land agencies become part of political deals between coalition partners. "Schizophrenic agencies" result whose units at different administrative tiers are lead by officials with diverging agendas. National or state level policies in favour of small farmers might be counteracted at lower administrative tiers.

Similar processes occur at the federal level between different ministries. In coalition governments, tensions between ministries also mirror party disputes. For example, Extractive Reserves are a type of conservation unit intended to secure the land rights of traditional people. They often result in a redistribution of access to land and other natural resources, if established close to the agricultural frontier (as evidenced by the conflicts that accompany processes of their creation, see, for example Silva 1994). When the responsible agency (*Instituto Chico Mendes de Conservação da Biodiversidade, ICMBio*) establishes an Extractive Reserve, it has to follow a certain administrative procedure. One of the steps requires agreement by the Ministry of Mines and Energy. Under president Lula's administration, the PMDB sets the minister of mines and energy since 2005. The PMDB of Pará is closely allied to the interests of the ranching and logging sector. Party affiliation opens up routes for political influence.

Influence of large claimants on decisions shaping property relations also extends to the judiciary.

Given the large amount of overlapping titles and the resulting insecurity of property rights, the judiciary assumes high importance in deciding upon the validity of property claims. In this context, Treccani (2001, 227) perceives a treatment that favours those who claim to be the owner of large properties. Whereas judiciary decisions "protecting" private property are issued quickly, requests by the land institute of Pará ITERPA to cancel titles take years to be processed (for a similar judgement along this line, see Instituto de Pesquisa Ambiental na Amazônia 2006, 41f). Analyses of investigations into crimes committed in land conflicts mirror this tendency. They conclude that these criminal investigations were systematically biased in favour of the perpetrator or the one ordering the crime (*mandante*) (Anistia Internacional 1988; Inter-American Commission on Human Rights 1997; Sauer 2005).

7.5 Path-dependence in Property Relations in the Brazilian Amazon

This section will take up the different threads developed above. It suggests that the evolution of property in land in Pará is a path-dependent process. Section 7.2 established that path-dependency is the result of agents obtaining social positions vis-à-vis other agents and the reproduction of these positions. Social positions emerge as a consequence of the institutional context. This context privileges some actors over others. Sensitivity to events that occur early in the sequence characterise path-dependent processes. This suggests that once social positions are established those occupying these positions find it easy to maintain or difficult to overcome them, depending on the vantage point. Identifying whether a process is path-dependent necessitates an analysis of the evolution of social positions and the institutions giving rise to and sustaining them. The evolution of property relations in Pará would be path-dependent, if the following characteristics apply: (i) sensitivity of the evolution of property to institutions allocating social positions early in the process; (ii) and inertia of these social positions.

To analyse whether a sequence of events exhibits characteristics of a path-dependent process, the start point of the sequence needs to be determined. There are several reasons to begin the analysis of the evolu-

tion of land rights in Pará with the colonisation of the Amazon under military rule. Before military rule, access to the region was limited to transport by boat. In 1964, the Belém-Brasília highway was completed. This led to an unprecedented expansion of the road network after that year (Mahar 1989, 23). In-migration and significant population growth ensued (Treccani 2001, 177f). Further, the area under cultivation expanded substantially (see table 7-1).

Through land and other agrarian policies, the military regime established an advantageous social position for large agricultural producers regarding property of land. Most of the policies alone were already biased in favour of large agricultural producers. Moreover, they re-enforced each other. Think of the example of subsidised credit which presupposes a land title which was out of reach for most smallholders. During 1970–1973, the National Integration Plan (PIN) briefly complemented this explicit focus on large agricultural producers as agents of colonisation with attention to small settlers. Resistance to this policy by those benefiting from the status quo contributed to PIN's removal.

The policies favouring large agricultural producers went hand in hand with the inability of the State to administer the land use dynamics that followed infrastructure investments. This situation was made more difficult by the complex land tenure situation that arose because of the many decisions by the State regarding the distribution of public land. Again, this insecurity favoured mainly large producers, who in the face of legal insecurity appropriated large tracts of land. Further, legal provisions and access to the judiciary allowed the later acknowledgement of illegally acquired public land by the state. Small producers, to the contrary, often found it difficult to obtain a title to the land they farmed. Bureaucratic procedures and the attitude of public officials discriminated against them.

The evolution of landholdings from 1960 to 1985 provides a vivid account of how social positions manifested themselves in the distribution of property (see table 7-1). At the end of military rule, land distribution in Pará is highly unequal. 1.8% of all landholdings occupy 60.5% of all area under agricultural use. This distribution emerged despite a fourfold increase

in the area under agricultural production in comparison to 1960 and although the region received a large number of settlers. Together these findings indicate the sensitivity of the evolution of property in Pará to the institutional setting established at the outset of colonisation under military rule.

The evolution of property under democratic rule points at the inertia of the social positions established during the military regime. In comparison to 1985, the area occupied by landholdings smaller than 100 hectares diminished even more. From 1985 to 2006, the Gini index of land distribution fell from 0.827 to 0.822 indicating a slightly less unequal distribution of land. However, the Gini index rose from 0.814 in 1995 to 0.822 in 2006 (Instituto Brasileiro de Geografia e Estatística 2006, 109). Apart from the unequal distribution of property in land, many small producers have suffered from infringements of their rights by more powerful agents. This provides another sign of their continuing marginalised social position regarding access to land. The analysis of inertia of social positions need not rely on the description of property distribution and rights infringements only. Section 7.4.4 describes processes that lead to the reproduction of social positions. It highlights that large agricultural producers were able to continue exercising influence over political parties under democratic rule. This is not restricted to political parties but extends to public officials in land administrations. Applying the conceptualisation advanced earlier, the evolution of property in Pará is a path-dependent process.

7.6 Conclusions

High levels of extreme poverty already characterise much of rural Pará. The likely impact of climate change will aggravate this situation (see, for example, de la Torre, Fajnzylber et al. 2009). Climate-resilient development in Pará is necessary. The rural poor of Pará depend to a large degree on natural resource based livelihood strategies. At the same time, their rights to natural resources are often insecure. Their marginal position in property relations is a result of agricultural policies that have discriminated against them. After the end of military rule in Brazil, economic elites managed to reproduce their superior social positions. This position allows them to con-

tinue appropriating public land. The evolution of property in land in Pará is a path-dependent process.

Global attention to climate change offers a discursive window of opportunity to take smallholders' property claims to national and global fora. Associated considerations on pro-poor adaptation and climate resilient development provide leverage to advance with this question. However, to transform this lever into actual progress – and to move beyond buzzword status – climate-resilient development would need to address inequities associated with the evolution of property in land in Pará. It is a struggle with history that needs to challenge vested interests. If development assistance is to advance it this regard, it needs to apply a politicised approach to development. In the end, climate-resilient development in Pará is about fundamental social change. One of the elements to contribute to this aim is support to civil society – or "social movements" *(movimentos sociais)* as the literal translation from Portuguese goes. Despite of the fact, that there are several well organised social movements, such an approach to development assistance has been sporadic in Western Pará. Generally speaking, in times of increasing importance of budgetary support and "policy dialogue" at the national level, I am afraid that development assistance is stripping itself of the means to implement a politicised approach to development. If this assessment is correct, the prospects of climate-resilient development in Pará are bleak.

Epilogue

At the end of this book, I would like to return to its very beginning. After the assassination of Dorothy Stang in 2005, it seemed as if Government finally assumed its responsibility to enforce the land rights of the small settlers living in the areas that are demarcated as Sustainable Development Projects in the municipality of Anapu. Massive Government intervention overcame the opposition of those who were profiting from the predatory use of the forest and the marginalisation of the settler population. Given the long history of this land conflict, it was difficult to overestimate the significance of these events in the political context of Pará in the year 2005.

At the moment I am writing this epilogue, tensions are high again in Anapu. The inhabitants of the PDS Esperança[124] again have to live under serious threats and loggers are illegally exploiting their resources. Shortly after my last field visit in October 2008, a candidate of the Workers Party (*Partido dos Trabalhadores*) was elected as mayor of Anapu. Given the entangled history of the Workers Party with the social movements of Anapu, hopes were high that municipal politics would finally reinforce the efforts to counter the marginalisation of the smallholder population. To get elected, however, the Workers Party entered a coalition with the PMDB (*Partido do Movimento Democrático Brasileiro*). The candidate for the position of vice-mayor was identified as one of the key actors supporting the assassination of Dorothy Stang by the Federal Inquiry Mission that investigated the assassination. The decision by the Workers' Party to enter the coalition already put severe pressure on the social movements. Representatives of the church and others were inquiring how the Workers Party could enter such an alliance. How-

ever, without this coalition, it is highly unlikely that the Workers Party would have won. In fact, the situation is not very different from other municipalities along the Transamazon highway, such as Medicilândia. Whereas the coalition was difficult to swallow for many of those involved in the land struggle, it should become worse. Shortly after the election, invasions of the PDS Esperança by loggers started again and intensified up to the current day. The municipal administration of Anapu proved incapable or unwilling to counter these trends.

The half-life period of progressive land policies seems to be rather short in the face of the prevailing social structures in Anapu.

The events in Anapu form the backdrop of this concluding chapter, as they highlight some of the key findings of my dissertation project. The project set out (i) at the empirical level, to provide accounts of land rights regularisation processes in Western Pará and to describe their outcomes; (ii) at the theoretical level, to try to explain these findings through the lens of institutional economics; and (iii) at the prescriptive level, to infer conclusions on how to support forest tenure reform. The research approach to achieve these objectives aims at understanding (see chapter 2). It builds on case studies, immersion in the society in which these processes take place and the analysis of narratives.

Two concerns gave rise to the project. The first concern was my earlier work on land reform and my conviction that securing property rights is crucial to reduce livelihood vulnerability. The second concern was theoretical in nature and relates to the mecha-

nism of institutional change privileged by much of the scholarship on common pool resources: collective action among the resource users to agree on and supervise rules that allow the sustainable management of resources. As reiterated at various parts of this book, I am convinced that in many rural areas the mechanism of institutional change that creates the necessary enabling conditions for communal resource governance (i.e., secure property rights) is fundamentally different from this conceptualisation of institutional change. Power play substitutes for collective action. Within this power play, collective action becomes important as one of the strategies to defend access to resources against others. In my understanding, the analysis of case studies presented here clearly makes this point. Power becomes the dominating mechanism of institutional change when other agents privileged by the social context contest the property claims of marginalised communities. The review of other studies in different chapters of this thesis highlight that this finding is not only valid for the Brazilian Amazon. Further, this finding might become increasingly relevant in a world that witnesses a trend of rising in-country inequality (International Labour Office 2008, 9ff; United Nations Research Institute for Social Development 2010, 62ff).

There is case study evidence suggesting that the implementation of pro-poor resource governance becomes more difficult in inegalitarian contexts. The challenges of implementing progressive land reform policies are probably the most prominent example (see, for example, Bardhan 2000). In this context, it is worthwhile to point out that inequalities in resource access are often more pronounced than income inequalities. Whereas in Latin America, for example, the average Gini index of income distribution is 51.3 (United Nations Development Programme 2010), the average Gini index of land distribution in selected Latin American countries amounts to 84.93 (Deininger and Olinto 2000).

The findings presented in this book further show that agents do have different scope of action regarding resource use (chapter 4) and institutional change (chapter 5). In the cases presented here, this scope of action is to a good part an effect of the social relations between the agents. Clientelistic relationships

between small agricultural producers and those agents of higher economic, social, or political standing perpetuate their marginalisation of the former. A State apparatus that is often not attending the demands of the impoverished rural population groups in society facilitates the endurance of these relationships. Selective responses in favour of the claims of elites further aggravate the situation. Again, the analysis of power is crucial to understand resources use. The same holds true for attempts to alter resource use practices. Although the metaphor runs the risk of being trite, it pointedly describes what is at stake: The social context of resource use is not a level playing field.

History shaped these social relations (chapter 7) and it continues to exert influence on agents' ability to alter today's social positions. The analysis of the evolution of land relations in Pará emphasizes this point. Public policies during military rule and thereafter favoured land acquisition by financially well-endowed agents. Large-scale land possession translated into political influence which, in turn, fostered their ability to maintain their possession or even expand it. From 1960–2006, the area under cultivation increased more than fourfold (see table 7-1). In spite of this increase and in spite of the settlement policies of the State,[125] the Gini index of land distribution remains extremely high (0.822 in 2006, Instituto Brasileiro de Geografia e Estatística 2006, 109). The case studies show that these land relations are not cast in stone and may be altered. However, at the same time, the outcomes of or forest tenure reform demonstrate the prevalence of institutions – in Hodgson's definition of the term – over legal rules (see chapter 6). The events in Anapu described above provide more – and even sadder – evidence along these lines.

According to the Oxford English Dictionary, the term "trajectory" in physics means "the path of any body moving under the action of given forces." I do not want to suggest that societies exhibit law-like properties. However, I do think that the term in its figurative meaning describes the development of land relations in rural Pará from the perspective of those who lack the necessary power, i.e., scope of action, to influence them. The evolution of property in rural Pará exhibits characteristics of a path-depen-

dent processes. The findings described in this book demonstrate that the recognition of property claims of forest-dependent people do have the potential to reform these *underdevelopment* trajectories. Property rights to land and to the natural resources on located on that land are a necessary condition for sustainable livelihoods. They might be an "institutional pathway to equity" (Bebbington, Dani et al. 2008). The findings also show that property rights are an insufficient condition to reform these *underdevelopment* trajectories. As a legal rule they need to rely on enforcement which is often lacking. Further, the institutional context and the social structures of rural Pará are often heavily biased against the new rights holders. Turning rights into substantive livelihood outcomes under these conditions requires further societal changes. In this respect, Cousins (2009, 906) emphasizes the limits of rights-based approaches to development in the face of the prevailing economic order: To "(...) translate formal equality and the rights of democratic citizens into substantive equality (...) requires that legal empowerment be linked strongly to civic activism (i.e. politics) in order to address imbalances of power within the realm of the formal economy, which is the prime source of substantive inequality".

Albert Einstein once said: "It is theory that decides what is going to be observed." Although I hope that the research approach described here (chapter 2) fosters openness to the unexpected, I also experienced the deliberations on structure and agency as equally eye-opening. The findings underline the importance of habitual behaviour and the constitution of social positions within structures. These phenomena can only be explained in a theoretically coherent way, if social structures are more than epiphenomena to individual agency. Social structures possess causal powers that cannot be reduced to their constituent parts, the agents. There is a wide range of theoretical approaches to the question of structure and agency available that, to my knowledge, have not been systematically been taken up by institutionalist theory. The emergentist account of social structures offered above is one example, relational sociology another (Emirbayer 1997; Emirbayer and Mische 1998). Institutional analysis of land relations that does not consider structural influences is likely to yield skewed results and misleading policy advice.

Against the backdrop of the findings presented here, the question of how to translate legal rules into institutions and practice becomes a research desideratum, from a theoretical and from a policy perspective. While Hodgson usefully distinguishes between legal rules and institutions, he does not elaborate on the process of how the former turns into the latter. Given the potential of rights to address inequalities as the ones described in this book, the translation processes merit attention. Hodgson's focus on institutions and habitual behaviour emphasizes that translation is not only a question of enforcement and power play, as emphasized above. It also takes place within the actors. These two processes suggest at least two distinct research foci on *institutional change* in the context described above: (i) the role of the judiciary in enforcing rights of those marginalised and the question of access to the judiciary and (ii) the question of how rights (legal rules) become internalised within the agents. As indicated above, understanding the process of translation also demands seeing reforms in rights in relation to the economic context in which they would need to prevail. In this regard, the framework of institutional change as outlined by Haller (2008) holds the advantage of incorporating the relative prices of goods in the institutional analysis. This approach would, as argued above, need to be complemented with a more explicit focus on social structures. In this respect, the emergentist account of social structures (Elder-Vass 2007a) could offer some common ground.

In conclusion, there are some brief points regarding public policies on the Amazon and their international support. First, at the most general level, the deliberations on causality (chapter 2) show that the search for law-like relations in the social world is a futile objective. This implies modesty regarding policy advice. There are no blueprints that will yield desired results irrespective of the context in which they are implemented. The careful identification of lessons learnt (see, for example Rauch, Bartels et al. 2001) that could assist in the process of finding locally adapted solutions should replace the search for ever more models (for a critique of blueprints, see Roe 1991; 1995). Second, institutional change in favour of marginalised communities requires active involvement in favour of their claims. The work of agencies of the State will reflect differing political

opinions and influences. Therefore, accompanying measures supporting specific societal groups are urgently needed. This is unlikely to be achieved by policy advice in Brasília only. It is also questionable, in my understanding, whether budget support does a better job in this regard. Third, communal resource management is – despite of many project documents suggesting the contrary – not primarily a technical question. It requires active involvement to create the necessary pre-conditions allowing for communal resource management. Often, this will imply the need to confront vested interests. Fourth, along similar lines, support to communal resource management cannot rely on capacity building only. If the scope of action of the recipients of capacity building exercises is not broadened, it remains difficult to imagine what they will do with their increased capacities. Fifth, as has been described extensively with regard to the redistribution of farmland, the declared beneficiaries of forest tenure reform need post-reform services. Sixth, changing land institutions will not be done overnight. These processes require sustained support that are unlikely to match project cycles. Responses to this challenge should adapt the latter to the former, rather than doing it vice versa.

As long as international development co-operation does not become serious about the politics of development, I fear that it offers rather sobering prospects for the small settlers of Anapu. This need not be the case. Systematic support of social movements – as offered by some agencies – can assist in fostering their further development and in establishing much needed links to other fora. To borrow Chico Mendes' words: The road will nevertheless remain arduous. This is particularly true for those who try to alter development trajectories in the rural areas of Pará. They merit all our support.

Zusammenfassung

In der vorliegenden Studie werden fünf Initiativen zur Landrechtsregularisierung im brasilianischen Amazonas analysiert. In den fünf betrachteten Fällen wird die Landrechtsregularisierung von kleinbäuerlichen Bevölkerungsgruppen angestrebt, deren Landrechte durch Holzeinschlag und Rinderzucht bedroht sind oder verletzt werden. Diejenigen, die von diesen wirtschaftlichen Aktivitäten profitieren, versuchen die Landrechtsregularisierung zu verhindern. Empirisch fokussiert diese Studie auf die Akteure und ihre Strategien, zentrale Ereignisse und die Ergebnisse dieser Landrechtsregularisierungsprozesse. Auf der theoretischen Ebene werden die Landrechtsregularisierungsprozesse als Prozesse institutionellen Wandels interpretiert. Die Institutionenökonomie – maßgeblich in ihrer klassischen Interpretation – dient als theoretische Basis für die Analyse. Zum Verständnis institutionellen Wandels schlägt die vorliegende Studie einen hermeneutischen Ansatz vor, dessen Basis eine „generative view of causality" ist. Diese Konzeptionalisierung von Kausalität betrachtet auf der ontologischen Ebene soziale Elemente, die mit so genannten „causal powers" ausgestattet sind – unabhängig davon, ob diese „causal powers" tatsächlich zur Anwendung kommen. Die „causal powers" unterschiedlicher sozialer Elemente existieren nebeneinander und beeinflussen einander. Empirisch beobachtbare Ereignisse sind deswegen erklärbar aber nicht vorhersehbar. Vor diesem Hintergrund wird für einen induktiven Forschungsansatz und für Fallstudien als zentrale Forschungsstrategie argumentiert, um institutionellen Wandel *zu verstehen*. Angesichts des konfliktiven Charakters der Reformprozesse steht Macht als zentrale Erklärungsvariable im Vordergrund der Analyse. Macht wird in dieser Studie als „power to"

definiert, als Kapazität eine Handlung auszuführen. Aufbauend auf der oben genannten „generative view of causality" schlägt diese Studie einen Ansatz vor, der in der Lage ist, unterschiedliche Quellen von Macht integrativ zu betrachten: Akteure, soziale Strukturen und Diskurse. Hinsichtlich der in der Region vorherrschenden sozialen Strukturen identifiziert diese Studie Klientelismus und einen selektiv wirkenden Staat (ein Staat, der von bestimmten Gruppen dominiert wird) als konstitutiv für den sozialen Kontext. Aufgrund dieser sozialen Strukturen befinden sich kleinbäuerliche Gruppen in einer marginalisierten sozialen Position. Zur Anerkennung ihrer Landrechte mussten kleinbäuerliche Gruppen deswegen einen Mobilisierungsprozess auf lokaler Ebene organisieren und Verbindung zur nationalen Ebene aufbauen. Diese beiden Voraussetzungen führten aber nur dann zu erfolgreichen Reformprozessen, wenn sich auf der nationalen Ebene besondere Gelegenheiten boten, diese lokalen Anliegen in der politischen Agenda zu verankern (*„momenta of responsiveness"*). Die Wahl des Präsidenten Lula da Silva war für die hier betrachteten Reformprozesse ausschlaggebend. Die vorliegende Studie zeigt weiter, dass die Anerkennung der Landrechte kleinbäuerlicher Bevölkerungsgruppen zwar eine notwendige aber nicht eine hinreichende Bedingung sind, um zur Verbesserung der Lebenssituation dieser Bevölkerungsgruppen beizutragen. Selbst in erfolgreichen Reformprozessen werden, erstens, die Rechte zur Nutzung der Ressourcen nicht automatisch mit an die intendierten Nutznießer der Reform übertragen. Zweitens, führen Landrechtsreformen erst einmal zu Änderungen in der Gesetzgebung, sie etablieren eine neue „legal rule". Die Effektivität von Institutionen – gesellschaftliche Regeln, die sozial verankert sind –

beruht hingegen darauf, dass sie habituell befolgt werden. Das Ausmaß der Effektivität von „legal rules" hängt maßgeblich von dem Ausmaß ab, in dem Maßnahmen zu ihrer Durchsetzung ergriffen werden. Diese Regeldurchsetzung ist in den analysierten Fällen häufig jedoch schwach. Zusammenfassend ist das Ergebnis dieser Studie, dass die Entwicklungswege im brasilianischen Amazonas reformierbar sind. Diese Reformprozesse sind jedoch ausgesprochen schwierig durchzusetzen und bleiben anfällig für Maßnahmen, die dazu dienen sollen, die Reformen zu unterlaufen.

Notes

1 Taken from excerpts from Chico Mendes' "Fight for the Forest" (Mendes 1992). The acronym CNS refers to the Brazilian National Council of Rubber Tappers (Conselho Nacional dos Seringueiros).

2 Traditional people are early settlers to the Amazon (often rubber tappers who moved to the Amazon and stayed after rubber extraction was not economically viable anymore) who practice agriculture and extractive activities, such as fishing. This book does not address indigenous people and their rights to land.

3 See Kay (2006) for a critical discussion of the strategic implications that the concept new rurality can imply.

4 On the probability of fundamental environmental change in the Brazilian Amazon see the World Bank's assessment of the "Amazon Dieback Scenario" (The World Bank 2010).

5 This is not to say that New Institutional Economics does not address the question of power. For a perspective from New Institutional Economics, see, for example, Knight (1992). Schlüter (2001) applies Knight's theory fort he analysis of institutional change in a post-socialist country. Ensminger (1992) emphasizes the role of bargaining power in institutional change working from a perspective that she calls New Institutional Economic Anthropology. Haller (2007; 2008; 2008)

6 Along similar lines, Bierschenk and de Sardan (1997) propose to choose conflicts as a starting point of anthropological analysis.

7 Similarly, Bogale, Korf, et al. (2004) treat "collective action scholarship" and those approaches, which focus on equity considerations in accessing common pool resources as complementary instead of opposing approaches.

8 The term agents as it is used here ought not to be confused the agent as in principal-agent theory

9 Kelle's (1994) elaborations on "qualitative induction" (qualitative Induktion) provide another line of arguments supporting the possibility of combining the two approaches in the explanation of explain social phenomena.

10 For a similar assessment and suggestions on how to put Critical Realism into practice, see the volume edited by Carter and New (2004)

11 The Pastoral Land Commission (Comissão Pastoral da Terra) collates information on land conflicts on a yearly basis.

12 In 2007, the Federal Environmental Institute IBAMA (Instituto Brasileiro de Meio Ambiente de dos Recursos Naturais Renováveis) was split up. One of the resulting agencies continues to carry the name IBAMA. It is primarily responsible for environmental licensing and inspection. ICMBio is the other agency that emerged from the former IBAMA. ICMBio is, inter alia, responsible for the management of Conservation Units. Later parts of the book still refer to IBAMA as the responsible organ for establishing Extractive Reserves. This occurs when the Extractive Reserves was established before August 2007.

13 Indigenous lands are territories that are given to indigenous people.

14 This reference serves indicative purposes only. Other articles of theirs on the subject are, for example, Alston, Libecap et al. (1999) or Alston and Mueller (2003).

15 I do not touch on the important notion that institutions also do enable here. See Bromley (1989a) for an elaborate account of this question.

16 See, for example, Maxwell (2004) for a criticism of the successionist approach to causation in educational studies, Sayer (1992) and Ekström (1992) in sociology, or Steinmetz (2004) in history.

17 On double hermeneutics see, for example, Bohnsack (2003b, 22f), Danermark , Ekström et al. (2002, 32f), Flyvbjerg (2001, 32ff), and Sayer (1992, 35f).

18 I owe this terminological distinction between tacit and discursive knowledge to Haugaard (2003).

19 The last two paragraph draws on several authors which I – for the sake of readability – did not include in the text as well. Some authors use induction to describe research designs such as case studies that analyse in detail particular cases which do not aim at generalisations regarding the larger population of cases. I want to point out, therefore, that I do refer to the mode of inference and not to the research approach when I speak of induction. Regarding the reconstruction of the "frame of orientation" as the objective of the interpretivist (or hermeneutic) endeauvour see Nohl (2006, 8). Danermark et al. (2002, 79ff) juxtapose the different modes of inference. Blaikie (2000, 114ff) and Bohnsack (2003b, 197f) highlight abduction as a mode of inference that is central to interpretivist approaches. Fischer (2001) analyzes abduction in detail. I am aware that there might be frictions between the writings of the authors that I quoted regarding the extent to which abductive reasoning might involve reference to theories in reconstructing the "frame of orientation" (Bohnsack (2003b), for example, argues for an approach which does not draw on theories in reconstructing the "frame of orientation"). My position – which I elabo-

rate later – is that theory can be a useful source in the process of reconstructing. This discussion, however, does not affect the general point that this section advances, namely that institutional analysis needs to apply abductive inferences; a point which Bromley (2006) forcefully makes.

20 Within institutional economics, Bromley (2006) and Hodgson (see Fleetwood 2008, 196) elaborate on reasons as causes.

21 This does not mean that theories should not enter the process of designing empirical research. In fact, even grounded theorists do not claim this. An open mind should not be confused with an empty head (cf. Kelle 2005). What is important is the question of how they enter the research process. I will elaborate on this point later on.

22 This applies even if land-use change occurs in areas that are formally under the jurisdiction of a particular governmental organ, like the land reform agency. This statement might appear trivial and in the end it is. However, studies that highlight the impact of agrarian settlements on deforestation and on that basis draw the conclusion that it is smallholder families who deforest are not in short supply (see, for example, Brandao Jr. and Souza Jr. 2006).

23 For a discussion of the respective strengths and weaknesses of Critical Realism and Classical Institutionalism, see Hodgson (2000b). This chapter already includes an insight of that discussion, namely the acknowledgement of "reconstitutive downward causation" as one of the ways in institutions exert influence over agents. Vatn (2005, 55f) is an institutional economist who seems to sympathize with Critical Realists' treatment of structures. For a critical assessment of Critical Realism in institutionalism, see Wilson (2005).

24 For an introduction to Critical Realism, I would like to refer readers to the introduction by Danermark, Ekström, Jakobsen et al. (2002) as well as to the Sayer's works on Critical Realism (1992; 2000). The brief outline of Critical Realism offered here builds on these sources.

25 See, for example, Chick and Dow (2005), Downward, Finch et al (2002), and Olsen (2006).

26 For matters of clarity, Bromley roots his work in the philosophical school of Pragmatism instead of Critical Realism (Bromley 2006).

27 Given the highly controversial discussion of the role of smallholders as agents of deforestation, I would like to point out that I use this example because of its value in making the point, not to identify smallholders as the key agents of deforestation.

28 Critical Realists often refer to retroduction as the principle mode of inference applied in Critical Realism. Retroduction aims at answering the question "What qualities must exist for something to be possible?" (Danermark, Ekström et al. 2002, 80f). It involves a move "from a description and analysis of concrete phenomena to reconstruct the basic conditions for these phenomena to be what they are. By way of thought operation and counterfactual thinking to argue towards transfactual [ie. qualities beyond the immediately given, J.W] conditions" (ibid). The terms are often used interchangeably (see, for example, Kelle (2004, 17) and Lawson (1989, 68)). So does Wuisman (2005, 369) in developing his "Logic of Scientific Discovery in Critical Realist Social Scientific Research". I follow Wuisman in the context of the stages of discovery as it underlines the hypothesis creating character of this mode of inference.

29 Many Critical Realist scholars sympathise with Grounded Theory. Their position with regard to the use of theory in analysis and their assumption of the depth ontology require modifications to the methodological procedures suggested by Glaser and Strauss (see, for example, Layder 1982).

30 Members of a social network, for example, stand in substantial relations to each other; they build a causal group. Whereas people belonging to the same age cohort do not stand in substantial relation to each other; they form, instead, a taxonomic group.

31 Mitchell (1983) and Yin (2003, 31f) refer to analytical as opposed to statistical inference in making the same point regarding the type of generalisation involved.

32 This is, of course, not the sole argument in favour of transactions as units of analysis. A focus on transactions also allows capturing the dynamics between the resource users in relation to the resource.

33 Mollinga, Meinzen-Dick, and Merrey (2007, 707) use the term problemshed instead of watershed to refer to the appropriate unit of analysis in water management approaches. The observe that "the question regarding the boundaries of a given water-management issue, in space, in time, and socially, is treated as an open, empirical question in a problemshed perspective, while, in a watershed perspective, boundaries are pre-defined spatially, sectorally, and analytically through the primacy of 'water'". Along similar lines Sikor (2006, 344) suggests to emphasize the "(…) linkages between local social relations and larger economic and political forces. Forest access is situated at the intersection of local-level processes and larger forces transmitted, in particular, by states and markets."

34 In this regard, this chapter builds on the findings presented in section 2.2.

35 Regarding his self-categorisation as a rational choice scholar, see Knight (1992, 14).

36 My presentation does not do justice to Ensminger's model. Haller (2007, 15ff) provides a concise but comprehensive account.

37 See Ensminger (1992, 8f and 12f) for her rationale of adopting a methodological individualist approach.

38 A game with two Nash-equilibria serves as a basis for the analysis of bargaining between the two agents involved (Knight 1992, 127ff): Each player has two alternative strategies, the co-operative strategy has higher payoffs than the non-cooperative strategy, and given the strategy by the other player, a rational player has no incentive to change his or her strategy. The game reflects power asymmetries by foreseeing different payoffs for the two players in the case of non-co-operation. That is, player 2, for example, suffers from higher costs of non-coordination. If player 1 signals to player 2 that he will follow the strategy that will involve higher costs of non-cooperation for player 2, player 2 has an incentive to pursue the strategy that will favour player 1. The bargaining process results in a social outcome that favours one player over the other. An institution emerged that yields unequal benefits to the players.

39 On the link between land ownership and political influence, see, for example, Bardhan (2000).

40 The call to more explicitly analyse social relations in poverty analyses is also mirrored by livelihood approaches, see, for example, Ashley and Carney (1999, 35) or Scoones (2009).

41 The term social structure carries different meanings depending on the position of the author in the structure and agency debate. Following the individualist – agency centred – approach to the social world, social structures are explained by reference to the "microfoundations" of society, i.e. individuals. Social structures, "in microtranslation, (..) refer to people's repeated behaviour in particular places, using particular physical objects, and communication by using many of the same symbolic expressions repeatedly with certain other people" (Collins 1981, 994). As a corollary to this, the State, for example, or a social class do not exist, "there are only collections of individual people acting in particular kinds of microsituations" (ibid, 988). With this conceptual-isation, Collins offers a behaviouralist definition of social structures. Similar to Knight's arguments social structures become a mere epiphenomenon to the actions of individuals in particular situations or "patterns of aggregate behaviour" (Porpora 1998, 340). At the other end of the conceptualisation of social structures is the position that structuralism advances. In a structuralist tradition, "social facts or group properties are related to each other by a pattern of law like regularities, which together constitute social structure" (Porpora 1998, 342). For example, "the relatively short time students stay at the university [a social fact] (...) makes student organizations weak [a social fact] (...)" (Vatn 2005, 52). A methodological collectivism results in which events are explained by reference to social facts without referring to agents' will or deliberation. Agents are bearers of social structures, which are independent of them and of which they are not necessarily aware of (Hay 1995, 199; McAnulla 2002; Hodgson 2007a). Both positions are subject to substantial criticism. The former, as explanations in terms of individuals alone are untenable (Hodgson 2007b, 221). The latter, as it systematically undervalues agential powers to change social structures and fails to give an account of how structures influence agents (Hodgson 2007a, 102f).

42 The works of the classical institutional economist Commons and Veblen also reveal their recognition of the pre-existence of institutions (Hodgson 2000b, 18).

43 The term "emergentist" is coined by Elder-Vass (for example 2007c), on whose work I build here.

44 Emergent properties not only characterise social systems. On emergence in natural systems, see Liu, Dietz et al. (2007).

45 Again, I build on my earlier elaborations on this point (see section 2.2).

46 Although Hodgson (2006, 17f) and Elder-Vass (2007b, 238) both refer to institutions as a type of social structure, they conceptualise the relationship between the terms institution and social structure differently. Hodgson conceptualises social structures as social relations (2006, 17f), which is a different definition of social structure than the one advanced by Elder-Vass (2007b). Institutions in Elder-Vass' (2007b, 242ff) understanding are properties of (what he refers to as norm groups). However, both, Hodgson and Elder-Vass vest institutions with properties that justify their analytical treatment as explanans. They also converge in attributing this causal efficacy to the emergent properties of social structures and institutions (Hodgson 2000a). Therefore, and despite of differences in their conceptualisations, I think that it is possible to usefully combine their insights.

47 Discourse is defined here as "a particular way of representing certain parts or aspects of the (physical, social, psychological world" and text as "the discoursal element of social events" that do "(...) not just [comprise] written text but also spoken interaction, multi-semiotic televisual text, etc." (Fairclough 2005, 925).

48 Phillips, Lawrence, et al. (2004) build on Taylor and van Every (1993, 109) who define text as "any kind of symbolic expression requiring a physical medium and permitting of permanent storage."

49 This paragraph builds on section 2.2.

50 This is in line with Lukes' (2005, 70) conceptualisation of power.

51 On impunity of illicit natural resource use strategies, see, for example Fearnside (2007), Hobley (2007, 50, 80), and Shackleton (2002).

52 These examples might involve other ways of creating power beside the ones they are associated with in this table.

53 Of course, the inability of smallholders to benefit from timber extraction in many tropical forests stems far more often from the legislation (which discriminates against them) and forces them to operate largely in illegality (see Larson and Ribot 2007).

⁵⁴ Chapter 3 outlines other sources of power that include agential capacities and discourses.

⁵⁵ For a more elaborated account, see chapter 2.

⁵⁶ The term traditional people refers to settlers who arrived in the Amazon during early colonization (such as the rubber boom) and whose livelihoods depend on subsistence agriculture as well as on extractive activities. Forest tenure reform is also employed to secure the land rights of other groups such as quilombolas or indigenous people. However, field research did not cover forest tenure reform processes that involve these groups.

⁵⁷ Fearnside (1999, 307f) suggests four different lines of evidence for the significantly larger contribution of large agricultural holdings to deforestation: (i) the association of deforestation swings with macroeconomic changes (such as the Plano Real), which affect medium to large-landholders more significantly than smallholders; (ii) the distribution of deforestation among the states that together comprise the Brazilian Amazon, which shows that those states, in which small-scale agriculture dominates (such as Rondônia) contribute less to overall deforestation than those states characterised by large-scale agriculture (such as Mato Grosso); (iii) the size of new clearings, which is beyond that what can be deforested by family labour; and (iv) direct observation and interviews with farmers which substantiate the claim. Fearnside (1999, 308) quotes Nepstad, Moreira, and Alencar (1999) who find that about 25% of the clearing activity took place in properties of 100ha or less. Chomitz (2007, 95f) presents similar results. The World Bank (2003, 166) arrives at the same conclusion for Latin America in general.

⁵⁸ I owe these insights to the work of Jomabá Torres at that time working for the "Roça sem Queimar" project in the municipality of Porto de Moz.

⁵⁹ The CPT counts as a land conflict those conflicts about land which involve smallholders, landless workers, and those gathering non-timber forest products such as rubber or Brazil nut (Sauer 2005, 33).

⁶⁰ "(...) toda a ação ilegal que objetiva a transferência de terras públicas para o patrimônio de terceiros constitui uma grilagem ou grilo (...)" (Instituto da Colonização e Reforma Agrária 1999, 12).

⁶¹ The report locates 55% of the area subject to grilagem in the state of Amazonas. Benatti (n.d., 11) using the same source locates 30% of the area subject to grilagem in the state of Pará.

⁶² The term "Terra do Meio" refers to region between the rivers Iriri in the East, the Xingu in the West and the Transamazônica in the North. The southern limit can be imagined by a virtual line between the cities of Novo Progresso and São Felix de Xingu.

⁶³ The following presentation of the process of grilagem primarily bases on Greenpeace (2003) and Instituto de Pesquisa Ambiental na Amazônia (2006).

Additional sources are indicated separately.

⁶⁴ To avoid misunderstandings that might arise because of the terminology: The "military police" is the type of police that falls under the jurisdiction of the State of Pará.

⁶⁵ The relatively small numbers of landholdings suspect of grilagem can be attributed to the size of the area used in this study. 10,000 has is already four times the size of the area which requires an authorization by the National Senate in order to be legally transferred from the public to private agents.

⁶⁶ Greenpeace (2008, 22ff) provides an analysis of 6 logging enterprises in the Santarém region. Of the 90 fines imposed, the enterprises paid 12 fines (roughly 13%) (author's calculations).

⁶⁷ On rights as social structures, see section 3.3. Please note that the term "social position" does not refer to Ostrom's term "position rules."

⁶⁸ See Fearnside (2007, 610f) for further empirical evidence along these lines.

⁶⁹ When Carlos Minc, federal minister for the environment at that time, requested further 3,000 officials to build a National Forest Guard in order to control the Legal Amazon better, he was assigned 1,000. The Government preferred not to enter a difficult battle with the opposition and parties that supported the Government in Congress (Amigos da Terra 2009b).

⁷⁰ For recent resonance, see the World Bank Annual Conference on Land Policy and Administration 2010.

⁷¹ This chapter applies a concept of agrarian reform that includes tenure reforms alongside other measures to democratise access to land (such as redistributive land reforms) (cf. Kuhnen 1982).

⁷² See, for example, the treatment of power in the recent review of design principles offered by Cox, Arnold et al. (2010).

⁷³ Section 5.2 builds on the considerations on power outlined in chapter 3.

⁷⁴ Regarding the close ties between the concept of causality and theories of power, see Clegg, Courpasson, and Philipps (2006, 207ff).

⁷⁵ The question of causal powers of discourses or ideas relates to the discussion on "reasons as causes." Those who reject that "reasons can be causes" often base their claims on a successionist view of causation which I do not share (for an elaborate discussion of this question, see Fairclough, Jessop et al. 2002).

⁷⁶ These elements are real in the sense that they have the causal power to produce events. As individuals bring discourses and structures into being they are socially constructed but nevertheless real in their effects.

77   This work suggests treating the concept of social structure as a meta-concept to the concept of institution. Institutions establish social structures which comprise agents, a relation between them and emerging properties which are not attributable to the agents alone (Elder-Vass 2007a).

78   Lukes (1974, 34) describes real interests by contrasting them with the interests they hold because of their societal context. In his words: "(...) men's wants may themselves be a product of a system which works against their interests, and, in such cases relates the latter to what they would want and prefer, were they able to make a choice." For a critique of the concept of real interests, see Benton (1981) and Clegg, Courpasson and Phillips (2006, 213ff).

79   I owe this quote to Lukes (2005).

80   I use the term "frontier" to denote an area that has certain physical characteristics: (i) large areas of primary forest cover that (ii) increasingly become explored or transformed into other uses. I do not associate the term "frontier" with notions of "development" that increasingly progresses into "wilderness" or other connotations that the term frontier might be associated with (for a critical discussion of the term, see Nitsch 1999).

81   I ask my reader to please bear with me when repeating parts of my research approach. I opted for this approach, as data gathering methods and data analysis procedures were slightly changed for the purposes of the different chapters.

82   The term "indigenous lands" denotes areas that are designated for particular tribes. It is a literal translation from the Portuguese term "terras indígenas."

83   The FVPP is an umbrella organisation for several social movements in the region of the Transamazon Highway and the Xingu.

84   For a more detailed analysis of land conflicts, see chapter 4.

85   These paragraphs build on the findings presented in detail in chapter 4.

86   See Godar (2008) for an analysis of the extent of selective timber extraction.

87   A later supervision mission by IBAMA confirmed the extent of logging activity and the degree of its illegality (Instituto Brasileiro de Meio Ambiente e dos Recursos Naturais Renováveis 2010).

88   The term refers to the activities practised by traditional people whose livelihoods partly depend on extractive activities.

89   The following analysis of the influence of social structures on the social positions of the agents builds on the analysis offered in section 4.4.

90   Both modalities for land rights regularisation have an environmental protection component. Extractive Reserves are a type of conservation unit recognised by the Brazilian System of Conservation Units. Sustainable Development Projects are a type of settlement project that intend to sustainably and collectively use 80% of the settlement area (on the history of the PDS modality, see Greenpeace 2007).

91   Ostrom explicitly stresses that a translation of this type should not take place (see, for example, Ostrom 2007).

92   I owe this reference to Cousins (1997).

93   The term 'traditional populations' (populações tradicionais) refers to settlers who moved into the rainforest a long while ago (the most cited example is the rubber tappers who settled in the Amazon at the beginning of the 20th century) and adapted to the living conditions (i.e. who practice small scale agriculture and pursue extractive activities). This term does not include indigenous people (populações indígenas).

94   The term 'Amazônia Legal' refers to the Brazilian Legal Amazon region. In Brazilian legislation the term denotes a particular area of jurisdiction. The region encompasses all or parts of the following states: Acre, Amapá, Amazonas, Maranhão, Mato Grosso, Pará, Roraima, Rondônia, and Tocantins.

95   This decision shall not imply that I consider the state to be per se a legitimate entity to acknowledge property claims or that it is the only legitimate one – although the fact that contestations of property claims often refer to acknowledgement of claims by the state would empirically justify a focus on the state (cf. Macpherson 1978, 4). In situations of legal pluralism, for example, there are competing legal systems with competing organizations in which sanctioning power is vested (Von Benda-Beckmann, Von Benda-Beckmann et al. 2006; Sikor and Lund 2009). These other organizations legitimising property claims are not per se illegitimate. So, in the end, the decision to treat the organs of the state as the entities granting property rights is a normative decision. This discussion has implications for the term 'de facto property rights.' On 'de facto property rights' Schlager and Ostrom (1992, 254) note: 'Property rights may also originate among resource users. In some situations resource users cooperate to define and enforce rights among themselves. Such rights are de facto as long as they are not recognized by government authorities.' Using the term 'rights' in this context grants the power to recognise property claims to groups of users. This might be straightforward in the case of collective management of common pool resources that are the heart of Ostrom's scholarship. I find it difficult, however, to accept this statement in general. To offer an extreme example. Ranchers invading indigenous land might collectively agree on 'use rights' recognising their property claims. These 'rights' might exist in blatant disrespect of the existing human rights legislation in this country. Talking of rights in this context also confers legitimacy to the entity recognising claims (Sikor and Lund 2009). I would therefore argue

for caution in applying the term right to all the situations in which groups of users sanction the behaviour of some of their members.

96 To avoid misunderstandings, I want to point out that property rights do not equal private property rights (or even property titles). See Schlager and Ostrom (1992) for a discussion of property rights and Bromley (1989b) for an overview of property rights regimes. Ostrom (2001) provides a discussion on the relative advantages of common property rights regimes and Sjaastad and Bromley (2000) unravel false assumptions that often give rise to claims for private property rights regimes.

97 In this regard, Ribot and Peluso's (2003) approach is similar to the analysis of environmental entitlements as suggested by Leach, Mearns, et al. (1999). The latter approach asks how endowments (rights and resources) translate into entitlements (effective command over alternative commodity bundles).

98 Schlager and Ostrom (1992) use the term access for what I call the right of admission. Need for clarification emerges, as this paper applies Ribot and Peluso's (2003) definition of access.

99 For an overview of forest tenure reform modalities, see Carvalheiro, Treccani, Ehringhaus et al. (2008).

100 This paper uses the term 'frontier regions' to denote regions that hold substantial areas of primary rainforest and which are increasingly becoming subject to intensive logging activities and converted and/or converted to agriculture.

101 For a more detailed presentation of the evolution of land rights in Pará, see chapter 7.

102 Anapu only became a municipality in its own right in 1996.

103 In the year 2008, the minimum wage rate was set at 415,00 Brazilian Reais per month.

104 The link between the illegal acquisition of public lands (grilagem) and access to public funding is well documented by Sobral Escada, Vieira, Kampel, et al. (2005, 11). See on the extent of corruption, for example, Amigos da Terra (2009a).

105 The PROMANEO project was part of the G7 Pilot Programme to Protect Brazilian Rainforests (PPG7).

106 I owe these calculations to Jomabá Torres, member of the social movements of Porto de Moz.

107 These allegations led to the cancellation of about 100 settlement projects and PDSes in Pará.

108 Mahoney's conceptualisation (2000, 513) includes another element, which I do not consider here. It is called "contingency" and refers "to the inability of theory to predict or explain, (...), the occurrence of a specific out-come." Although I will not be able to reconstruct the notion of causality that underpins

Mahoney's work here, I agree with Little (2005) that his approach does not give "sufficient weight to the contingent and conjunctural character of social causation." The search for law-like social theories is a futile objective as is the quest for prediction in the social world. Events in the social world are contingent upon many social entities – e.g., agents, structures, or discourses – operating at the same time. Each of these entities has causal powers able to bring about events. Their co-existence leads to them re-enforcing or contradicting each other. A particular event can, hence, be caused by social entities A and B but also by C in the temporary absence of D (cf. Sayer 1992, 103ff). Social events are therefore explicable (Tilly 1995, 1601) but not predictable (Little 1993).

109 This paragraph builds on earlier chapters, in particular chapter 4 and 5.

110 See Schmidt (2008; 2010) for a discussion of "Historical Institutionalism" along this line. She maintains that "Historical Institutionalism" undervalues agential capacities to shape paths. A conceptualisation of path-dependency that does not take into account agential capacities is, so her line of reasoning goes, severely restricted in accounting for change.

111 On this question, see, in particular, chapter 3.

112 That is, this chapter adopts a dialectical perspective on the question of structure and agency. It acknowledges agential capacities while not denying the causal effectiveness of institutions and other social elements (Sayer 2000; Elder-Vass 2007a).

113 Other sources of path-dependency might emerge because of human interaction with the physical world. An example is investments in irrigation infrastructure.

114 Author's calculations based on data provided in Treccani (2001, 180).

115 The federal state of Acre, for example, has long been disputed between Brazil and Bolivia and was finally integrated as part of the Brazilian territory in 1903.

116 See Bernecker (2000, 275) for a description of the evolution of the income distribution from 1960 to 1985. In 1970, the lowest 20% and 50% income groups experienced a decline in their respective income shares, whereas the highest 10% and 1% income groups held a greater income share in comparison to 1960.

117 For an analysis of the "Projeto Tucumã," one of the largest private colonisation projects in Pará, see Schmink and Wood (1992, chapter 7).

118 In 1974 this was reduced to 25% of the tax liability of corporations (Mahar 1989).

119 There is considerable debate on whether the Land Statute is a piece of legislation that actually serves to protect property claims by small producers. Treccani (2001, 136ff) provides a review that concludes high-

lighting the potential of this legislation for recognising smallholders' property claims. At the same time, he emphasises that political will to implement these regulations was lacking.

[120] On the process of grilagem see, for example, Treccani (2001) and Instituto de Pesquisa Ambiental na Amazônia(2006) The illegal acquisition of public land involves costs that are difficult to shoulder for smallholders. In addition, grilagem requires contacts to public officials in land agencies and in private land notaries that are often out of reach for smallholders.

[121] Owners often register land in the name of others (laranjas). Therefore, it is very likely that the degree of land concentration is even higher (for an assessment along similar lines, see The World Bank 1992).

[122] The term "quilombola" refers to descendants of former slaves, who enjoy special constitutional rights. These also encompass rights to land.

[123] In this context, it is necessary to point out that only 20 % of the area of Pará falls under ITERPA's jurisdiction. Hence, there are several municipalities that do solely encompass areas under federal jurisdiction. The number of municipalities that might potentially be covered by this new policy is therefore smaller than the 143 municipalities referred to above.

[124] This book primarily addresses the situation in the PDS Virola-Jatobá in Anapu. The PDS Esperança is the other Sustainable Development Project in Anapu.

[125] Pará belongs to the states that comprise the Legal Amazon region in which most settlement projects were established. For the years, 1970–1981 see Treccani (2001, 431), for the years 1988–2006, see Girardi (2008, 281)

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