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Forest and Nature Governance

A Practice Based Approach

Springer

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Preface

This book reflects the contents of the research programme of the Forest and Nature Conservation Policy Group (FNP) at Wageningen University, the Netherlands. It was conceived some years ago, when ideas about putting the concept of 'practice' central in FNP's research programme first began to emerge. Since then, the group's thinking has been developed as a result of discussing the concept's content and the authors' positions in seminars, freely deliberating book-related topics in research lounges, and actually writing the book. When we started writing this book, none of us could foresee the specific contents, but from the outset the concept of practice was key to us. Some proposed chapters dropped out, others changed in content or were added at a later stage, and new author teams emerged. Hence, writing this book was a process as creative and unpredictable as the forest and nature governance practices that the book documents.

Besides promoting and reporting our own research programme, the book also contributes to forest and nature governance studies by offering a novel approach in this field; it also contributes to governance studies in general by furthering an interpretative approach. In so doing, we hope to inspire a wide range of governance scholars. Our intended readers are graduate and postgraduate students in governance studies, as well as senior researchers and postacademic professionals in the fields of forest policy, forest management and nature conservation, in both the global North and the global South.

We are fully aware that this book is just a snapshot in an ongoing process. Practices are neither fixed nor universal categories, but instead are specific doings, sayings and things 'in action', whether that action be science or governance. Therefore, our thinking about governance practices and doing practice-based research in governance studies will inevitably develop further. We invite readers to respond, comment, criticise, reflect, etc. Please write to: bas.arts@wur.nl.

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Part I
Introduction

Chapter 1
Prelude to Practice: Introducing a Practice Based Approach to Forest and Nature Governance

Bas Arts, Jelle Behagel, Séverine van Bommel, Jessica de Koning and Esther Turnhout

1.1 Introduction

This book is about social practices in forest and nature governance. It is about what practitioners in forest and nature conservation and management—be they community members in a Tanzanian village or professional foresters in the US Forest Service—actually do in their everyday management practices, which entail planning schemes, operational strategies, technical equipment and living trees. But it is also about how they interpret, talk about and respond to new forest policies, environmental discourses, codes of conduct, or scientific insights that actually or potentially impact their work. However, the 'forest practitioner' is not necessarily a forester on the ground, but could be someone involved in policy making, doing research or working in an NGO. Therefore, this book is also about how policy makers, for example in the offices of the United Nations, European Union or in a national forest department, design policy programmes to reduce deforestation and enhance sustainable forest management, while at their desks or during meetings with colleagues, by working with texts, statistics, computers, etc. We also discuss forestry scientists and their everyday performance of doing research, discussing theories and results, writing papers and books, teaching, evaluating forest policies, etc. Moreover, this book is about how communities, NGOs, stakeholders, and citizens become involved in forest and nature governance by being members of community councils, by writing management plans, and by accepting invitations to participate in policy making. Consequently, this book deals with how practitioners talk about and work with trees, forests, biodiversity, wildlife, etc., while situated in the diverse social and policy fields that at the same time shape their performance.

Such a 'micro-sociological' perspective on forest and nature governance is not often taken in mainstream policy analysis. It is more common to put emphasis on decision making processes and their outcomes for forest policy, or on the institutional arrangements and the rules of the game for conserving biodiversity, and to ignore the

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practices in which these decisions and institutions are actually produced and acted upon. This book is an attempt to redress this imbalance and to contribute to the further theoretical and empirical development of the field of forest and nature governance.

In this first chapter, we introduce the practice based approach. We start with an overview of developments in forest governance and nature governance, and discuss the increasing emphasis on ecosystem management and sustainability in forestry and nature conservation and the shift to governance in policy making. Secondly, we discuss the so-called 'practice turn' in the social sciences. Having arrived at that stage, we introduce the three sensitising concepts that form the core of the practice based approach: situated agency, logic of practice and performativity. Thereafter, we offer a set of methodological guidelines. We conclude the chapter by introducing the contents of the book.

1.2 Forest and Nature Governance

Our book is about forest and nature governance. But why have we chosen to deal with forest and nature? and why forest and nature governance? Before the 1980s, the issues of forests and nature tended to be dealt with separately, both in science and in policy making (Farrell et al. 2000; Umans 1993). Forests were the domain of the forestry sector and forestry sciences, whereas nature was the domain of the conservation sector, biology and ecology. Of course, forests protected in separate forest reserves because of their ecological value were considered to be 'nature'. Outside those reserves, though, they were mainly seen as natural resources for human use. Over time, with the emergence of ecosystem management (Bengston 1994) and the broad interpretation of sustainability in forestry in the 1980s and 1990s (Wiersum 1995), this situation changed and ecology and biodiversity became much more prominent in the field of forestry. The classical approach of forest protection and the creation of separate reserves has been augmented by current systems of sustainable forest management that aim at preserving genes, species and habitats while also delivering productive (timber) and socio-cultural functions (recreation, aesthetics) (Kennedy and Koch 2004). Although there are always trade-offs to be made between the multiple functions of forests (Glück et al. 2010), it is because of this overlap between forestry and nature conservation and their associated sciences that this book is entitled forest and nature governance. Its authors and chapters are therefore embedded both in social forestry sciences and in social sciences of nature conservation.

The way society currently deals with forests and nature leads to various problems, including deforestation. According to the Food and Agriculture Organization (FAO 2010), every year about 13 million hectares—an area three to four times the size of the Netherlands—are deforested at the global level. This deforestation has been reported to have numerous consequences: local and global climate change, erosion of biological and genetic resources, soil degradation, loss of water regulation, adverse impacts on human livelihoods, etc. (Humphreys 2008). Another (related) theme is

biodiversity. According to biologists, we are currently facing unprecedented rates of biodiversity loss, with numerous ethical, social and economic ramifications (Rockstrom et al. 2009). A third example is illegal logging (Concalves et al. 2012). It is said that about 10–30 % of the global trade in tropical timber is based on illegal sources and that in individual tropical countries illegal logging can amount to 50 or even 70 % of all harvested timber (Cerruti and Tacconi 2008; Hansen and Treue 2008). This not only contributes to deforestation and biodiversity loss but also reduces income for forest workers and revenues for governments.

The above problems—deforestation, biodiversity loss and illegal logging—have provoked various policy responses. To mention a few: (1) the United Nations' so-called Non-Legally Binding Instrument on All types of Forests, the first global objective of which is to urge countries to stop deforestation (UNGA 2007); (2) the Convention on Biological Diversity, which aims at the conservation and sustainable use of habitats, species and genes worldwide (CPB 1992); and (3) the EU's so-called FLEGT initiative—Forest Law Enforcement, Governance and Trade—which, with collaboration from a number of tropical timber-exporting countries, aims to reduce and ultimately ban illegally harvested timber from the EU market (EC 2005). Today, such policy initiatives are often referred to as forest and nature governance (Lemos and Agrawal 2006; Agrawal et al. 2008).

In its broadest interpretation, governance is about the many ways in which public and private actors from the state, market and/or civil society govern public issues at multiple scales, autonomously or in mutual interaction (Arts and Visseren-Hamakers 2012). This description acknowledges that current policy making involves not only national governments and their rules and regulations, but also many international organisations, non-governmental actors and voluntary instruments (Kjaer 2004). For example, the FLEGT initiative involves intense stakeholder consultation when developing instruments to halt illegal logging (Beeko and Arts 2010). In other cases, non-governmental actors are not just consulted, but take the lead. An example is forest certification: a market-based mechanism of independent labelling and monitoring that aims to guarantee that timber products originate from sustainably managed forests (Cashore 2002). The inclusion of multiple actors and rules in governance is often related to societal trends such as emancipation and globalisation, to state failure and state reform, and also to the complexity and uncertainty of many policy problems, like climate change and biodiversity loss (Beck 1999; Pierre 2000; Van Tatenhove et al. 2000).

In the domain of forests and nature, the rise of the topic of 'governance' is also embedded in the on-going scientific and societal debates on how to properly govern natural resources, particularly the so-called 'common pool resources' (CPRs). Examples are communally owned fishery ground, meadows and forests. This body of literature has its origin in Hardin's seminal work The Tragedy of the Commons (Hardin 1968) which pointed to the *rival* nature of CPRs (consumption of the resource by A renders consumption by B impossible) as well as their *non-exclusive* nature (both A and B have access to the resource). These two characteristics make CPRs very vulnerable to rapid depletion, since Hardin assumes that every resource user is inclined to maximise harvest, whereas free access is

guaranteed for all. Thus, in order to prevent a tragedy of the commons, such free access should be limited through state regulations or private ownership.

Hardin's theory has been very influential in natural resource governance, but has also been criticised, particularly because of its rational choice assumptions ('maximisation of harvest'). One of the most-well known critics is Nobel laureate Elinor Ostrom, who, in her book Governing the Commons (Ostrom 1990), showed that local communities can be very successful in governing CPRs and thus preventing a tragedy. Rather than individual utility maximisation, Ostrom emphasises the importance of *bounded* rationality and *institutional* choice (Ostrom 2011). Not only is rationality bounded because people often lack crucial information to optimise decision-making, it is also mediated by the rules of the game in a specific social setting. This means that individuals' choices are largely shaped by rules, norms and beliefs that are valid for a specific group of people. And these might include norms for regulated or restricted access to natural resources.

Like Hardin's, Ostrom's work has been very influential in the forest and nature governance literature (Kjaer 2004; Bevir 2011). As a consequence, a strong belief in institutions in general ('rules do and can guide behaviour') and in the 'right' institution to solve CPR problems in particular (the state, the market or the community) has dominated the literature. This has also generated criticism. Cleaver, for example, shows that communities do not simply follow institutions literally, but instead reshape them in practice, or even reject them on the basis of socially-embedded beliefs and conventions (Cleaver 2002; de Koning 2010). Thus, as we will discuss in more detail later in this chapter, rules and institutions explain social behaviour inadequately or not at all: people improvise, are creative, and interpret and reshape rules and institutions in practice.

1.3 Three Models for Understanding Human Behaviour

From the above discussion on governance, it is clear that different authors employ different models to explain social processes and human behaviour. Hardin's analysis is an example of rationalism, while Ostrom uses an institutional approach. In this section, we offer a more detailed discussion of these two models and complement them with a third practice based model.

The first model of rationalism can best be understood by the metaphor of the marketplace. Humans are considered to be rational-strategic agents who aim to obtain the highest individual benefits. Or in Hardin's tragedy of the commons: resource users are inclined to maximise their harvest in a CPR (Hardin 1968). In this model, people are assumed to base their decisions on individual rational cost-benefit calculations (or maximisation of utility) and on consequences (or 'what's in it for me?'). Most theorists refer to this logic of action as 'rational choice' (Simon 1959), but some refer to it as the 'logic of consequentialism' (March and Olsen 1989). According to this logic, social change can be achieved by incentives being strategically altered—be it by a market, or a government—so that individuals will change

their calculations and hence, behaviour. A good example of such an approach is tax exemption for hybrid cars, which has indeed boosted their sales in the Netherlands. The type of human being assumed in this model is the *Homo economicus*.

The second model of institutionalism can be described through the metaphor of the game (football, chess, etc. North 1991). People have to follow certain rules of the game, and often they do so unconsciously, because they have internalised these rules. At the same time, they have some room to manoeuvre, i.e. some room to modify or challenge the rules, with the danger, however, of becoming excluded from the community if they go too far. So, a tendency to conform to norms and rules in order to prevent social exclusion is omnipresent. March and Olsen (1989) call this the 'logic of appropriateness'). Indeed, the successful cases of CPR management in Ostrom's book refer to situations in which people conform to rules of regulated access to natural resources (Ostrom 1990). From such logic of action it follows that social change can best be induced by altering the rules of the game, or introducing new ones. This is the approach most followed by governments: designing or changing laws, rules and regulations to foster sustainability, for example. The type of human being assumed in this model is the *Homo sociologicus*.

The third practice based model is that of the play (theatre, dance, music) (Goffman 1959). In this model, individual actors are guided by a script and a director, so they are made to be certain subjects (Foucault 1977). At the same time, however, they are supposed to interpret, to improvise upon and to perform the script through bodily movement, mental presence, discursive and emotional expression, and through things and artefacts in the décor (Reckwitz 2002). The interaction with the audience in specific sites is also crucial. A play performed night after night will be a different practice at each performance. Hence, outcomes are inevitably unpredictable, at least partly. According to this perspective, social change is rather difficult to steer or predict, because scripts are not easily changed overnight and because improvisation cannot be controlled completely. Thus, such logic of practice (Bourdieu 1990) offers a less optimistic—and arguably more realistic—model for understanding what incentives, rules and institutions may and may not achieve in terms of changing behaviour in certain preferred directions. The type of human being assumed in this third model is the *Homo practicus*. This edited volume is situated in the tradition of this last perspective.

1.4 The Turn to Practice in Forest and Nature Governance

A theory of governance understands a field such as forest and nature as the multiple sites in which societal and political processes take place, as the multiple actors that shape and are shaped by these processes, and as the multiple rules, norms and beliefs that operate in these interactions (Arts and Leroy 2006; Held and McGrew 2002; Hajer 2003; Pierre 2000). Such a multi-dimensional perspective does not sit easily with a linear and instrumental model of policy making based on previously set objectives, incentives and rules, but instead needs to focus on dynamic processes of

interaction, interpretation, negotiation and sense making by multiple actors, through multiple norms and rules, and in multiple sites (Fischer and Forester 1993; Yanow 1986). Therefore, it is not surprising that discursive and framing approaches have gained prominence in governance studies, including those studies focusing on forest and nature (Behagel and Turnhout 2011; Hajer 1995; Pülzl 2010; Van den Brink and Metze 2006). However, these discursive approaches do more than simply focus on texts, language and words: they critically scrutinise the social settings in which these are uttered and produced and also the social practices in which they gain their meaning and are acted upon. Instead of being a 'mirror of nature'—a neutral tool to represent the world in which we live—language needs to be considered as an active intervention, which impacts not only on how we understand the world, but also on how we act upon it (Rorty 1979). Thus, language is performative, i.e. produces the practices that are being said (Austin 1962). Through such discursive perspectives, the notion of 'practice' has also played an increasingly central role in governance studies (Bevir 2011; Hajer and Wagenaar 2003).

However, before the rise of governance, the concept of practice had already gained prominence in the field of sociology. To a large extent, the concept of practice was introduced in order to move beyond the problematic dualisms in social theory, including those between object and subject, actor and structure, power and knowledge, mind and body, and nature and society. For Bourdieu (1977) and Giddens (1984), the concept of practice is important to make clear that social structures such as rules and institutions do not simply 'exist' or influence actors 'from the outside', but are produced and reproduced in practice, in the interaction between actors and structures. Bourdieu (1977, 1990) introduced the concept of 'habitus' to describe how actors embody and reproduce social structures in their daily activities. By doing so, he shifted the locus of explanation of human behaviour from the individual actors towards the field of practice. Giddens (1984) introduced the notion of structuration to show that one cannot see structure in isolation from agency, and vice versa. Human action is mediated by structure (discourses, institutions, power), but the latter is simultaneously recursively produced, reproduced or transformed by the former. Only in these processes of 'instantiation', can structures be said to exist. Foucault (1977), being concerned with the role of power in society, used the concept of practice to move away from actor- or state-centred models of power (Clegg 1989). Power, according to Foucault, is decentred, omnipresent and hidden, works as a productive force in subject formation, and operates through a plethora of social technologies and hegemonic discourses. Latour (1993, 2004), in his social studies of science, focuses on the dualisms between nature and society that exist in what he calls the 'modern constitution'. In this constitution, nature and society are considered separate entities and the only possible mediators between them are scientists, by virtue of their authoritative scientific knowledge. Latour challenges this modern constitution and its knowledge claims and, instead, argues that nature, science and society are performed in socio-material networks of human and non-human agencies.

These ideas have been taken up in what can be called a second generation of practice theorists (Postill 2010), who have contributed to the further theoretical

and methodological development of the notion of practice. They include a wide variety of authors from different schools of thought. For example, development anthropologist Long and Long (1992) introduced the concept of 'social interface' to emphasise the dialectical relationships between development interventions on the one hand and their application in practice on the other. The meanings and effects of these interventions are the result of site-specific processes (e.g. Nuijten 1992). In a similar vein, policy analysis began to conceive of policy implementation not as the linear application of a set of objectives, but as a dynamic process of interpretation and negotiation (Yanow 1986). In science and technology studies, Pickering (1995) outlined a performative perspective on science. This perspective emphasises the constitutive role of knowledge and argues that science does not so much represent reality but instead performs it. Thus, knowledge and reality are co-produced in practice (Jasanoff 2004). Consequently, knowledge and action become intertwined, as aptly captured by phrases such as 'reflection in action' or 'thinking on your feet' (Schön 1983; Yanow and Tsoukas 2009). Each of these refer to processes of thinking not as distant de-contextualised reflecting or pondering, but as an embodied and in-context knowing what to do, while doing it (Fischer 2006).

Thus, each in their own way, practice theorists argue against setting human agencies apart from the various factors such as rules, discourses, institutions or nature that influence them, and favour a dialectical or dialogical perspective in which these factors continuously bring each other into being. More generally, they argue that social processes and human behaviour should be understood as located at the interface of institutions and actors, in the dynamics of everyday practices, and in the coproduction of knowledge and reality. Consequently, a practice based approach 'decentres' notions such as power, knowledge, rules or agency away from individual actors or separate institutions, and instead locates their existence and meaning in the field of practice.

1.5 Sensitising Concepts of the Practice Based Approach

The idea of 'practice' can be clarified by referring to, for example, the practice of a chef in a restaurant; of a scientist in a laboratory; or of a forester in a state forest service. All these people are professionals who do things in particular ways, say things in particular ways, possess knowledge and know-how in order to achieve certain outcomes, and relate to a broader professional field that creates them and is at the same time created by them. While this may seem straightforward, theoretical concepts of practice vary widely, ranging from very simple definitions that refer to 'mere doing' to definitions that include not only actions but also knowledge, emotions, values, community, discourse, standards, technologies and dialectics (Wagenaar and Cook 2003; Reckwitz 2002; Spaargaren 2011). In light of this variety of definitions, we propose the following definition of practice for this book: 'an ensemble of doings, sayings and things in a specific field of activity'. By referring to doings, sayings, and things, this definition incorporates not only

agency and action, but also discourse, knowledge and rules, as well as non-human and inanimate entities. Moreover, the definition emphasises the importance of the social and material contexts—i.e. the specific field of activity—in which these doings, sayings and things are situated and through which they are brought into being in accordance with particular logics imprinted in such fields (be it a restaurant, a laboratory, or a forestry organisation). But this relationship also goes the other way around: doings, sayings and things recursively (re)produce the fields in which they are situated: hence they are *performative* upon such fields. Based on this definition and its elaboration, we will now discuss three 'sensitising concepts'—interpretive devices that will guide our research (Bowen 2006)—as the core of the practice based approach: (1) logic of practice, (2) situated agency, and (3) performativity. Taken together, these three concepts offer a comprehensive framework with which to address practices in forest and nature governance.

The first sensitising concept is 'logic of practice' (Bourdieu 1977, 1990). We use it to critically examine the excessive faith that many scholars of forest and nature governance place in institutions to steer human behaviour, as well as to criticise centralist and functionalist accounts of institutions that assume that the principal 'drivers' of behaviour are located in and constituted by formal institutional structures (compare Cleaver and Franks 2005). The logic of practice acknowledges that on the one hand there is always some sort of logic implied in any (social) action—e.g. in terms of intentions, knowledge, bodily movements or routines—but that such logic does not necessarily follow a pre-designed and general model, theory, rule or plan. In the words of Bourdieu: 'practice has a logic which is not that of the logician' (Bourdieu 1977: 109). Hence, logic is *internal* to practice, not externally imposed by a formal structure, rule or institution. According to Bourdieu, logic of practice is able to organise doings, sayings and things by means of a few generative principles (such as 'reciprocity' in social interaction). As such, the notion of logic also fosters the idea that human action is not just at random or chaotic, nor does it follow a 'garbage can model' (Cohen et al. 1972). Practical knowledge, local understanding, routine behaviour and collective sense-making might all contribute to the *patterning* of social practices by means of a limited number of generative principles, but this, according to Bourdieu, is not to be misinterpreted as following a master plan, or being guided by an invisible hand or subjected to authoritative rule (like God, Market or State). A logic of practice therefore does not readily conform to institutional boundaries or scales, but is instead constituted in a field of practice that has formed historically in time and space. Consequently, a logic of practice 'decentres' the category of institutions by integrating it into the concept of practice in two ways: (1) by criticising the faith many scholars of governance place in institutions, incentives, rules and norms to change social action towards predefined goals and (2) by situating generative principles that steer human behaviour in a historically formed and specific field of practice rather than in universal accounts of the human being and/or the social.

Our second sensitising concept is 'situated agency' (Bevir 2005). This concept assumes that actors' ideas, identities and behaviour are shaped in the context of the

social practices in which they are situated. It therefore challenges assumptions made in rationalist accounts, which describe human agency in terms of individuals operating strategically (Bevir 2005). Instead, the agency to conform with, or to resist, traditions, rules, social objectives and discourses is situated in practice (Bevir 2005; Giddens 1984; Hay 2002; Van der Arend and Behagel 2011). In everyday practices, humans often behave routinely, yet they are capable of acting otherwise, particularly when confronted with social disruption, political dilemmas or shock events. But in daily routine too, people first of all have to interpret objects, traditions, rules and discourses while thinking, speaking and acting. This calls for improvisation, which at a collective level and over long time frames might imply gradual social change. So the notion of actors acting sensibly and intentionally, making decisions, and doing things differently is accepted in the practice based approach, but *without* adopting the concept of 'autonomy' of the rational model (Bevir 2005). Instead, the focus is on the context in which these actors are situated and on the practices in which agency comes about. We understand actors and practice to be *entwined* (Sandberg and Tsoukas 2011) and locate agency in this entwinement. From this it follows that change is driven by two equally important factors: the particular practice in which the actors are situated and the actors' capacity to improvise. Thus, the idea of situated—as opposed to individual—agency emphasises the social dimension of agency (organisations, networks), its discursive aspects (language, discourse) as well as its material setting (bodies, artefacts, nature). Consequently, the concept of situated agency 'decentres' its source from individual actors towards social practices by: (1) understanding the ideas, behaviours and identities of actors to be largely determined by local traditions, rules and discourses and by (2) ascribing agency to the entwinement of actor and practice.

Our third sensitising concept is 'performativity'. It means that discourses and knowledge constitute the reality they describe (Callon 1998; Law 2008, 2009). Thus the concept of performativity makes it necessary to critically scrutinise the discourses and systems of knowledge that operate in practices of governance. By criticising the assumption that discourse and knowledge represent universal and objective reality, be it social or natural, the concept of performativity focuses attention on how discourses and knowledge are shaped, produced, and reproduced in context-specific interactions and interpretations. This is to say that understanding the world cannot be separated from acting upon the world. As Butler (1997, p. 11) explains: 'The idea of performativity is that utterances are always "redoubled" by an act which cannot itself be fully recognized or made visible in the utterance.' In other words, sayings are a special kind of doings that—just like 'normal' doings—cannot be fully dissociated from practice. Just like any other doing taking place in a field of activity, their meanings and their effects are constituted 'in action'. Therefore, they are subject to the specificity of practice and the contingency that accompanies practice. Thrift and May (2001) uses this insight to describe how discourses are not only rational but also accompanied by and given meaning through human emotions, social interactions and historical contingency. As such, performativity can be studied by observing the use of

knowledge as constitutive of reality and involving power and unpredictability (Behagel and Turnhout (in press)). The concept of performativity thus allows us to understand social change—or agency—not only in the entwinement of actors with practices, but also in the active performance of discourses, knowledge, rules, standards and institutions. Consequently, the concept of performativity 'decentres' the notions of discourse and knowledge by integrating them into the concept of practice in two ways: (1) by understanding discourse and knowledge as not merely representing the world, but actively constituting it and (2) by bringing them into the domains of power and contingency.

These three sensitising concepts will guide our analysis of forest and nature governance in this book. They shift attention away from institutional structures towards the materiality of practices; from actors and the role they play in governance processes to the events they encounter and to the social fields in which they are situated; and from objective and de-contextualised knowledge to practical intelligence and policy discourses in the practices of forest and nature governance.

1.6 Methodological Guidelines

In the practice based approach of this book, the aim is to interpret how actors are situated in practices and fields, to observe what they do and say, and with what consequences. The main question then is: 'How is that done?' (Miettinen et al. 2009, p. 1316). As Flyvbjerg (2004, p. 296) points out, this means:

> a focus on the actual daily practices, common or highly specialised or rarefied, which constitute a given field of interest, regardless of whether these practices constitute the UN headquarters, a local planning office, a particular plan or project, a grassroots organization, a neighbourhood, or the decisions of an architectural review board.

This type of research does not aim to find universal knowledge or solutions, such as furthered by grand schemes of modernity, technocracy, or institutional design (Scott 1998). Instead, practice based research starts from local problems and brings these to bear on broader theoretical discussions: for example the role of place and action in policy analysis (Wagenaar and Cook 2003), the role of institutions in the development debate (Nuijten 1997), organisational knowing as a collective endeavour (Gherardi and Nicolini 2000), or friction at the local–global interface (Lowenhaupt-Tsing 2005).

But how does one do such practice based research? Does its methodology have any specific features and, if so, what are the methodological 'ingredients' of such an approach? We conducted a literature review, which revealed various methodological characteristics of practice based research. According to Shank (2001), most such research starts because of a surprise: for example, the observation that the behaviour of people encountered in the field does not match with scientific theories (such as rational choice or institutionalism, as discussed earlier). Practice based research 'calls for taking surprises seriously and creating new concepts to

account for them' (Agar 2010: p. 289). The research questions that follow from such surprises, or puzzles, are key. However, this does not mean that practice based research neglects theory or knowledge of the case under investigation—on the contrary: it usually starts with an overview of conceptual and theoretical knowledge that is relevant to the case, the surprise and the research questions. Such an overview forms the basis for further engagement in research.

Van Maanen et al. (2007, p. 1149) note that surprises occur not only at the beginning of research, but also in all phases of the research process.

> First and second drafts [of research papers], for example, may be more valuable for generating unmet expectations and bringing to light unseen puzzles than for tidying up, presenting, and defending plausible theory and its empirical support.

In order to take full advantage of these new puzzles, researchers need to adopt an iterative way of working that allows them to go between field data, analysis, research questions, conceptual framework and study design. As Yanow (2006, p. 13) puts it:

> prior experiences shape one's understanding of new experiences, and new understanding derived from these experiences itself may refine the a priori knowledge brought to bear on subsequent experiences.

In practice, many of the steps in the research process (establishing the analytical question, developing the theoretical framework, designing the study, analysing the data) do not follow each other in a linear fashion and often overlap.

Another characteristic of practice based research that stands out in the literature is the preference for thick descriptions and in-depth case studies rather than for large-scale, one-shot surveys and formal statistical modelling (see for example Long 2001). The term 'thick description' refers to a detailed description of an event, the setting in which it takes place and the people and interactions involved; often it is based on techniques such as interviewing, observing, participating, working with groups, and interactive mapping. This is considered necessary 'to get a grip on the various deeply embedded processes of acting and doing, shedding light on the everyday activities performed' (Geiger 2009: p. 129). Close attention to detail is considered important, because otherwise the value of the case study is lost (Peattie 2001). By paying such close attention to detail, researchers place themselves within the practices they study. Although thick descriptions are usually associated with ethnographic research, they are not necessarily limited to this genre (Yanow 2006).

The practice based approach, though, has implications for the kind of knowledge claims case studies can make. Practice based case studies should preferably not be used to make empirical generalisations or construct universal theorems to be tested in follow-up research. Instead, what they *can* provide in this approach is: (1) in-depth insights into complex social practices that aggregated data sets cannot offer, (2) critical evidence that some theories are not universally applicable, and (3) illustrations or explorations of practice theory concepts (Flyvbjerg 2004; Yin 1994).

The preference for thick descriptions does not make the nature of the data—whether qualitative or quantitative—key to a practice based approach. Often, a

quantitative survey is a useful way to initiate a research project, as Nandigama (2009, p. 40) explains:

> At the onset of the fieldwork, I conducted a baseline household survey of the Adavipalli village in order to collect demographic data pertaining to all the households. This not only helped me to gain general insights into the social differentiations of community members, but also gave opportunity to introduce myself to all households, and gain rapport with the villagers in general.

Similarly Nuijten (1998) worked on three databases during her research: a census of the village, genealogies of families of the village and genealogies of land plots of the *ejido*. She states that:

> with respect to the *ejido* plots I wanted to find out more precisely what had happened with the land over the years. In the end, the more quantitative material which was the result of the genealogies of land plots was crucial for the contextualization of some parts of the qualitative field material. This way of working proved to be an excellent way to make people talk about things that happened in the past, and about people who had disappeared or were never mentioned. (Nuijten 1998, pp. 28–29).

Thus, researchers can use quantitative data to gain access to the field, to illustrate or contextualise their qualitative materials, or to initiate new lines of thinking by paying attention to surprises or paradoxes. It therefore follows that the practice based approach uses an interpretative perspective, which recognises that research findings are actively produced and interpreted by researchers, and which applies to both quantitative and qualitative data. By so doing, the practice based approach accepts a broad range of research strategies and data sources.

Another important characteristic of practice based research is related to the position of the researcher. When collecting data, the practice researcher often works inter- or trans-disciplinarily and slides along the continuum from full participation to 'pure' observation, and back (Miettinen et al. 2009). As such, practice research can be action research. However, it is important to realise that the practice researcher is embedded in the same social reality as the subjects studied and therefore the research accounts cannot be separated from the fieldwork they are based on. Thus, 'Research is co-constituted, a joint product of the participants, researcher and their relationship' (Finlay 2002, p. 212). In a similar vein, Yanow (2009, p. 279) draws our attention to the interaction between the researcher and the intended reader and states that:

> to the extent that researcher-writers can […] reflect on possible readings of their texts, imagine responses, and write for them—it makes sense to consider reading, along with writing, as a method of discovery.

So, researchers are part of the practice they study and they bring this practice into being while interacting with their research participants and the readers of their research accounts. Given this performative aspect of practice based research, it is necessary to reflect not only on the trustworthiness of research accounts but also on the accountability of researchers (Finlay 2002).

Based on the above discussion of the literature, we identity the following six methodological guidelines of the practice based approach:

1. Practice is the 'unit of analysis'
2. Research interest starts with a 'real-life' puzzle or surprise that generates key research questions
3. Reasoning is iterative (continuous iteration between research questions, theory and empirics)
4. In-depth case studies and thick descriptions are prioritised over large-scale, one-shot surveys and formal statistical modelling
5. Qualitative and/or quantitative techniques and data are used (within the context of an interpretive methodology)
6. Science itself is a social practice (complex, practical, performative), so there is a need for reflection on trustworthiness and accountability

We wish to stress that these methodological guidelines are not blueprints for doing practice based research. That is why we have deliberately called them 'guidelines' instead of 'principles' or 'criteria'. Following Mason (2002), we stress that practice-based researchers should make decisions not only on the basis of a sound research strategy, but also on the basis of sensitivity to the changing contexts and situations in which the research takes place.

1.7 The Book's Contents

The chapters in this volume were chosen on the basis of a two main criteria: (1) taken together, they should form a comprehensive overview of the theme of forest and nature governance, including different countries in the global North and the global South, different local, national and international scales and different governance topics, such as participation, institutions and the role of scientific expertise; and (2) as a whole, they should contribute to the development of the practice based approach in various ways (theoretically, methodologically, empirically). Based on these two criteria, the chapters in this book have been selected and organised around three themes. The chapters that fall under the first theme—'Rethinking institutions'—challenge dominant institutional approaches in our field of forest and nature governance, and move towards critical institutional perspectives and practice theory. The chapters that fall under the second theme—'The global–local nexus'—challenge the idea that global governance is separate from local governance and emphasise their interconnectedness. The chapters that fall under the third theme—'Representing nature?'—criticise objectivist approaches to the generation of knowledge about nature in scientific and management practices. These theme chapters are preceded by two introductory chapters and succeeded by a concluding chapter.

The present chapter is one of the two chapters that make up the first section: the 'Introduction'. The second chapter in this section presents a short history of forest policy studies, from which the practice based approach perspective of this book emerged. This history reveals that forest policy studies were initially strongly embedded in conventional forestry sciences and focused on offering advice to

improve forest management. From the 1970s onwards, the normative commitments of forest policy studies to the sector began to be replaced by an empirical-analytical approach, which entailed forest policy studies moving further away from the professional sector. Currently, with the involvement of social scientists and critical theory—including the practice based approach—in this field, science and practice seem to be converging again, but in a different way. Instead of 'speaking truth to power', scientists are now urged to be responsive to the knowledge claims of others, including practitioners and laymen, and to be much more modest about their own claims. In analysing these various phases, the chapter uses conceptualisation of the 'disciplinary matrix' to demonstrate how certain fields of knowledge develop in connection to social and scientific contexts.

The second section of the book is called 'Rethinking institutions'. Chapter 3 introduces the notion of 'bricolage practices' to refer to the extent to which local practices of forest use and management result from people's reshaping of different institutional elements, including national law and local norms. The chapter draws on examples from the global South—Papua New Guinea, Bolivia, and the Democratic Republic of Congo—to show that local actors creatively construct a patchwork of institutions in which old and new ones are combined. Hence, the introduction of regulations and norms for local forestry triggers a chain of (often) unexpected responses, thereby demonstrating the limited capacities of institutions to steer human behaviour. Chaper 4 deals with public participation in the implementation of the EU Water Framework Directive (WFD) in the Netherlands. This chapter shows that despite the great effort put into organising this participation, societal groups have not evaluated it very positively. In particular, the case study shows how the newly introduced participatory mechanisms struggled to re-order the field of practice in which participants and organisers were engaged. These findings are not a disincentive for the institutional design of public participation, but rather a call for more attention to be paid to the spaces, roles and practices in which participants are already situated. Then, Chap. 5 shows how the formal participation of men and women in a community-based forest management project in Andhra Pradesh, India, shapes and is shaped by informal, often invisible practices. In particular, the participation of women is influenced by the prevalent self-images of femininities and masculinities in the community and by women's everyday roles in local informal practices. Despite being marginalised in formal participatory institutions, women have been able to actively increase their bargaining power in livelihood decisions at the informal level.

The third section is about 'The global–local nexus'. Chapter 6 shows how global forest governance and local forest management practices have become deeply entwined through 'glocal' networks. It challenges the idea that these are separate realms, as many theories on international politics do (such as regime theory). Using two case studies from Tanzania, the chapter illustrates how global ideas, norms and rules have performed on the ground, with implications that are positive as well as negative, and anticipated as well as unanticipated. Chapter 7 focuses on practices of interaction management within the REDD+ regime. This chapter shows how three different aspects have come together: (1) global ideas on reducing greenhouse gas

emissions from deforestation and forest degradation, (2) international initiatives, such as the World Bank's Forest Carbon Partnership Facility (FCPF) and the United Nations UN-REDD Programme, and (3) national REDD+ policies and local pilot projects, such as in the Democratic Republic of Congo. The REDD+ regime faces the challenge of managing the interactions between all these initiatives, in order to ensure positive outcomes in practice. Chapter 8 addresses newly emerging global forest markets. By presenting an overview of different conceptualisations of markets—ranging from Antiquity and neoclassical economics to institutional economics and sociology—the chapter posits markets as practices and applies this perspective to the example of the global certified timber market.

The fourth section of the book on 'Representing nature?' starts with Chap. 9 on the construction of scientific biodiversity databases. Using material from the EBONE project (European Biodiversity Observation Network) the chapter illustrates how biodiversity databases are constructed in scientific practices which are characterised by a continuous interplay between scientific ideals related to objectivity and pragmatic considerations related to feasibility and data availability. Chapter 10 deals with the differences between the representations of nature of professional nature managers in the Netherlands on the one hand and those of ordinary Dutch citizens on the other. The chapter shows that although recreational practices are often highly routinised, controversial management interventions—like felling forest in order to create heath lands—may disrupt such routines and trigger protest against management practices. Chapter 11 zooms in on the role of the researcher and presents two auto-ethnographies that detail the way in which the authors constructed their narratives about nature governance in the Netherlands, UK and Spain. In this way, the chapter demonstrates how research accounts come about and illustrates how the stories producing the research findings are written from the (unique) perspective of their authors. As such, this chapter is not a standard case study that produces certain results, or an ethnography that sketches people's cultures; instead, it is the authors' reflections on their own scientific practices.

The book ends with a concluding chapter that compares and discusses the different chapters in the book. In so doing, the chapter offers a reflection on the different conceptual and methodological approaches used in relation to the practice based approach. It also discusses the potential of this book to contribute to practice theory as well as to enhance the science and practice of forest and nature governance.

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References

Agar M (2010) On the ethnographic part of the mix: a multi-genre tale of the field. Organ Res Methods 13:286–303

Agrawal A, Chatre A, Hardin R (2008) Changing governance of the world's forests. Science 320:1460–1462

van der Arend S, Behagel J (2011) What participants do: a practice based approach to participation in two policy fields. Crit Policy Stud 5(2):169–186
Arts B, Visseren-Hamakers I (2012) Forest governance: a state of the art review. In: Arts B, van Bommel S, Ros-Tonen M, Verschoor G (eds) Forest-people interfaces. Wageningen Academic Publishers, Wageningen
Arts B, Leroy P (eds) (2006) Institutional dynamics in environmental governance. Springer, Dordrecht
Austin J (1962) How to do things with words. Harvard University Press, Cambridge
Beck U (1999) World risk society. Polity Press, Cambridge
Beeko C, Arts B (2010) The EU-Ghana VPA: a comprehensive policy analysis of its design. Int For Rev 12 (3):221–230
Behagel J, Turnhout E (2011) Democratic legitimacy in the implementation of the water framework directive in the Netherlands: towards participatory and deliberative norms? J Environ Planning Policy Manage 13(3):297–316
Behagel JH, Turnhout E (under review). The performativity of environmental quality standards: convergence and resistance in the constitution of water quality
Bengston D (1994) Changing forest values and ecosystem management. Soc Nat Res 7(6):433–515
Bevir M (2005) New labour: a critique. Routledge, London
Bevir M (2011) Democratic governance. Princeton University Press, Princeton
Bourdieu P (1977) Outline of a theory of practice. Cambridge University Press, Cambridge
Bourdieu P (1990) The logic of practice. Polity Press, Cambridge
Bowen GA (2006) Grounded theory and sensitizing concepts. Int J Qual Methods 5(3):12–23
Brink van den M, Metze T (2006) Words matter in policy and planning; discourse theory and method in the social sciences. Netherlands Geographical Studies, vol 344, Utrecht: Netherlands Graduate School of Urban and Regional Research
Butler J (1997) Excitable speech: a politics of the performative. Routledge, London
Callon M (ed) (1998) The laws of the markets. Blackwell Publishers, London
Cashore B (2002) Legitimacy and the privatization of environmental governance: How non-state market-driven (NSMD) governance systems gain rule-making authority. Governance 15(4):503–529
Cerutti P, Tacconi L (2008) Forests, illegality, and livelihoods: the case of Cameroon. Soc Nat Res 21(9):845–853
Cleaver F (2002) Reinventing institutions: bricolage and the social embeddedness of natural resource management. Eur J Dev Res 14(2):11–30
Cleaver F, Franks T (2005) How institutions elude design: river basin management and sustainable livelihoods. BCID Research paper 12. Bradford: Bradford Centre for International Development
Clegg S (1989) Frameworks of power. Sage publications, London
Cohen M, March J, Olsen J (1972) A garbage can model of organizational choice. Adm Sci Q 17(1):1–25
Concalves M, Panjer M, Greenberg T, Magrath W (2012) Justice for forests: Improving criminal justice efforts to combat illegal logging. The World Bank, Washington
Costanza R, d'Arge R, de Groot R, Farber S, Grasso M, Hannon B, Limburg K, Naeem S, O'Neill RV, Paruelo J, Raskin RG, Sutton P, van den Belt M (1997) The value of the world's ecosystem services and natural capital. Nature 387:253–260
CPB (1992) Convention on biological diversity. United Nations Environment Programme (UNEP), Geneva
EC (2005) Council Regulation (EC) No 2173/2005 of 20 December 2005 on the establishment of a FLEGT licensing scheme for imports of timber into the European Community. Brussels: European Commission
FAO (2010) Global forest resources assessment. Food and Agriculture Organization, Rome
Farrell E, Führer E, Ryan D, Andersson F, Hüttl R, Piussi P (2000) European forest ecosystems: building the future on the legacy of the past. For Ecol Manage 132(1):5–20

Finlay L (2002) Negotiating the swamp: the opportunity and challenge of reflexivity in research practice. Qual Res 2(2):209–230
Fischer F (2006) Participatory governance as deliberative empowerment: the cultural politics of discursive space. Am Rev Publ Adm 36(1):19–40
Fischer F, Forester J (eds) (1993) The argumentative turn in policy analysis and planning. Duke University Press, Durham and London
Flyvbjerg B (2004) Five misunderstandings about case-study research. In: Clive Seale, Giampietro Gobo, Jaber F. Gubrium, and David Silverman, (eds.) Qualitative Research Practice. London and Thousand Oaks, CA: Sage
Foucault M (1977) Discipline and punishment. Pantheon, New York
Geiger D (2009) Revisiting the concept of practice: toward an argumentative understanding of practicing. Manage Learn 40:129–144
Gherardi S, Nicolini D (2000) To transfer is to transform: the circulation of safety knowledge. Organization 7(2):329–348
Giddens A (1984) The constitution of society: outline of the theory of structuration. Polity Press, Cambridge
Glück P (coordinating lead author) et al (2010) Core components of the international forest regime. In: Rayner, J, Buck A, Katila P (ed) Embracing complexity: Meeting the international forest governance challenge, vol 28, p 172, Vienna: International Union of Forest Research Organisations
Goffman E (1959) The presentation of self in everyday life. Anchor, New York
Hajer M (1995) The politics of environmental discourse: ecological modernization and the policy process. Clarendon Press, Oxford
Hajer M (2003) Policy without polity? Policy analysis and the institutional void. Policy Sci 36:175–195
Hansen C, Treue T (2008) Assessing illegal logging in Ghana. Int For Rev 10(4):573–590
Hardin G (1968) The tragedy of the commons. Science 162:1243–1248
Hay C (2002) Political analysis: A critical introduction. Palgrave, Hampshire
Held D, McGrew A (2002) Governing globalization: power, authority and global governance. Polity Press, Cambridge
Humphreys D (2008) Logjam: Deforestation and the crisis of global governance. Earthscan Publication, London
Jasanoff S (ed) (2004) States of knowledge: The co-production of science and the social order. Routledge, London
Kennedy J, Koch N (2004) Viewing and managing natural resources as human-ecosystem relationships. For Policy Econ 6(5):497–504
Kjaer AM (2004) Governance. Polity Press, Cambridge
de Koning J (2010) Reshaping institutions: Bricolage processes in smallholder forestry in the Amazon. Wageningen University, Wageningen (Doctoral thesis)
Latour B (1993) We have never been modern. Harvard University Press, Cambridge
Latour B (2004) Politics of nature: How to bring the sciences into democracy. Harvard University Press, Cambridge
Law J (2008) On sociology and STS. Sociol Rev 56:623–649
Law J (2009) Seeing like a survey. Cult Sociol 3:239–256
Lemos M, Agrawal A (2006) Environmental governance. Ann Rev Environ Res 31:297–325
Long N (2001) Development sociology: actor perspectives. Routledge, London
Long N, Long A (eds) (1992) Battlefields of knowledge: The interlocking of theory and practice in social research and development. Routledge, London
Lowenhaupt-Tsing A (2005) Friction: An ethnography of global connection. Princeton University Press, Princeton
March J, Olsen J (1989) Rediscovering institutions: The organizational basis of politics. The Free Press, New York
Mason J (2002) Qualitative researching. Sage Publications, London

Miettinen R, Samra-Fredericks D, Yanow D (2009) Re-turn to practice: an introductory essay. Organ Stud 30(12):1309–1327
Nandigama S (2009) Transformations in the making: Actor-networks, elite-control and gender dynamics in community forest management intervention in Adavipalli, Andhra Pradesh, India. The Hague: International Institute of Social Studies of the Erasmus University (Doctoral thesis)
North D (1991) Institutions, institutional change and economic performance. Cambridge University Press, Cambridge
Nuijten M (1992) Local organization as organizing practices: Rethinking rural institutions. In: Long N, Long A (eds) (1992) Battlefields of knowledge: The interlocking of theory and practice in social research and development. Routledge, London
Nuijten M (1997) Agrarian reform and the Ejido in Mexico: illegality within the framework of the law. Law Anthropol 9:72–104
Nuijten M (1998) In the name of the land; organisation, transnationalism and the culture of the state in a Mexican ejido. Wageningen Agricultural University, Wageningen Doctoral thesis
Ostrom E (1990) Governing the commons: The evolution of institutions for collective action. Cambridge University Press, Cambridge
Ostrom E (2011) Background on the institutional analysis and development framework. Policy Stud J 39:7–27
Peattie L (2001) Theorizing planning: some comments on Flyvbjerg's rationality and power. Int Plann Stud 6(3):257–262
Pickering A (1995) The mangle of practice. University Of Chicago Press, Chicago
Pierre J (ed) (2000) Debating governance: Authority, steering and democracy. Oxford University Press, New York
Postill J (2010) Introduction: Theorising media and practice. In: Bräuchler B, Postill J (eds) Theorising media and practice. Berghahn, New York
Pülzl H (2010) Die politik des waldes. Böhlau Verlag, Wien
Reckwitz A (2002) Toward a theory of social practices: a development in culturalist theorizing. Eur J Soc Theor 5(2):243–263
Rockstrom J, Steffen W, Noone K, Persson A, Chapin FS, Lambin EF, Lenton TM, Scheffer M, Folke C, Schellnhuber HJ, Nykvist B, de Wit CA, Hughes T, van der Leeuw S, Rodhe H, Sorlin S, Snyder PK, Costanza R, Svedin U, Falkenmark M, Karlberg L, Corell RW, Fabry VJ, Hansen J, Walker B, Liverman D, Richardson K, Crutzen P, Foley JA (2009) A safe operating space for humanity. Nature 461:472–475
Rorty R (1979) Philosophy and the mirror of nature. Princeton University Press, Princeton
Sandberg J, Tsoukas H (2011) Special topic forum-theory development: grasping the logic of practice: theorizing through practical rationality. Acad Manage Rev 36(2):338–360
Schön DA (1983) The reflective practitioner, how professionals think in action. Basic Books, New York
Scott J (1998) Seeing like a state: How certain schemes to improve the human condition have failed. Yale University Press, New Haven
Shank G (2001) It's logic in practice, my Dear Watson: An imaginary memoir from beyond the grave. Forum: qualitative social research 2 (1), Art 9
Simon H (1959) Theories of decision making in economics and behavioral science. Am Econ Rev 49:253–283
Spaargaren G (2011) Theories of practices: agency, technology and culture. Exploring the relevance of practice theories for the governance of sustainable consumption practices in the new world-order. Glob Environ Change 21:813–822
van Tatenhove J, Arts B, Leroy P (2000) Political modernisation and the environment: The renewal of environmental policy arrangements. Kluwer Academic Publishers, Dordrecht
Thrift N, May J (eds) (2001) Timespace: Geographies of temporality. Routledge, London
Umans L (1993) A Discourse on forest science. Agric Hum Values 10(4):26–40
UNGA (2007) Non-legally binding instrument on all types of forests: A/RES/62/98. United Nations General Assembly, New York

Maanen J, Sørenson J, Mitchell TR (2007) The interplay between theory and method (editors introduction to special topic forum). Academy of Management Review 32(4), pp 301–314
Wagenaar H, Cook S (2003) Understanding policy practices: action, dialectic and deliberation in policy analysis. In: Hajer M, Wagenaar H (eds) Deliberative policy analysis: understanding governance in the network society, Cambridge University, Cambridge, pp 139–171
Wiersum F (1995) 200 years of sustainability in forestry: lessons from history. Environ Manage 19(3):321–329
Yanow D (1986) How does a policy mean? Interpreting policy and organizational actions. Georgetown University Press, Washington
Yanow D (2009) Organizational ethnography and methodological angst: myths and challenges in the field. Qual Res Organ Manage Int J 4(2):186–199
Yanow D, Schwartz-Shea P (2006) Interpretation and method: Empirical research methods and the interpretive turn. M E Sharpe, Armonk
Yanow D, Tsoukas H (2009) What is reflection-in-action? a phenomenological account. J Manage Stud 46(8):1339–1364
Yin RK (1994) Case study research: design and methods, 2nd edn. Sage, London

Chapter 2
From Practical Science to a Practice Based Approach: A Short History of Forest Policy Studies

K. Freerk Wiersum, Bas Arts and Jim van Laar

2.1 Introduction

According to the handbook *Terminology of forest science, technology practice and products* (Ford-Robertson 1971), forestry is 'A profession embracing the science, business and art of creating, conserving, and managing forests and forest lands for the continuing use of these resources'. As this definition indicates, forestry science and practice are traditionally closely related. This intimate relation dates back to the end of the 18th century:

> It was at the end of the 18th century that a complete synthesis between empirical knowledge held by technically skilled practical foresters and the more theoretical concepts and teachings of the 'Kameralisten' (students of finance and administration) and natural scientists was achieved. This synthesis was personified by the so-called classics of forestry, who, because of their practical experiences and thorough scientific training, were in a position to unite theory and practice, and to develop the (modern) science of forestry as a coordinated whole (…) by linking intellectual and natural science knowledge with woodland empiricism (Mantel 1964, pp. 14–15).

The close ties between science and practice not only concerned practical silvicultural management, but also forest policy and organisation, as the following quote illustrates:

> Pinchot synthesized the Forest Service, the American forestry profession, the foundation for American forestry training, and our Society [for Forestry]. The stuff of all these, the separate strands, were waiting to be braided into a single, strong cord (…) The Forest Service was the central strand, the profession reinforced it, the universities created trade schools to supply and support it, and the Society whipped the ends to keep the cord from fraying (Behan 1966, p. 399).

In other words, there exists a deep entwinement of science, policy and professional practice in the history of forestry that has been disentangled only recently, as we will discuss below. In view of these traditional ties, it may seem odd to propose a novel 'practice based approach' within forest policy studies.

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Nonetheless, this book does so, and we will show that this practice based approach differs fundamentally from the practical forestry science of the early days, while respecting and renewing its interest in forestry practices and practitioners.

Forest policy has emerged as a sub-discipline in forestry science only recently: in the second half of the 20th century. Since its inception, forest policy studies has changed a great deal. During this historical process, the focus has gradually changed from normative (how to improve forest management) towards more analytical (how to explain policy processes). More recently, a critical focus has gained prominence that studies the 'performativity' of forest policy processes, by reflecting upon how forest policies actually 'work'; e.g. through routine practices, through practitioners who consciously intervene and through professional fields that co-shape their behaviour. As the focus of forest policy studies changed over the years, so did the questions that scholars sought to answer: from (1) how do we improve forest policies? to (2) how do we explain forest policies? and finally to (3) how does policy actually work in practice? Each change in focus involved an important shift in thinking about how forest policy scientists interact with professional practitioners, and about the actual and desired relationship between science and practice. In this chapter we will briefly describe this historical process, starting with the roots of forest policy studies in a tradition of forestry science that dates back to the 17th century and ending by discussing critical strands that have surfaced only recently. We will do so by discussing the principles that forest policy scientists have followed at different times, the normative commitments they hold, and the questions they ask.

The chapter is structured as follows. First, the analytical framework that we use to construct a historical review of forestry science is explained. Building on Kuhn's concept of the 'disciplinary matrix', this framework focuses on the normative commitments of scientists and their relationship with professional practice. Then the basic characteristics of forestry science that prevailed in the mid-20th century—at the point forest policy studies emerged—will be explored. This section briefly describes the historical roots of forestry and explains how they resulted in a specific normative foundation for conventional forestry science. The next sections describe how forest policy studies emerged and further developed. This process is further illustrated in a number of text boxes summarising certain key publications on forest policy to date. Additionally, a specific text box is dedicated to the development of forest policy studies at Wageningen University, the Netherlands.[1] Finally, the chapter concludes that the practice based approach described in this book should not be considered new wine in old sacks, or a return to the historical roots of forestry science, but rather as a new, still evolving approach to forest policy studies.

[1] Due to the authors' predominant research focus on European and tropical forestry, in this chapter only a few references are made to forest policy studies in the Americas.

2.2 Practising Science: Kuhn's Disciplinary Matrix

A practice based approach can be understood in more than one way. At first glance, practice can be assumed to refer to the object of study: in this case the practices of different types of actors engaged in forest-related activities such as using, managing or controlling forest resources. But as indicated above, it can also be related to the practices of policy makers and forest scientists themselves. Forest policy scientists do not only identify relevant forest-related practices for study, they also position themselves in relation to policy makers and forest managers. Glück (1992) posed the following questions on the position of forest policy scientists:

- Should they advise practitioners how forest policy ought to be? Should they legitimate policy making?
- Should they describe the object 'forest policy' without value judgement, explain phenomena of forest politics and contribute towards 'enlightenment'?
- Or should they understand their position as contributing to the ideal of a more just society by critically analysing forest sectors?

As these questions indicate, scientific practices are based on a set of normative commitments. To understand and analyse such commitments, Kuhn (1970) introduced the concepts of paradigm and disciplinary matrix. According to Kuhn, the course of scientific progress is characterised by long periods of 'normal' science punctuated by a succession of scientific revolutions and paradigmatic change. Normal science involves a cumulative process, during which the basic theories of a scientific discipline are progressively articulated and extended. Scientists engaged in such normal science operate (mostly unconsciously) within a paradigm. Such a paradigm was originally characterised by Kuhn as 'universally recognized scientific achievements that for a period provide model problems and solutions to a community of practitioners' (Kuhn 1970, p. viii). These normative perspectives inform scientists what major problems are and which research approaches are legitimate and reasonable for problem-solving. He subsequently clarified the concept as referring to a 'disciplinary matrix' which covers the entire constellation of beliefs, values and techniques shared by practitioners of a specified scientific community (Kuhn 1970). This disciplinary matrix has four major dimensions: shared symbolic generalisations, shared beliefs in specific models, shared values to judge scientific endeavours and shared exemplars.

The notions of Kuhn on occasional paradigmatic change received explicit attention in forestry science at the end of the 20th century. Several scientists discussed whether the conventional approach to forestry was being challenged, and whether a paradigmatic change was needed. Many of these discussions were related to new socially-oriented developments in forest policy in tropical countries (Westoby 1989; Arnold 2001). They involved the question of whether a 'people-centred' paradigm should replace the conventional 'forest-centred' paradigm (Gilmour and King 1989; Wiersum 1999; for rebuttal see Roche 1992). Discussions of the values and beliefs underlying forestry (e.g. Bengston 1994; Kennedy et al. 1998; Scott 1998)

and the need for a new vision in both forestry science and practice (Gordon 1994) also took place in the context of forestry in the United States and Europe. Consequently, the question of whether forestry science was experiencing a cumulative process in normal science or a paradigmatic revolution (Coufal 1989) became a subject of debate. Although this debate on paradigmatic change has waned in the last decade, making place for debates on how to study forestry (see Chap. 1 of this volume), the concept of disciplinary matrix still provides a good analytical tool to assess the basic commitments underlying different approaches in forest policy studies. Moreover, it forms a useful concept to link present discussions that argue for a renewed focus on forest practices to earlier discussions on the nature of forestry science. The use of a disciplinary matrix as an analytical tool therefore allows us to offer a historical account of the normative commitments in forestry science from the time of inception of forest policy studies up until the present day.

2.3 Characteristics of Traditional Forestry Science

Conscious efforts to conserve forests for either wood production or hunting in Europe were already being made in the Middle Ages. These initiatives did not consist of systematically developed management practices, however, but instead were based on local experiences and traditions (Mantel 1964). The first efforts to systematise forestry knowledge and practices were not made until the 17th century. Two books from this period are considered landmarks in the history of forestry and representative of the normative grounding of forestry science: Evelyn's book *Sylva: or a discourse of forest trees and the propagation of timber in his majesty's dominions*, published in 1664 and Colbert's French forest *Ordinance* of 1669 (Westoby 1989; see also Glacken 1967). Evelyn's book has been described as an appeal to see forestry as a science and a field of learning. It appeals for a proper understanding of the silvicultural techniques that are needed for effective forest management. Forestry is described not just as an empirical practice, but also as requiring scientific knowledge and techniques, in addition to a respect for artisanship (Glacken 1967, p. 485). Colbert's ordinance formulated the general aims, rules and prescribed management models to ensure that France would not 'die for lack of wood', notably marine timber (Glacken 1967, p. 491). The ordinance led to the standardisation of multiple local governing systems in France and to the codification of new government laws that superseded previous rules and regulations on use and control over forest lands. It was:

> an example of climax legislation, resting on law, custom, and regulation … Its revolutionary character lay less in its departures from the past, than in its collating, sifting, rationalizing, and synthesizing the confused and miscellaneous body of custom, ordinance, and rights of use of the past (Glacken 1967, p. 491).

Together, these landmark books provided the basis for setting a disciplinary matrix for forestry science that lasted far into the 20th century. They established the basic norms for forestry as a state-controlled activity supported by scientific knowledge of silvicultural techniques. As such, early forestry science was normatively based upon maintaining or expanding a country's strategic natural resources. Moreover, forestry constituted a profession, rather than just a field of work (Zivnuska 1963). Since their inception, these basic norms have been gradually refined. Moreover, they have spread over the world as a result of colonial expansion and the establishment of colonial forestry that espoused the European forestry principles (Westoby 1989; Vandergeest and Peluso 2006a). Later, stimulated by the forestry discourses of international organisations, the state control over forests was further strengthened in the early years of independence of former colonies (Wiersum 1999; Vandergeest and Peluso 2006b).

Historically, forestry science was first considered a tool for improving and transmitting knowledge to address forest-related problems as defined by the government. It was based on strong normative commitments to maintain or expand strategic resources and had a positive orientation towards rational problem-solving. Its approach did not reflect academic (or basic) science, but rather applied or even practical science. These last two forms of science differ from academic science in respect to their purpose, the object studied and the criteria for assessing research findings (Table 2.1). The earlier descriptions of forestry involving a professional activity supported by scientific knowledge, and the description of Behan (1966) of the integrated network of forestry practitioners and forest scientists as a 'central strand' of forestry emphasise conventional forestry science's orientation on the rational solving of practical problems. As indicated by Mantel (1964), in applied sciences the criteria for evaluating research findings should be based both on science (truthfulness) and on society (practicality). However, the assessment criteria for rational problem-solving within forestry science have historically been predominantly societal, based on a governmental point of view (i.e. maintaining or expanding the national resource base). Hence, forestry science first and foremost had the character of a *practical* science (see right-hand column in Table 2.1).

That conventional forestry was foremost a practical science can be illustrated by its disciplinary matrix, which had emerged by the second half of the 20th century (Wiersum 1999):

- Shared symbolic generalisation:
  - Forestry is basically perceived as a specific form of natural resource management that is guided by the enlightenment ideals of *welfare* and *well-being* of mankind.
- Shared beliefs in specific models:
  - Forestry is conceptualised as a science and a practice of composite *interdisciplinary* nature involving three dimensions: (1) a process dimension involving the *manipulation of natural processes* in forests in such a way that

Table 2.1 Different types of science (after van Hengel 1991)

	Academic science	Applied science	Practical science
Purpose	Truthful explanation and/or prediction in abstract terms	Truthful explanation and/or prediction in options for human interventions	Rational problem-solving
Object	Idealised/abstract objects	Real world/practical objects	Real world/ practical objects
Criteria	Science-based	Both science- and society-based	Society-based

biological resources are transferred to the required end-products, (2) the dimension of *technical operations* by human actors, and (3) the dimension of *state authority* in coordinating and controlling the activities of various actors (cf. van Vliet 1993).

- Professional activities are needed for problem-solving; these activities have to be guided by scientific knowledge. The basic characteristics of the sought-for solutions (or doctrines, cf. Glück 1987) were considered to be *multiple use* and *sustainability*.

- Shared values to judge scientific endeavours:
  - The basic task of forestry is to *restore the balance* between social demands on forests on the one hand and the actual state of forests on the other. The identification of the nature of time- and location-specific problems is basically politically legitimated.
  - Due to the multi-resource character of forests and the fact that many forest functions cannot be regulated through market mechanisms, forests should preferably be managed under *state control*.

In concord with these perspectives, the ideal-typical *exemplars* for forestry activities (e.g. best practices for sustainable forest management, main types of silvicultural systems, essential issues in forest policy, etc.) were developed on the basis of forestry problems identified at a national level by politically powerful groups. Professional foresters were presented as a technically trained elite in charge of the rational management of forests that were either under custodial or statutory state control. Within this disciplinary matrix, foresters' activities mainly focused on designing and applying technical standards for forestry as a biological and technical undertaking, with timber production having primacy.

This field of early forestry science implied specific roles and relationships of professionals, scientists and policy makers. The role of the professional forester was to be engaged with the technical management of forests. The basic role of scientists was to support these practitioners with scientific advice on the manipulation of natural processes in forests and on related technical operations. And, next, such advice should contribute towards optimal practices to guarantee multi-use and sustainable forest management and conservation, in conformity with the

stipulations in governmental ordinances. These specific roles and relationships of the main actors involved also implied a specific perspective on how science and practice are conceptually related. Here, science is considered very closely related to practice, as a practical discipline that brings professional knowledge and skills to the field, while practice is seen as *praxis*, as the sphere in which scientific theories can be applied (Reckwitz 2002; van Hengel 1991).

2.4 Forest Policy Studies as Practical Science

When forest policy studies emerged as a specific sub-discipline in forestry science in the 1970s, it was initially embedded in the general scientific orientation of the latter. It was mainly oriented towards developing knowledge on optimising forest policy (Glück 1992). Forest policy studies were considered a means of providing systematic information for forest policy makers to guide their rational decision-making for solving problems that emerged as a result of increasing social demands on forest resources. The social and political setting for forest policy was considered as non-problematic, and attention focused mainly on improving forest policy design. Little attention was given to questions of how forest policies relate to socio-economic and political dynamics, or how these policies are constituted and implemented on the ground.

The first handbooks on forest policy were published in 1970 in the USA (Worrell 1970) and in 1984 in Europe (Hummel 1984). They demonstrate how the early scientific approach to forest policy followed the orientations in the conventional approach to forestry science in general. As demonstrated by the contents of the European textbook (Hummel 1984), attention was mainly paid to rationalising and systematising the design of forest policy within its historically evolved institutional setting (Box 2.1). As such, forest policy studies mainly focused on providing advice to practitioners who were involved in governmental forest policy making. This de-facto legitimated the central role of the state in forestry. The disciplinary matrix guiding these early forest policy studies strongly resembled that of conventional forestry science. The main innovation to this matrix was the identification of a new type of forestry practitioner in addition to the forest manager: the forest policy maker. This identification did not, however, fundamentally change the relationship between scientists and practitioners; it was still considered the task of scientists to support the policy makers with scientific knowledge.

Box 2.1 Early focus in forest policy studies: improving the praxis of policy design

In 1984 one of the first European textbooks on forest policy was published (Hummel 1984). The book discusses forest policy as ‘a definite course or method of action from amongst alternatives and in the light of given

conditions to guide and usually determine future decisions.' (Ibid.: xvii). It focuses on the theoretical foundations of forest policy and the options with which policy makers are confronted in practice. The theoretical foundations should enable a policy maker

> …to define the general situation, the multiple functions of forests, the measures necessary to meet the demands made on forests and the manifold legal, planning, organizing, and other actions necessary in this context.' (Ibid.: xviii).

The book strongly focuses on issues relating to policy design. In the final chapter it is concluded that

> The sensible development of forest policies to meet changing needs requires a great deal of effort by many people, and that while the final responsibility for major decisions must rest with the government, wise decisions are more likely to result if the relevant facts have been assembled and analysed and if there is a continuing dialogue between the government and all relevant non-governmental forestry interests. (Ibid.: 303).

2.5 Changes in Forest Policy

The orientation of forest policy studies started to change in the 1980s, largely in response to changes in actual forest policy in the latter part of the 20th century. The traditional focus on an ideal-type and well-institutionalised forestry sector changed drastically as a result of forestry concerns being embedded more frequently in other policy fields. Three important developments can be distinguished: (1) the linking of forestry issues to rural development, (2) the embedding of forest policy into environmental policy, and (3) the incorporation of forest policy in newly emerging governance arrangements. These changes resulted in a reorientation of professional and scientific practices.

2.5.1 Emergence of New Forestry and Rural Development Policies

In the second half of the 20th century, in tropical countries, the traditional tenets of professional forestry came under heavy criticism for contributing little to socio-economic development. Several international development organisations, such as the Food and Agricultural Organisation (FAO) and the World Bank, undertook initiatives to strengthen the links between forestry and rural development and advocated new forms of 'development forestry' (Gregersen et al. 1989; Arnold 2001). For instance, in the mid-1970s, the question came up of whether the then prevailing policy concerns on the need for land reform should not also have repercussions for forestry in tropical countries with their emphasis on state forest

lands (Arnold, pers.com). This discussion resulted in a new programme on 'Forestry for local community development'. Community forestry was identified as any forest management activity which closely involves either individual households or community groups in producing fuel-wood and other forest-related basic needs, including non-timber forest products (NTFPs), or in maintaining forests and tree plantations for providing environmental stability for food production and/or income generation (Arnold 2001). Hence, the programme introduced a new type of a non-professional forestry practitioner, and the doctrine of multiple use was extended to include 'poor people's products'. The World Forestry Congress of 1976 heralded this reorientation of tropical forest policies and provided further visions on forests contributing to rural development and local livelihoods rather than concentrating on timber resources of strategic importance to states (Wiersum 1999).

2.5.2 Embedding of Forest Policy into Environmental Policy

In the 1980s the efforts in linking forestry and development were integrated in a more general discussion on linking environmental conservation and human development. This notion was propagated in the World Conservation Strategy published in 1980 (IUCN 1980). These ideas received further global recognition as a result of the report 'Our common future' of the World Commission on Environment and Development (WCED 1987) and the UNCED Earth Summit in Rio de Janeiro in 1992. Forest concerns played an important role in these new policies. On the one hand, deforestation and forest degradation were identified as major environmental problems, and much attention was given to the need to develop a global forest convention. On the other hand, the concerns about the need to develop new socially-responsive conservation approaches mirrored the concerns that had resulted in the initiation of community forestry policies. Hence, the social development approaches in tropical forestry fitted well with the novel discourse of sustainable development in environmental policy. Therefore, in the wake of the Rio conference, forest policies became increasingly impacted by international policy discussions on the need to develop a new global forest regime which should focus primarily not on regulating the forestry sector, but instead on stimulating environmental conservation and sustainability (Humphreys 1996).

2.5.3 Incorporation of Forest Policy in Newly Emerging Governance Arrangements

As illustrated by the new policies to stimulate community-based forest management and the efforts to establish a global forest regime, forest policies became caught in contradictory trends of localisation and globalisation (Wiersum 2000). This reflected the more general shift from government to governance that evolved at that time and that implied a partial relocation of decision-making power from the nation state to international organisations and sub-national authorities (Pierre

and Peters 2000). But this shift also implied increasing the role of non-governmental actors in forest policy. Hence, the evolving forest governance process included not only decentralisation and devolution of forest policy and management responsibilities to local level organisations (as reflected by the community forestry movement), but also incorporation of non-profit, civil society organisations and market organisations in policy making (Cashore 2002; Arts and Buizer 2009). These emergent multi-actor and multi-level governance schemes (Humphreys 1996; Agrawal et al. 2008) were based both on general democratic principles and on the idea that forestry practices should be more firmly grounded in society. Consequently, increased attention was paid to the often conflicting norms in multi-stakeholder arenas that currently constitute forestry policy and management (Rayner et al. 2010). Due to all these developments, the dominant position of national governments (i.e. the state) in policy making became seriously challenged.

2.5.4 Repercussions for Forest Policies

As a result of the incorporation of tropical forestry in an enlarged policy field and the need to adjust forest policies to new social values, norms and demands, forest policy researchers started to critically scrutinise the conventional forest policies (Westoby 1989; Peluso 1992). The question arose whether the new policies demonstrated the 'underdevelopment' of the conventional forestry approach (Dargavel et al. 1985) and the need for a new form of professionalism (Fairfax and Fortmann 1990). But the changes in forest policy were not restricted to tropical forestry. In the more developed countries, where forestry had already been institutionalised much more strongly, changes in social values on forests and upcoming environmental concerns also required new approaches to forest policy and management (Poore 1995; Kennedy et al. 1998). New notions of how forests should be managed to provide a mix of social values for current and future generations (Koch and Kennedy 1991; Bengston 1994; Wiersum 1995) resulted in an opening-up of the traditional forest sector (Verbij 2008) and in a change in the professional identity of foresters (Kentish and Fawns 1995). Consequently, it was no longer possible to relate forest policy assessments to an ideal-type forest sector or to a predefined set of practitioners. Rather, forest policy scientists had to make sense of a variety of institutional arrangements and multiple practitioners.

2.6 From Normative to Analytical Science

The new dynamic field of changing forest values and the emergence of new governance arrangements significantly impacted on forest policy studies. Scientists were challenged to explain these policy changes rather than solve problems for a predefined sector. In endeavouring to do so, they were confronted with a greater

Table 2.2 Comparison of normative and analytical approaches in forest policy studies (after Glück 1992)

	Normative approach	Empirical-analytical approach
Objective of forest policy	Care and promotion of forestry	Regulation of conflicts of interests in the forest sector
Objective of forest policy studies	To advise and legitimate policy making	To analyse and explain forest policy, without value judgement

variety of policy actors, political processes and—sometimes conflicting—interests, values and norms. They could no longer assume that they were destined to rationally develop policy advice for an ideal-typical forestry professional who operates in a clearly bounded forest sector with a predefined set of norms and objectives. Rather they were faced with questions as to how the different actors involved perceive forestry problems, how the social field of forestry is subject to dynamic institutional arrangements, and how different perceptions of problems result in different policy options. This not only required new analytical tools for studying the changes, but also resulted in a re-evaluation of the prevailing doctrines of conventional forestry.

2.6.1 Changing Academic Orientation

Not only did forest policy studies change as a result of the emergence of new forest-related policies and the need to explain their significance; the changes also reflected new scientific orientations (e.g. Ambrose-Oji 2010). Several forest policy scholars, although foresters by training, became more and more influenced by the mother discipline of political science. For instance, in Europe, Glück (1987, 1992) questioned the scientific commitments underlying the prevailing practical science approach, and identified the need for a more analytical approach (Table 2.2). In so doing, these scholars were strongly influenced—as were most of social scientists of that time—by positivism and critical rationalism. As a consequence, an empirical-analytical approach towards forest policy emerged. Advocates of such an approach argue that the objective of forest policy studies should not be to develop and legitimise professional expertise and to advise policy makers, but rather to identify, describe and explain forest sector issues and forest policy problems, including conflicting approaches towards governing forest resources. Thus, with respect to the earlier identified question on what the role of forest policy scientists should be, the answer changed: from advising practitioners to analysing forest policy processes, explaining forest-related social and political phenomena and thus contributing towards the enlightenment of forestry scientists, professionals and policy makers. The shift from a practical approach focusing on forest policy making to an analytical perspective advocating forest policy analysis becomes clearly visible when one compares the focus of one of the first European textbooks on forest policy (Box 2.1) with one published in 2005 (Box 2.2).

Box 2.2 From forest policy praxis to forest policy analysis
In 2001 a new European handbook on forest policy was published, first in German, later in English (Krott 2005). Unlike Hummel's 1984 textbook, it does not focus principally on forest policy praxis, but rather on forest policy *analysis*. It offers students of forest policy a combination of forest sector analysis and political science concepts, such as interest, power, conflict, stakeholder, institution and policy instrument. Empirical examples are mainly drawn from Germany. Krott characterises the book as follows:

> This book can be seen as a bridge between the forest sector and political science. However, it is not a simplified form of political analysis. On the contrary, its application to the field of forest policy is an endurance test for the performance of political science theory. (Krott 2005, p. 3)

He also explains:

> [The] empirical-analytical orientation differs from those concepts that are based on the establishment of suitable policies. (…) This provides a clear differentiation from the previously predominant normative-ontological concept (…), [which] has many normative elements that should be avoided in favour of a scientific explanation of forest policy processes. (Ibid.: 284).

Obviously, a strong empirical-analytical programme for forest policy analysis is put forward here, with the ultimate aim being to analyse empirical phenomena on the basis of scientific theories and in so doing test them, rather than to design the best policies for practitioners. This is not to say that policy advice has been abandoned, but rather that scientists should refrain from taking normative or ideological positions and that stakeholders themselves should decide whether or not to use scientific findings.

Two leading theories within the empirical-analytical approach which continue to be dominant in forest policy analysis today are rationalism and institutionalism (Arts 2012). The former posits the axiom of the rational-strategic actor who makes choices (political or otherwise) based on the highest expected utility, i.e. from a range of alternatives he or she chooses the one which yields the highest expected return given his or her interest (Simon 1959). Although such choices might be rational at the individual level, they might produce suboptimal or even negative outcomes at the collective level (Hardin 1968). According to critics of these types of theories, this is why policies so often fail, or favour only the powerful. Institutional policy analysis, the second leading theory, claims that rational choice cannot fully explain human behaviour and political outcomes. Choices are mediated by rules, norms and beliefs, to be defined as 'institutions' (Ostrom 1990). People do not behave solely on the basis of the highest expected utility, but on the basis of what is appropriate in a certain institutional setting. For example, corruption in politics may produce the best financial return for individuals, but in

many political cultures this is simply not an option. Therefore, policy making should focus on designing the 'right' institutions for specific types of problem-solving. In forest policy analysis, rationalism has mainly been used in explaining conflicts of interests in the forest sector, while institutionalism has, for example, been applied to explain the (lack of) effectiveness of forest management by referring to (in)appropriate rules of the game (Ostrom 1990; Krott 2005).

2.7 Changes in the Disciplinary Matrix

The combination of forest policy change and the shift from normative to analytical science brought with it an important change in the disciplinary matrix of forest policy studies. The increased empirical attention to multiple practitioners and institutional settings resulted in a gradual expansion of the disciplinary orientation:

- From a focus solely on the professional forestry sector to a focus on a multitude of institutions and norms related to the use and management of forest resources, including communities' and layperson's activities.
- From a focus on forestry science as the driving force in forestry policy development to a focus on the socio-political trends driving such a development.

The new analytical focus also implied new disciplinary commitments with respect to shared beliefs in models for problem solving. The focus on ecological and technical issues was extended to include issues of social interaction and political coordination in forestry. The doctrine of state authority in delivering common goods and in coordinating activities of various forest actors was relaxed, and new premises of governance and participation were added. Due to the emerging belief in such multi-actor governance processes, forest policy scientists recognised that not only commitments and practices of forest professionals needed consideration, but also those of laypersons, communities and civil society organisations (Lawrence 2000). Much attention was given to how forestry could contribute to rural development and poverty alleviation, as well as to solving global environmental problems. This included the analysis of normative issues, such as forest rights of ordinary people and indigenous communities and environmental justice for those deprived of natural resources (Zerner 2000; Colchester 2008). Hence, the interaction between different types of forest users and managers has become part of the research agenda, and includes characteristics of participatory processes (Pimbert and Pretty 1997) and of forest partnerships (Visseren-Hamakers and Glasbergen 2007; Ros-Tonen et al. 2008).

Additionally, the sought-for solutions to forestry problems in the form of multiple use and sustainability have been re-interpreted as involving a broad range of dynamic social values rather than professional ones only (Koch and Kennedy 1991). For instance, multiple use forestry essentially involves many users who

have conflicting demands on diverse forest resources. Such conflicting demands should now be reconciled through negotiations in a governance setting, rather than through state authority. And as the interaction between different groups cannot a priori be considered as harmonious, attention should also be given to the social dynamics of forest conflicts and their negotiation and resolution (Castro and Nielson 2003; Yasmi 2007). However, the empirical-analytical approach does not merely involve a new focus on forest policy as social engineering. It also implies a diversification in the roles and relationships of professionals, scientists and policy makers. Although much research remains of an applied nature, the academic science approach has been added to the repertoire of the forest policy researcher. The role of the latter is no longer conceived of as providing advice to policy makers, but as primarily to act as an independent scientist: to objectively assess the forest sector and its dynamics, analyse its related decision-making processes, enrich forest policy with scientific concepts, and test relevant theories, such as rationalism or institutionalism. The resulting findings are, of course, accessible to professionals and policy makers, but they are no longer presented as the best professional advice. Rather, they are offered as alternative options, scenarios, or evaluations and provide the basis for democratic decision-making within a governance setting.

The new roles and relationships of professionals, scientists and policy makers imply a new perspective on how science and practice conceptually relate. In contrast to the position of the earlier normative approach the analytical science approach is more distanced from praxis. The policy praxis is considered the arena for empirical fact finding, with research results serving to explain how policy processes involve multiple interests, norms and values, consist of multi-level and multi-actor governance processes, and imply dynamic institutional arrangements. This knowledge should be independent, distanced and as much as possible value-free in respect to a priori assumptions on the ideal-typical institutional setting of forestry. It should also serve to bring enlightenment to multiple practitioners in the policy process and may result in the identification of alternative policy actions for those involved. Foremost, however, it should aim at scientific analysis and theory testing.

2.8 Emergence of Critical Policy Studies

At the end of 20th century, forest policy studies became increasingly exposed to social scientists who were neither trained as foresters nor aware of the disciplinary matrix of traditional and analytical forestry science. There were two reasons for this interest: the increasing involvement of social scientists in academic curricula on forest policy, and the growing interest in forest policy as a topic for the policy sciences in general (Arts 2012). An outcome was that scientific debates from the

social sciences were imported into forest policy studies. A crucial debate was between mainstream social sciences—of which rationalism and institutionalism are part—and critical studies. The latter is a family of theories including neo-Marxism, postmodernism and discourse theory. These theories attach great importance to the construction of meaning in science and society, and to the social, political and power processes through which such meanings are constructed, as opposed to 'objective truth' that can be discovered in the world 'out there' (Wagenaar 2011). Therefore, they all distance themselves from the positivist paradigm, which claims that: (1) reality exists independently of our knowledge (the realist position), (2) natural and social sciences are analogous in principle (the naturalist position), and (3) science should explain phenomena, generalise findings and separate facts from norms and values (the objectivist position) (Crotty 1998).

This mainstream philosophy of science is fundamentally challenged by critical studies. These reject the notion that the world exists independently of our knowledge and claim instead that scientists 'construct' the world rather than discover it (the constructivist position). Mediated by scientific discourse, by conceptual frameworks and by measurement technologies, certain realities are produced, while others are excluded (Berger and Luckman 1967). Moreover, scientists—being people after all—are influenced by their normative commitments and individual aspirations (the anti-objectivist position). As a consequence, knowledge, values, interests and power are all implied in scientific practice (Foucault 1972). Also, a distinction is made between the natural and social sciences, because the objects—either nature or society—are so different (the anti-naturalist position). While nature neither 'interprets itself' nor 'speaks back' to the researcher, society does. This leads to a double interpretation (or 'double hermeneutics'; Giddens 1984) in the social sciences: in a first step the world is interpreted by people, in a second the researcher interprets their interpretations—a process which is absent in the natural sciences. Hence, the former should not uncritically follow the latter and develop its own methodologies. As a result of this debate being imported into forestry science, critical studies has been added to the repertoire of forest policy research, taking its place alongside the mainstreams of rationalism and institutionalism, while critically reflecting upon, or even breaking with, their positivist paradigm.

The new critical forest policy studies did not principally aim at contributing to better professional practices or at analysing the forest sector for itself. Instead, it critically examined the 'forestry establishment' in its broader political and social settings, revealing that it was not inevitable or natural, but actively created by the state, the market, their elite networks and forestry science to serve certain interests, often at the cost of local communities, livelihoods, customs and nature itself. For instance, Scott (1998) analysed how the grand schemes of the modern nation state, built upon the ideology of civilisation and progress, often produced adverse effects, or even worse, failed completely. Well-known examples are large-scale agricultural modernisation in Europe and the USA, the collectivisation in Russia and the compulsory establishment of *Ujamaa* villages in Tanzania, but Scott also gives examples from forestry. With the aim of taxation and securing strategic

resources, the early modernist states in Europe—and later in the colonies—aligned with scientific forestry to re-make the semi-natural forest systems into legible, measurable and exploitable monocultures of valuable timber trees. This radically simplified forests into a 'single-commodity machine' and deprived rural communities of their complex cultural, social and economic relationships with forests, wildlife and trees. Although this assessment was based on a specific interpretation of forestry, namely plantation forestry from Central Europe, thus excluding other forms, such as close-to-nature forest management or various participatory forestry schemes which have always existed besides plantation forestry, Scott's study represents a clear example of a critical social theory interpretation of the modern forest sector.

The new critical research orientation can also be illustrated by the example of how the 'doctrine' of participation that emerged during the second phase of analytical forest policy studies became elaborated (Boon 1999). Earlier, most studies on participatory forestry focused on analysing 'the who', 'the what' and 'the how' of participation (Cohen and Uphoff 1980). For instance, they tried to objectively assess the level of participation by means of Arnstein's 'ladder of participation', or explain why a certain scheme or level was appropriate to serve a certain institutional purpose (Arnstein 1969; Pimbert and Pretty 1997). The studies predominantly focused on the participation of local residents or lay people in forest policy and management and served to explain what factors impacted on their involvement in the professionally designed schemes (Charnley and Poe 2007; Lawrence 2000; Mustalahti and Lund 2010). But gradually the focus was enlarged to include the notions that participation involved engagement of professional practitioners with indigenous knowledge and laymen's practices (e.g. Lawrence 2000) and that interfaces may occur between the normative systems of professional practitioners and laymen practitioners (Long and van der Ploeg 1989). Later, participation came to be analysed from interpretive angles too: for example, as 'performative practice' (Turnhout et al. 2010). In this work, participation is not conceptualised as a neutral site where, at the invitation of the state, citizens meet and discuss freely, but as a highly political site with many intended and unintended consequences. It not only includes but also excludes people, produces a certain definition of the problem at stake, and not others, and implies there are certain expectations to fulfil, such as loyal support for the resulting policy after citizen deliberation. Hence, participation is to be considered a 'performative practice' that creates certain participants, discourses and outcomes. At the same time, such outcomes are not predictable either, because participants exert agency and are able to renegotiate participatory roles, re-interpret issues and problems and reshape expectations. As a consequence, outcomes are neither predictable nor causally fixed, but contingent on people's perceptions, preferences and practices as well as on the social fields in which they are situated.

Another example of the emerging critical science approach in forest policy studies is expressed in the special 'Political theory for forest policy' issue of the journal *Forest Policy and Economics* (Box 2.3), which can be considered the most recent overview of the field in Europe. In this special issue, the current state of the

art on theory use in forest policy studies is reviewed. It is shown that rational, institutional and critical policy analyses are all three current in the field, but with the third gaining prominence in recent years.

Box 2.3 From analytical to critical forest policy analysis
A recent special issue of the journal *Forest Policy and Economics* (Vol. 16, March 2012) on 'Political theory for forest policy' provides an overview of current theorising on forest policy and shows how the field has moved forward since Krott's (2005) handbook. It consists of three sections: rational, institutional and critical approaches. The first section mainly focuses on instrument choice theory in forest policy, the second one on the analysis of institutional arrangements for forest policy and the third one on forest discourses. While the first two fit mainstream policy analysis quite well, the last section critically analyses various discursive practices in forest policy at global, national and local levels. It shows, amongst other things, how global forest media discourses are dominated by Western countries and organisations, how discursive hegemonies in forest policies of developing countries often suppress the interests of the poor and how public deliberation in green urban planning in the Low Countries is far from inclusive. All these analyses go beyond instrumental and institutional arguments to make forest policy 'well-designed' and 'fit' for the job of problem-solving, and instead show the ideological and normative biases, power inequalities, discursive struggles and multiple realities of various social groups implied in forest policy.

2.8.1 Impacts on Disciplinary Matrix

The new critical approach involved further changes in the disciplinary matrix of forest policy scientists. The shared symbolic generalisation of forestry as guided by the enlightenment ideals of welfare and well-being of mankind has become more critically reflected upon, or even 'deconstructed'. Questions like: What welfare? Welfare defined by whom? Welfare for whom (and for whom not)? and Welfare at the cost of what? have become more prominent. No longer are the enlightenment ideals and their normative commitments taken for granted. More relevant is to critically assess how these commitments are created and (re)interpreted at the interface of state, market and civil society organisations in forest governance, both in rich and poor countries. The critical stance has also affected the beliefs in models that assume that forest use and management can be rationally planned on the basis of technical and social engineering. Rather, the use and management of forest resources have become interpreted to be performed in practice, and this often has unintended consequences, some of which confirm rather than remove power inequalities, in terms of access to and control over forest resources and political decision-making. To reflect upon such issues, scientists must be responsive to multiple social practices, normative systems and value conflicts.

New 'situated' concepts, such as agency, practice and performance have supplanted the former ideal-typical ones such as institutions and interests. The critical stance is foremost related to a dream of multiple practices of socially and environmentally responsive conservation and use of forests rather than to one idealised model of an enlightened and modernised society, as suggested by Glück (1992). It also entails researchers changing their stance from one that is rational and problem-solving to one that is more interpretive and reflexive.

Box 2.4 Forest policy research at Wageningen University

The development of forest policy research and education at Wageningen University, the Netherlands, provides a good example of the evolution in forest policy studies as described in this chapter. The first lecturer in silviculture was appointed at the then Wageningen agricultural school back in 1883. The school became a college of higher agricultural education in 1918, which heralded the start of academic forestry research and education in the Netherlands, and has been a university since 1986. In the 20th century, the scientific focus in forestry at Wageningen gradually extended from silviculture to forest management and forest economics. In 1977, forest policy was formally introduced as a subject. Since then, forest policy research has evolved rapidly. Initially, the focus was on identifying the principles for rational problem-solving in forestry (van Maaren 1984; Wiersum 1984). By the mid-1980s, the perspective had started to change (van Maaren 1993). In response to changes in actual forest policy in both tropical countries and the Netherlands, where forest policy became strongly integrated in nature conservation (Veenman et al. 2009), much attention focused on explaining these developments and assessing their relevance (Umans 1993; Wiersum 1999). In addition, rather than focusing on professional practices, increased attention was given to the nature of layperson's practices (Wiersum 1997), and to participatory policy making and management schemes (e.g. Elands and Wiersum 2001). Later, the analytical approach was further extended by asking questions about how professional foresters make sense of their management and policy practices (Banjade et al. 2006; Hoogstra 2008), how they identify the boundaries of 'their' forestry sector (Schanz 1999; Verbij 2008), and how forest policies can be considered discursive institutions (Schanz 2002). In a next step, the attention to policy practice widened to include multi-stakeholder and multi-level governance processes (Arts 2006) as well as to endeavour to understand different social representations of forests and nature (Buijs 2009). Other studies focused on the role of experts and expertise in nature conservation (Turnhout et al. 2008; van Bommel 2008). All these studies indicated that processes of forest policy making are largely shaped by societal discourses and social practices, and have resulted in the gradual identification of the practice based approach, as presented in this book.

2.9 Conclusion

During the evolution of forest policy studies from a normative to an empirical-analytical approach in the 1980s, two main changes in thinking occurred regarding the relevance and scope of forestry practices. In the first place, the notion of forest policy as a governmental process, concerned with the conservation and management of strategic forest resources and executed by professional foresters, changed to a notion of multi-actor and multi-level forest governance. Within this perspective, a much larger diversity of norms and techniques for conserving and managing forests was considered than in the conventional forestry perspective. Consequently, the relevance of both professional and non-professional practitioners became recognised, as did the need to focus research on the scope of a pluriform rather than a standard set of practices for conserving and managing forests.

In the second place, the understanding of what constitute relevant forestry practices was expanded. Whereas in the conventional approach the focus was on the design of technical and organisational practices, in the analytical approach, explicit attention was also given to social coordination and conflict negotiation. It was recognised that forest policy research should not only provide knowledge for effective policy design, but also produce insights into policy developments on the ground. This included a focus on 'new' issues such as participation, communication and negotiation, rather than on forest-related technical and organisational schemes only. As a result of these changes, the scientific approach in forest policy research gradually shifted from practical to analytical. Although the empirical focus remained directed at objective representations of forestry practices, the scientific focus became strengthened by giving increased attention to theories from the social and political sciences rather than relying solely on models from forestry. Initially, theories to study forest policy were predominantly rationalist and institutional in nature, but at a later stage, as more and more social scientists became involved in the field, critical policy studies was added to the theoretical repertoire. This has resulted in a critical rethink of the role of the state, societal groups and scientists in the governance of forest and nature.

The practice based approach as presented in Chap.1 parallels this evolution. It stands in the interpretive and critical traditions of science, i.e. considers the meanings that practitioners attach to their life-worlds as crucial for understanding their behaviour in forest policy and management. Equally, these meanings are considered to be co-shaped by the social field—the institutions, discourses, disciplinary matrix, etc.—within which these practitioners operate. This interaction between agencies and field cannot simply be reduced to rational or institutional processes, but involves what in this book is called 'performativity'. This is, while certain logics of 'doing and saying things' inherent in any social field tend to reproduce practices as they evolve over time—and push people to follow daily and professional routines—their agency also enables them to improvise upon norms and rules, to do and say things otherwise than expected, or to make a difference in

routinised patterns. As a consequence, social (including policy) outcomes are rather unpredictable and only rarely match the rational optimum or the institutional fit. In line with this thinking, forest policy is understood as implying a diversity of agencies, meanings, norms, institutions, practices and fields. The realities of forest and nature governance are therefore considered complex, often messy and hard to foresee. Hence, the practice based approach is not a return to the pre-analytical, practical science approach of forestry, for which the clearly defined forestry sector and the rational problem-solving approach were key elements, but instead is a step towards a new paradigm that reorders and rethinks how science, policy and practice relate.

The above has important repercussions for the disciplinary matrix guiding forestry science. The normative commitments with respect to the importance of forests and forest resources for humanity are maintained: however, the modern notions of welfare and well-being are critically assessed, because these might mean very different things to different people in the first place and, secondly, are very unequally distributed in today's world, whatever definition is chosen. Also, the basic belief in the policy problem of the lack of balance between social demands on forests and the actual state of forests is retained. But the understanding of the process of problem identification has been adjusted and the practices of policy legitimation are understood as being performed by the different actors in the field rather than a priori defined. Moreover, rather than focusing on the activities of professional foresters, the practices of different forest-related groups and other decision makers are considered, including the activities of lay people. Finally, the basic characteristics of the sought-for solutions are no longer solely focused on technical and ecological issues such as multiple use and sustainability, but also include adaptation to social change and democratic processes. As a result, the ideal-typical exemplars of relevant forest-related practices have been significantly amended.

A final caveat about assessing the repercussions of the practice based approach in respect of the disciplinary matrix of forest policy studies concerns the shared values used to judge scientific endeavours. In this chapter, the critical science orientation has been characterised as being predominantly focused on interpretation and reflexivity rather than on identifying the best operational practices for improved forest use and conservation. This new position could imply a loosening of the historical link between forest policy studies and the professional practice within the forestry sector. This would imply bidding farewell to the traditional notion of the forest sector as essentially encompassing the 'golden triangle' of forestry science, professional practice and operational training. It still remains an open question whether the practice based approach is taking such a turn, and concentrating on forging stronger links between forest policy analysis and (critical) social sciences rather than on linking scientific practice with professional and laypersons' practices. Given its emphasis on the role of practitioners in policy making, on the interaction between science and practice, on democratic governance, etc., the practice based approach has the potential to add new thinking to further shape the relationships between scientists, policy makers and professionals.

This could require the practice based approach to include relevant aspects of transdisciplinary research (Giller et al. 2008). The aim of such an endeavour would not only be to analyse practices of forest policy and management and reflect upon their meaning, but also to develop new forms of interaction between scientists, professionals and other motivated people, with the aim of actively contributing to sustainable forest use and conservation in a socially responsible manner.

References

Agrawal A, Chhatre A, Hardin R (2008) Changing governance of the world's forests. Science 329(5882):1460–1462

Ambrose-Oji B (2010). Environmental sociology and international forestry: historic overview and future directions. In: Redclift MR, Woodgate G (eds) The international handbook of environmental sociology, 2nd edn. Edward Elgar, Cheltenham UK & Northampton USA, pp 311–326

Arnold JEM (2001) Forests and people: 25 years of community forestry. Food and Agriculture Organization, Rome

Arnstein SR (1969) A ladder of citizen participation. J Am Inst Planners 35(4):216–224

Arts B (2006) Forests, institutions, discourses. A discursive-institutional analysis of global forest politics. Inaugural address, Wageningen University, The Netherlands

Arts B (2012) Forests policy analysis and theory use: overview and trends. For Policy Econ 16:7–13

Arts B, Buizer M (2009) Forests, discourse, institutions. A discursive-institutional analysis of global forest governance. For Policy Econ 11:340–347

Banjade MR, Schanz H, Leeuwis C (2006) Discourses of information in community forest user groups in Nepal. Int Forestry Rev 8(2):229–240

Behan RW (1966) The myth of the omnipotent forester. J Forest 64(6):398–407

Bengston DN (1994) Changing forest values and ecosystem management. Soc Nat Resour 7:515–533

Berger P, Luckmann T (1967) The social construction of reality. Penguin Books, London

Boon TE (1999) Five analytical frameworks for analysing public participation. In: Niskanen A, Väyrynen J (eds) Regional forest programmes: a participatory approach to support forest based regional development. EFI Proceedings No. 32, Joensuu, Finland, pp 47–62

Buijs A (2009) Public nature. Social representations of nature and local practices. Doctoral thesis. Wageningen University, Wageningen

Cashore B (2002) Legitimacy and the privatization of environmental governance: how non–state market–driven (NSMD) governance systems gain rule–making authority. Governance 15(4):503–529

Castro AP, Nielson E (2003) Natural resource conflict management case studies: an analysis of power, participation and protected areas. FAO, Rome

Charnley S, Poe MR (2007) Community forestry in theory and practice: Where are we now? Annu Rev Anthropol 36:301–336

Cohen JM, Uphoff NT (1980) Participation's place in rural development: seeking clarity through specificity. World Dev 8(3):213–235

Colchester M (2008) Beyond tenure: rights-based approaches to peoples and forests. Some lessons from the forests peoples programme. Rights and Resources Initiative, Washington

Coufal JE (1989) Forestry: in evolution or revolution? The current paradox of forestry. J Forest 87(5):27–32

Crotty M (1998) The foundations of social research. Meaning and perspective in the research process. SAGE, London

Dargavel J, Hobley M, Kengen S (1985) Forestry for development and underdevelopment of forestry. In: Dargavel J, Simpson G (eds) Forestry, success or failure in developing countries. Australian National University, Centre for Resource and Environmental Studies, CRES Working Paper 1985/20, Canberra, Australia

Elands BHM, Wiersum KF (2001) Forestry and rural development in Europe: an exploration of socio-political discourses. For Policy Econ 3:5–16

Fairfax SK, Fortmann L (1990) American forestry professionalism in the third world: some preliminary observations. Popul Environ 11(4):259–272

Ford-Robertson FC (ed) (1971) Terminology of forest science, technology practice and products. Society of American Foresters, Washington

Foucault M (1972) The archaeology of knowledge. Pantheon Books, New York

Giddens A (1984) The constitution of society. Polity Press, Cambridge

Giller KE, Leeuwis C, Andersson JA et al (2008) Competing claims on natural resources: What role for science? Ecol Soc 13(2), article 34. http://www.ecologyandsociety.org/vol13/iss2/art34/

Gilmour DA, King GC (1989) Management of forest for local use in the hills of Nepal. I Changing forest management paradigms. J World For Resour Manage 4:93–110

Glacken CJ (1967) Traces on the Rhodian shore. Nature and culture in western thought from ancient times to the end of the eighteenth century. University of California Press, Berkeley

Glück P (1987) Social values in forestry. Ambio 16(2/3):158–160

Glück P (1992) Evolution of Forest Policy studies in Austria. In: Paper IUFRO 1992 Centennial meeting, subject group Forest Policy and Administration, Berlin, 31 Aug–4 Sept 1992

Gordon JC (1994) The new face of forestry: exploring a discontinuity and the need for a vision. School of Forestry, Northern Arizona University, William P. Thompson Memorial Lecture No. 18, Flagstaff, USA

Gregersen H, Draper S, Elz D (eds) (1989) People and trees: the role of social forestry in sustainable development. World Bank, EDI Seminar Series, Washington

Hardin G (1968) The tragedy of the commons. Science 162:1243–1248

Hoogstra MA (2008) Coping with the long term. An empirical analysis of time perspectives, time orientations, and temporal uncertainty in forestry. Doctoral thesis, Wageningen University, Wageningen, The Netherlands

Hummel FC (ed) (1984) Forest policy. A contribution to resource development, vol 12. Forestry science Martinus Nijhoff/Dr W. Junk Publishers, The Hague 12

Humphreys D (1996) Forest politics. The evolution of international cooperation. Earthscan, London

IUCN (1980) World conservation strategy living resource conservation for sustainable development. International Union for Conservation of Nature and Natural resources, Switzerland

Kennedy JJ, Dombeck MP, Koch NE (1998) Values, beliefs and management of public forests in the western world at the close of the twentieth century. Unasylva 49(149):16–26

Kentish B, Fawns R (1995) The changing professional identity of foresters. Aust Forestry 58(3):110–117

Koch NE, Kennedy JJ (1991) Multiple-use forestry for social values. Ambio 20(7):330–333

Krott M (2005) Forest policy analysis. Springer, Dordrecht

Kuhn TS (1970) The structure of scientific revolutions., 2nd enlarged edn. University of Chicago Press, Chicago

Lawrence A (ed) (2000) Forestry, forest users and research: new ways of learning. European Tropical Forest Research Network (ETFRN), Wageningen, The Netherlands

Long N, van der Ploeg JD (1989) Demythologizing planned interventions: an actor perspective. Sociologia Ruralis 29(3/4):226–249

Mantel K (1964) History of international science of forestry with special consideration of central Europe: literature, training and research from the earliest beginnings to the nineteenth century. Int Rev For Res 1:1–37

Mustalahti I, Lund J (2010) Where and how can participatory forest management succeed? Learning from Tanzania, Mozambique, and Laos. Soc Nat Resour 23:31–44

Ostrom E (1990) Governing the commons. The evolution of institutions for collective action. Cambridge University Press, Cambridge
Peluso NL (1992) Rich forests, poor people. Resource control and resistance in Java. University of California Press, Berkeley
Pierre J, Peters G (2000) Governance, politics and the state. Macmillan, London
Pimbert MP, Pretty JN (1997) Parks, people and professionals: putting 'participation' into protected area management. In: Ghimire KB, Pimbert MP (eds) Social change and conservation. Earthscan, London, pp 297–329
Poore D (1995) Forestry and nature conservation: changing perspectives. Commonwealth For Rev 74(1):5–19
Rayner J, Buck A, Katila P (eds) (2010) Embracing complexity: meeting challenges of international forest governance. A global assessment report, vol 28. IUFRO World Series, International Union of Forest Research Organisation, Vienna
Reckwitz A (2002) Towards a theory of social practices. A development in culturalist theorizing. Eur J Soc Theory 5(2):243–263
Roche L (1992) The profession of forestry now and in the year 2000. Commonwealth For Rev 71:13–19
Ros-Tonen MAF, van Andel T, Morsello C, Otsuki K, Rosendo S, Scholz I (2008) Forest-related partnerships in Brazilian Amazonia: there is more to sustainable forest management than reduced impact logging. For Ecol Manage 256:1482–1497
Schanz H (1999) What is a forest? What is forestry? Science on the boundaries. Inaugural address. Wageningen University, Wageningen
Schanz H (2002) National forest programmes as discursive institutions. For Policy Econ 4(4):269–279
Scott JC (1998) Seeing like a state. How certain schemes to improve the human condition have failed. Yale University Press, New Haven
Simon H (1959) Theories of decision making in economics and behavioral science. Am Econo Rev 49:253–283
Turnhout E, Hisschemöller M, Eijsackers H (2008) Science in Wadden sea policy: from accommodation to advocacy. Environ Sci Policy 11:227–239
Turnhout E, van Bommel S, Aarts N (2010) How participation creates citizens: participatory governance as performative practice. Ecol Soc 15(4), article 26. http://www.ecologyandsociety.org/vol15/iss4/art26/
Umans L (1993) A discourse on forestry science. Agric Hum Values 10(4):26–40
van Bommel S(2008) Understanding experts and expertise in different governance contexts: the case of nature conservation in the Drentsche Aa area in the Netherlands. Doctoral thesis, Wageningen University, Wageningen
van Hengel E (1991) Milieukunde: nieuw paradigma of meer van hetzelfde? In: Gremmen B, Lijmbach S (eds) Toegepaste filosofie in praktijk, vol 32. Wageningse Sociologische Studies, Wageningen, pp 35–54
van Maaren A (1984). Forests and forestry in national life. In: Hummel FC (ed) Forest policy: a contribution to resource development. Martinus Nijhoff/DR. W. Junk Publishers, The Hague, pp 1–19
van Maaren A (1993) Bomen over bossen en mensen in't verschiet. Farewell address. Wageningen Agricultural University, Wageningen
van Vliet C (1993) Bosbeleidskunde in ontwikkeling: een systematische benadering. Nederlands Bosbouw Tijdschrift 64(3):136–146
Vandergeest P, Peluso NL (2006a) Empires of forestry: professional forestry and state power in southeast Asia, part 1. Environ Hist 12(1):31–64
Vandergeest P, Peluso NL (2006b) Empires of forestry: professional forestry and state power in southeast Asia, part 2. Environ Hist 12(4):359–393
Veenman S, Liefferink S, Arts BJM (2009) A short history of Dutch forest policy: the 'de-institutionalisation' of a policy arrangement. For Policy Econ 11(3):202–208

Verbij E (2008) Inter-sectoral coordination in forest policy. A frame analysis of forest sectorization processes in Austria and the Netherlands. Doctoral thesis, Wageningen University, Wageningen
Visseren-Hamakers IJ, Glasbergen P (2007) Partnerships in forest governance. Global Environ Change 17(3/4):408–419
Wagenaar H (2011) Meaning in action. Interpretation and dialogue in policy analysis. M. E. Sharp Inc, New York
WCED (World Commission on Environment and Development) (1987) Our common future. Oxford University Press, Oxford
Westoby JC (1989) Introduction to world forestry. Basil Blackwell, Oxford
Wiersum KF (1984) Strategies and designs for afforestation, reforestation and tree planting. Proceedings of an international symposium. PUDOC, Wageningen, The Netherlands
Wiersum KF (1995) 200 years of sustainability in forestry: lessons from history. Environ Manage 19(3):321–329
Wiersum KF (1997) Indigenous exploitation and management of tropical forest resources: an evolutionary continuum in forest-people interactions. Agric Ecosyst Environ 63:1–16
Wiersum KF (1999) Social forestry: changing perspectives in forestry science or practice? Doctoral thesis, Wageningen University, Wageningen
Wiersum KF (2000) Forest policy development between globalisation and localisation. In: Krishnapillay B et al (eds) Forest and society: the role of research. In: Proceedings XXI IUFRO world congress 2000, vol 1, Sub-plenary session, Kuala Lumpur, Malaysia, pp 589–605
Worrell AC (1970) Principles of forest policy. McGraw-Hill, New York
Yasmi Y (2007) Institutionalization of conflict capability in the management of natural resources. Theoretical perspectives and empirical experience in Indonesia. Doctoral thesis, Wageningen University, Wageningen
Zerner C (2000) People, plants and justice: the politics of nature conservation. Columbia University Press, New York
Zivnuska JA (1963) Forestry: a profession or a field of work? J Forest 61:339–340

Part II
Rethinking Institutions

Chapter 3
Bricolage Practices in Local Forestry

Jessica de Koning and Charlotte Benneker

3.1 Introduction

Academics and policy makers traditionally focus on designing and introducing optimal institutions to guide and regulate the use of resources. Over recent decades, governments in the global South have undertaken numerous attempts to introduce institutional frameworks and mechanisms to achieve more sustainable use of forest resources. Examples of these frameworks are integrated conservation and development, sustainable forest management, independent timber certification, community forestry, voluntary carbon markets and verification of the legality of harvested timber (Kaimowitz 2008; Karky and Skutsch 2010; Rametsteiner and Simula 2003; Ros-Tonen et al. 2008). As such, the design of an optimal institutional framework to engender sustainable forest use has been a central issue in global, national and local discussions and decisions on forest use and forest governance over recent decades (Leach et al. 1999; Paavola 2007). This chapter discusses three such frameworks: how they were introduced in local practice and how they changed these practices, or failed to do so.

In the 1980s, integrated conservation and development projects (ICDPs) were developed in response to the failure of the conservationist approach of 'fines and fences'. ICDPs aim to meet social development priorities as well as conservation goals at the grassroots level and have been applied in many developing countries, one being Papua New Guinea. ICDP as a framework for achieving desirable conservation goals has been applied both by governments and by NGOs (Hughes and Flintan 2001; Worah 2000). Since the 1970s, the 'sustainable forest management' and 'community forest management' frameworks have become more important. Both frameworks entail norms and regulations, which are used to manage forests used to produce timber and/or non-timber forest products and both aim to enhance sustainable forest management practices (Arnold 2001; Kaimowitz 2008) as well as to improve the connection to markets (Ros-Tonen et al. 2008). An example is the timber certification scheme of the Forest Stewardship Council (FSC). In Bolivia,

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for instance, community forestry and certified timber have become important mechanisms by which efforts have been made to conserve forests and to engage local communities in legal logging activities. In the Democratic Republic of Congo (DRC), decentralised institutional frameworks for artisanal logging have been introduced by the government.

The implementation of the above institutional frameworks for sustainable forest use has not been straightforward, has often resulted in different and unexpected outcomes, and has fallen short of expectations (Leach et al. 1999). Changing the role of actors from 'uneducated destroyers' of forests into 'keepers of the forest' does not happen without a fight. Resistance from farmers and indigenous people to adopt new legislation is common and well-documented (Leach et al. 1999; Cleaver 2001; Benneker 2008; Koning 2011). This resistance is often found in the way that actors bend the rules in their favour whilst taking advantage of the government's lack of capacity to monitor their actions. Where formal legislation and customary rights coexist, actors can engage in institutional shopping; to pick and choose those elements of legislation and customary rights that best suit them. New rules may also bring about unexpected outcomes, such as communities that strengthen their traditional identity by forming political organisations that separate themselves from national governments (Koning 2011). It appears that despite many policy interventions that are designed to manage forests more effectively, actual land and forest use practices remain unpredictable and dynamic (Leach et al. 1999; Ribot et al. 2010; Koning 2011).

Although many factors can be put forward to explain why unexpected outcomes occur or why outcomes do not live up to the expectations of policy makers, we identify one main factor: the misplaced faith that policy makers and scientists put into the ability of formal regulatory institutions to influence local forestry and to diminish uncertainty (Cleaver 2001). This faith has been boosted by more popular theories on common property regimes (see for example Ostrom 1990, 1991) and new institutional economics (see for example North 1990). Common property regime views formal institutions as transparent mechanisms for furthering 'good governance' of local forestry and suggests that local forestry can be strengthened through policy reform, capacity building and redesigning community-level institutions (Koning and Cleaver 2012). However, what it tends to neglect is the informal local dynamics, everyday contexts, and daily practices in which institutions are embedded (Mehta et al. 2001). New Institutional Economics recognises the informality of institutions. Moreover, governing structures are defined by informal codes of conduct, norm and conventions (North 1990). However, by focussing on institutions as constraining and the individual human being as explaining factors, it overlooks the enabling aspects of institutions and the importance of practices as explanans for change. Therefore, an understanding that forest institutions consist of patchworks of institutions that are rooted in social relationships, and history and reshaped in daily practice can give much more satisfactory accounts of the actual effect of institutions on local forestry practice (Cleaver 2001).

Instead of the mainstream approach to formally designed institutions in forestry, we employ a more critical perspective on institutions. In our view, mainstream institutional approaches focus too much on the functioning of institutions in terms of input, output, effectiveness, success and failure. As a result, they have a hard time explaining why institutional frameworks lead to different outcomes at local levels. Furthermore, they neglect the role of actors: in particular, how local actors respond to introduced institutions. Rather than trusting in an institutional logic, we therefore focus on practices of everyday life, as these more adequately reflect the actual effects of institutions. Studying everyday practices reveals a story of the creativity and inventiveness of local actors in forestry as they respond to formally introduced institutions and the emergence of different patchworks of institutions. This leads us to conclude that institutions cannot be uncritically imposed on local practices. Instead, local actors reshape newly introduced institutions. Therefore, we view local practices as consisting of ad hoc and messy local constructions in which different types of institutions, styles of thinking and social relationships are pieced together.

In this chapter, we argue for a shift from an institutional logic to a logic of practice, in order to enhance our understanding of how formally introduced institutions influence local practices. Underpinning the chapter is the theory of institutional bricolage (Cleaver 2001, 2002). We use the concept of bricolage practices to describe how local actors respond to and deal with formal institutions. The chapter will first explain the theory of institutional bricolage, the concept of bricolage practices and its relation to the concepts logic of practice (Bourdieu 1977) and situated agency (Bevir 2005; Long 2001). This is followed by a methodological section that discusses how we have researched bricolage practices. It will continue to describe practices of bricolage in three cases in the global South: one in Papua New Guinea, one in Bolivia, and one in the Democratic Republic of Congo. The cases have been selected on the basis of our extensive research in these countries. They provide lively and clear descriptions of bricolage practices to not only illustrate the concept of institutional bricolage but also to give a critical account of the role of actors and institutions in forestry. By taking into account how actors are situated in practice, this chapter sheds light on how people deal with institutional arrangements and why they do so. It reveals that local actors are often creative, have a feel for 'the game' and have the ability to reshape institutions in their favour, which makes it difficult for introduced institutions to steer human behaviour.

3.2 Critical Institutionalism and Institutional Bricolage

The concept of institution is subject to several interpretations and on-going debate. Institutions are best known as the 'rules of the game' (Lowndes 2002). Rules refer to the structural, stable, and regularising characteristics of institutions according to which they steer behaviour. A focus on the regulative characteristics of institutions is

also found in mainstream institutional approaches to local forestry. According to these theories, institutions are to provide information and guarantee certain behaviour. For example, frameworks promoting community forestry offer incentives to act collectively and restrain opportunistic behaviour. In these frameworks, institutions are formal, public, designed for a specific purpose and 'crafted' through public decision-making processes (Koning and Cleaver 2012). As such, the accounts of local forestry that mainstream institutional approaches offer tend to be overly functionalist. That is to say that they ascribe a predefined, single objective to a certain kind of institution (such as a community forestry framework) and believe its success or failure depends on introducing this institution properly. However, in doing so they neglect local contexts, assume that human behaviour is rational and place excessive faith in the effectiveness of formally designed institutions in changing behaviour (Cleaver 2001, 2002; Mehta et al. 2001; Koning 2011).

Although natural resource management in more general and mainstream institutional approaches to local forestry in particular devote much attention to the steering role of regulative institutions (Leach et al. 1999), formalised rules are not the only stabilising influence on human behaviour (Hall and Taylor 1996). There are, for example, commonly accepted norms on appropriate behaviour, or cultural beliefs (such as traditions), which reflect those structures that are completely taken for granted. Institutions therefore are not only the rules but also the norms and beliefs of the game (Koning 2011). It is important to make the distinction between those institutions that have been intentionally designed and those that already exist in local practice. One can do so by dividing institutions into those that have been 'newly introduced'—such as forest legislation or global standards on sustainable forestry—and those that are already 'embedded in practice'—such as customary law, community norms, or traditions. An institutional analysis that takes these kinds of institutions into account looks not only at the formal, regulative aspects that rule 'the game', but also at social organisation, relationships, desirable way of life, local traditions, and so on. Here, rules, norms and beliefs are not static but ever changing, as they respond to both the external environment and internal pressures (Shepsle and Bonchek 1997). Such an institutional analysis that includes norms and beliefs and considers institutions to be dynamic offers us a critical perspective on how institutions affect practice.

Critical perspectives on institutions draw on disparate insights but have a number of common features (Cleaver 2011; Koning and Cleaver 2012): they reject the narrow functional logic behind mainstream institutional approaches and emphasise the complexity of institutions, their entwinement with everyday social life, their historical roots, and the interplay between the old and new and informal and formal arrangements (Koning and Cleaver 2012; Sandberg and Tsoukas 2011). Consequently, they move away from the use of analytical concepts such as designed institutions and rational actors because they perceive institutions to be adapted from other arrangements and accept people's rationalities to be 'emotional' 'moral' or 'social' as well as economic (Koning and Cleaver 2012). Rather than discussing specific institutional designs, critical perspectives on institutions draw on anthropology and sociology—such as development sociology and legal pluralism—in

order to emphasise the role of actors in the constitution of practice (Long and Long 1992; Nuijten 1992; Long 2001) and to show how people deal with introduced institutions in practice (Cleaver 2001; Koning 2011). These critical perspectives on institutions are collectively known as post-institutionalism (Mehta et al. 2001) or critical institutionalism (Koning and Cleaver 2012). Critical institutionalism rejects the narrow functionalism of mainstream institutional approaches that assume a direct relationship between rules and outcomes. It does not portray institutions as having been designed to address one issue alone—for example, the sustainable use and conservation of forests. Rather, critical institutionalism emphasises the complexity that follows from the entwinement of institutions with everyday social life, their historical formation, the interplay between traditional and modern, and formalised and informal arrangements (Koning and Cleaver 2012). Moreover, critical institutionalism considers institutions to be multipurpose and socially embedded; they can relate to different issues at the same time. For example, forest associations established to manage a community forest can naturally and rapidly evolve into a social security system that lends money in case of illness, or into a farmers' association in which agricultural information is exchanged. Actors give a purpose or meaning to institutions, not vice versa. The influence of institutions on actors is therefore seen as complex, indirect and ad hoc, and the result of bricolage.

Bricolage means making creative and resourceful use of whatever materials are at hand, regardless of their original purpose. Institutional bricolage is a process in which actors consciously and unconsciously reshape or piece together different institutional arrangements at hand (Cleaver 2001, 2002; Koning 2011). It consists of adaptive processes in which people ascribe meaning and authority to configurations of rules, traditions, norms and relationships. They do so by altering legislations, forest ownership, or law enforcement through reinterpretation, recombining different institutional elements, negating some institutions, and rearticulating others from socially embedded beliefs. In so doing, they modify old arrangements and invent new ones. Consequently, these new patchworks of different rules, norms and beliefs are always linked to commonly acceptable ways of doing things. In the process of institutional bricolage, institutional components from different origins are continuously re-used, reworked, or refashioned to perform new functions (Galvan 1997; Lanzara 1999; Cleaver 2001; Sehring 2009; Koning 2011). Institutional bricolage is a reaction against the idea that designed institutions can be universally effective in achieving a predefined purpose. As such, it gives body to critical institutionalism that considers institutions to be multipurpose and embedded in practice. Institutional bricolage does not analyse institutions in terms of success and failure but looks at what happens at the local level: how introduced institutions are reshaped in practice by actors who deal with everyday challenges and respond to changes in the social field. By doing so, it offers us new insights into the working of institutions, the role of agency and the constitution of practice. These insights are overlooked by mainstream institutional approaches, as they are simply categorised in terms of success and failure, without conceptually explaining underlying processes. In contrast, we consider such insights vital to our understanding of the responses of local actors to newly introduced forest institutions.

3.3 Bricolage Practices

Whereas institutional bricolage describes the interface of institutions and actors, bricolage practices are what local actors actually do: they engage in practices of reshaping and renegotiating (Koning 2011). In these practices, local actors respond to introduced institutions that have been designed to achieve better forest management. These introduced institutions are often forest regulations or normative conventions on appropriate forest use. When these institutions are introduced to local communities, they enter the already existing, local institutional framework consisting of traditions, local norms and local rules. Instead of simply adopting new institutions, local actors reshape them and recombine them with locally embedded laws, norms and traditions, or reject them completely. In this process, local actors are quite innovative and creative. As a result, they are also called bricoleurs: 'craftsmen' who resourcefully create something new from different elements (Cleaver 2001). The definition of actors as bricoleurs and the creativity they show should not give the misleading impression that agency in bricolage practices is therefore voluntaristic or autonomous. It is neither. Bricoleurs are situated in a logic of practice in which they perform situated agency, as we explain below. Bourdieu's (1977) logic of practice states that the logic behind any action does not follow any predesigned model or theory that is fully 'logical' in terms of following a clear rationality or conscious plan. A logic of practice is internal to practices, this means that logic cannot be externally imposed from outside and it not easy to modify. Practices are not just an assemblage of rational, predesigned calculated actions of actors but rather entail a practical and realistic sense or feel. This practical sense relates just as much to day-to-day decisions as to a commonly accepted way of doing things. Logic of practice therefore favours simplicity and is often based on a few generative principles or resources, such as social norms, taken-for-granted ways of doing things, but also straightforward surviving strategies, or the need to earn an income. Within a situation, certain local principles are consciously and unconsciously implicitly mobilised (Bourdieu 1977).

From the above it is clear that a logic of practice differs from an institutional logic. An institutional logic also considers behaviour to be regulated by a social context that provides actors with opportunities for agency. However, it does so by conceiving of a logic as being distinct from other logics, having key organising principles that are consistent with each other, and as consciously chosen by actors (Thornton and Ocasio 2008). In contrast, a logic of practice finds its unity in the doings and sayings of actors, consists of principles that are contingent and can be at conflict with one another, and is often unconsciously followed by actors. Bricolage practices build upon a logic of practice, as they use those elements that are 'at hand', can bring about different outcomes, and often occur unconsciously. In addition to their dynamic characteristics, bricolage practices enable us to pay much attention to creativity, innovation, or improvisation. Bricolage is a fundamentally dynamic process characterised by unevenness and temporal intermittence. That is to say that rather than being rationally designed, or even crafted, institutions are patched together, consciously and unconsciously, from the social,

cultural and political resources that are available to people. As such, institutions are not pre-existing 'things' but the results of what people do, and to exist they need to be continually reproduced or re-enacted by people (Lund 2006). Consequently, no one factor (or group of factors) is sufficient to explain their success. Rather, institutional processes are dynamic, play out through very different forms in varying contexts, and elude institutional design (Koning and Cleaver 2012).

Key in institutional bricolage is the role of the local actors also known as bricoleurs. The roles and rules for natural resource management are devised not only by introduced institutions, but are equally or more so influenced by routines, overlapping social identities, moral world views, and by conscious and non-conscious psychological motivations (Cleaver 2012). Therefore, bricolage practices are not just creative processes in which every outcome is possible: they are situated in social life and shaped by routines, traditions, social norms, or culture (Long and Long 1992, 2001; Bevir 2005). By using the concept of situated agency we wish to focus on the enabling and constraining effects of structures on agency. Giddens (1984) and Long (2001) have written extensively on the actor capable of processing social experience and responding to changes. Equally, bricolage situates the actor within a network of social relationships and institutions embedded in practice in which he or she responds to introduced institutions. Newly constructed institutional patchworks therefore reflect common notions on taken-for-granted ways of doing things, already accepted and well-worn practices and organisational arrangements, or devices to ensure social applicability (Koning and Cleaver 2012).

In conclusion, instead of focussing only on formally designed institutions, bricolage practices emphasise the piecing together of rules, norms, and beliefs that constitute a logic of practice that situated bricoleurs follow, usually unconsciously. Bricolage practices can best be seen as mediating between newly introduced institutions and an already existing logic of practice. As mentioned, a logic of practice is not automatically changed by introduced institutions. Through bricolage practices, local actors can reshape the introduced institutions to better relate them to existing practices. This allows them to react, for example, to new forestry legislation and at the same time not to abandon their traditional practices. By creatively constructing a new institutional framework for forestry in which the old is spliced to the new, local actors are key to changing a logic of practice. The following examples will show this creativity when new institutions are introduced to local communities.

3.4 Examples of Bricolage Practices From Different Parts of the World

To illustrate how local people deal with introduced institutions aimed at improving the use and conservation of forests, three examples of how local bricolage practices are given. They are drawn from different parts of the world: Papua New Guinea, Bolivia, and the Democratic Republic of Congo (DRC). We have selected these examples (1) to cover different regions (Oceania, South America and Africa)

in order to show that bricolage practices occur in different socio-cultural and historical backgrounds, (2) to cover a variety of institutional frameworks affecting local forest use, to show that bricolage practices happen, irrespective of the type of institutional arrangements that are introduced and (3) to cover a time-span of over ten years in order to show that bricolage practices are not something of the here and now. The objective of this research was to disclose bricolage practices and to shed some light into why they occur. Therefore, the chosen cases are not selected to yield generalizable data on institutions and actors. Rather, they are critical in the sense that they undercut the overly functionalistic belief in institutions; they are extreme to the point that they clearly show practices of institutional bricolage. The data collected on these cases are qualitative in nature and mainly engendered by interviews and observations. According to Ritchie and Lewis (2003, p. 216):

> …qualitative explanations attempt to say why patterns and outcomes in the data have occurred. These explanations may use causal logic in a loose, non-universal, non-deterministic sense, but the logic is not based on linear variable analysis. They rarely cite a single cause or reason, but set out to clarify the nature and interrelationship of different contributory factors or influences.

Qualitative research is therefore most suitable for research on bricolage practices, as our objective is to understand the social complexity of forest use. To study practices of bricolage, the researcher must locate the interface of institutions and actors that is the critical intersection where changes are likely to be located (Long 2001; Cleaver 2002). It is at this intersection that bricolage practices can be found. This intersection is most visible where and when local traditions and norms are challenged by newly introduced institutions. Research on bricolage practices thus requires an understanding of existing institutions and needs to follow the introduction of new institutions. The researcher will notice the bricolage practices in everyday situations, activities and sayings. This implies that bricolage researchers need to be guided by a hunch, a feeling of being on to something, and to explore this without worrying about narrow and pre-drafted criteria for research.

The three studies drawn on in this chapter were therefore carried out by means of ethnographic fieldwork with in-depth case studies. These in-depth studies involved long sojourns in the field. To ensure comprehensive descriptions, data was collected by a combination of extensive interviews and participant observation. The examples of bricolage practices in this chapter are based on information gathered under different research projects in different countries. The case in Papua New Guinea is an example of an ICDP framework in which an ecotourism project was introduced to a local community in the Lakekamu Basin. This research entailed spending eight months in the field in 1999 and 2000 (Kalwij and de Koning 2000). The Bolivian case is based on PhD research projects conducted 2003–2009 in the lowlands of Bolivia on community forestry and local forest use (Benneker 2008). The case in the DRC is based on the analysis of several studies by university staff and students, government officials and NGOs of artisanal timber logging in Oriental province in the northeast of the country. The results of these studies are to be published in a book (see Benneker et al. 2012).

3.5 Forest Conservation and Development in Papua New Guinea

Early 1990, two NGOs introduced the idea of an ecotourism project to a local community in the Lakekamu Basin: a vast area (2,500 km^2) of lowland rainforest. As the area was relatively uninhabited, this project mainly dealt with four, hamlets clustered around an airstrip. The three aims of this project were: first of all, to conserve forested area under the Conservation Areas Act of Papua New Guinea; second, to provide inhabitants with an alternative source of income though ecotourism; third, to establish a local biodiversity research institute and a nature reserve. This combination of conservation and local economic development was then known as ICDPs: Integrated Conservation and Development Projects.

Initially, the ecotourism project was met with enthusiasm and great interest by the local community, as they welcomed this alternative potential source of income. After the kick-off, the villagers quickly built a guesthouse near the airstrip. They appointed and instructed guides to lead future tourists around. The airstrip was cleaned and the villagers expectantly awaited the tourists. But none came. The Lakekamu Basin is very difficult for outsiders to reach and there were no facilities such as running water or electricity. As time passed, the guesthouse was used only by the occasional researcher or visiting family and friends. In other words, hardly any income was generated through ecotourism. As the guesthouse stood in someone's garden, the little income it generated went straight to the owner of that garden and was not shared. This went against the ideals behind ICDPs, namely that communities as a whole—not just one or two individuals—would be offered an alternative income. The NGOs reacted by trying to reunite the inhabitants by organising meetings and workshops on local organisation.

When the local people found out that there was no income to be made from the project and that possible future income needed to be shared by everybody, they started to criticise the project. Through gossiping and naming names, the villagers complained about the project to each other. Suddenly, field officers of the NGOs were linked to stories about crime or alcoholism. However, these criticisms were hidden and not openly expressed to the field officers. After a while, not only field officers were blamed but also other villagers. For example, the owner of the guesthouse was portrayed as too greedy and certain other villagers as simply too lazy to make the project work. Slowly and steadily, but unknown to the NGOs, discussions became heated. On the surface, it appeared that the villagers still supported the project as they appeared to remain interested in ecotourism and conservation. Consequently, the NGOs continued their work—oblivious of what was actually going on—and started to discuss the possibility of establishing a nature reserve in the Lakekamu Basin. The local people responded to these discussions by participating in meetings on the location of this reserve and maps of the area were drawn to further facilitate this discussion.

Unexpectedly, the meetings aimed to define the location of the nature reserve turned into heated discussions about access to land and landownership. What happened was

that the villagers tried to use the ecotourism project and the plans to conserve the Lakekamu Basin for completely different purposes than the NGOs had intended. The project was designed to create awareness, stimulate participation, and strengthen the local organisation in charge of conservation activities. However, it misjudged the local dynamics and socio-cultural context. Whereas the NGOs assumed they were dealing with a homogenous community, the four hamlets actually represented four different social-cultural groups—clans—engaged in long-lasting disputes and feuds on customary land boundaries. The NGOs found themselves in the middle of a tug-of-war between the four clans.

The establishment of a nature reserve through the Conservation Areas Act provided an almost perfect mechanism for all clans to make formal claims to these disputed areas of land. As land titles were customary and had never been put on paper, the clans were eager to have any piece of paper drawn up by an outsider that would clarify land rights—even if that paper was merely a hand-drawn map used by the NGOs to facilitate the discussions on the location of the nature reserve. It was generally believed that the map chosen by the NGO would settle the land conflict once and for all. This was an important issue, as the clan that was able to make that claim on land would then certainly increase their authority over others. The issue of authority was of particular importance for them, as these four groups shared a long history of disputed land titles and access. Furthermore, it would add more weight to their tradition of settling these disputes through warfare.

The initial interest in the economic opportunities offered by the project was genuine. Livelihood opportunities were limited in this remote area and people felt the need to have a cash income. When ecotourism proved to not bring in any cash, people reverted to an already existing way of making money that the NGOs had overlooked: alluvial gold mining. Gold mining added additional pressure on the existing disputes over land boundaries, as land ownership was important to define which river belonged to whom and who had access to which gold. After a few years of trying, and weary of the on-going disputes, the NGOs left the Lakekamu Basin without having achieved any success: the nature reserve had not been created and ecotourism had never got going.

The ecotourism/conservation project was met by strategic bricolage practices of local actors. In these practices, the objectives of the ecotourism project and legislation on conservation were met with local practices of reshaping that entailed gossiping, play-acting and even faking interest. By pretending to be very conservation-minded, local actors conned the NGOs into believing that the project was a success—until these NGOs discovered the traditional and economic factors that were playing a role. In this area, the issue of power through landownership has always been important. For the local actors, land ownership has traditionally been considered a yardstick of power: the more land you own, the more powerful you are. Clan leaders were considered to be the ‘fathers of the land’: the ultimate landowners who then subdivided the area among the clan members. Land ownership was also of economic value, especially as there was gold to be found in rivers. Therefore, making claims on the land was vital. Here, map drawing was important, as these maps became ‘proof’ for land claims: putting something down

on paper, thereby creating a document, increased the importance of land claims. The problem in this area was that the land claims of the different groups overlapped. Traditionally, this would probably have been solved through warfare, but the NGO presence, their plans, and the Conservation Areas Act suddenly provided the landowners with a legal and less drastic tool. Very creatively, the inhabitants tried to make use of this tool to pursue their objectives.

The case shows that the introduced institutions of the ICDP did not achieve their original objectives of conservation and reduction of poverty. Instead, they were strategically used in the pursuit of other, internal objectives based on a local logic of practice. This logic consisted of a combination of economic motivations (survival strategies), embedded institutions (customary land claims) and traditional power. Interestingly, different identities were drawn upon to embed certain institutional elements that were considered useful. First, villagers drew on their identity as forest conservationists, an image of them as 'green people', to lead the NGOs into believing they were interested. During the project, the traditional identity as landowners situated in a culture of warfare surfaced. In this example, the bricolage practices were very colourful; they were a performance in which the community pretended to have a green image whereas in fact they had a different agenda. The detail in which this performance was presented was intriguing, as the inhabitants of the Lakekamu Basin were able to fool the frequently visiting field officers for years. The ecotourism project in the Lakekamu Basin failed to meet its objectives because the logic of practice proved to be stronger than the intervention. This was so because the local actors were deeply situated in their social norms, traditional beliefs and social networks. By following the introduced institutions, local people would 'run the risk' of losing land, losing authority or social relationships, and losing access to gold. The institutional logic of the project—based on conservation through collective income generation—did not take account of this logic of practice and failed to change it.

3.6 Logging Concessions and Indigenous Territory in Bolivia

Artisanal or small-scale logging has been an important income-generating activity in all relatively easy accessible forest areas of Bolivia for decades. Artisanal logging—timber logging in which the log is processed with a chainsaw in the forest, to facilitate timber extraction from the forest—used to be prohibited. In 1996, two institutional rules were introduced to local communities in Bolivia: a new Forestry Law and the Land Reform Law. The 1996 Forestry Law recognised the existence of the small-scale artisanal loggers and proposed to give them formal access rights to the forest. Artisanal loggers were requested to organise themselves in local social associations through which they would be able to request a municipal logging concession and engage in logging in a legal and sustainable manner. In the same year, the 1996 Land Reform Law acknowledged the rights of indigenous people to formally claim land rights over the areas they traditionally occupy. Most indigenous organisations formulated land claims, and the government

officially recognised these claims and prohibited all land transaction in the recognised areas whilst formalising the claims. The 1996 Land Reform Law also ensured indigenous people had exclusive forest user rights in their territories, which means that no other actors may have forest user rights in these territories.

In the north of the department of La Paz in Bolivia, an indigenous organisation *Indigena*[1] used the Land Reform Law to claim formal land rights over their traditional territory. They thereby also secured exclusive forest user rights over the forest resources in this area. At the same time, a group of artisanal loggers living in the same area organised themselves into an association and requested a municipal forest concession under the provisions of the Forest Law. The association of artisanal loggers submitted their demand for a municipal logging concession, and to speed up the process conducted a forest inventory and drew up a forest management plan in anticipation of the formal approval of the concession. The targeted forest area, however, turned out to be located in the indigenous territory claimed by *Indigena* and could not be given as a concession to the association of artisanal loggers. The overlapping claim on the forest set off different reactions by both groups.

First, the association of loggers decided to change its legal identity from 'association of artisanal loggers' into 'indigenous community', as most of the members of the association were of indigenous descent anyway. This formal change in identity of the association functioned well, and the newly established 'indigenous community' managed to get access to exactly that same forest area they had previously demanded as a municipal concession. In this way, the artisanal loggers did not lose all the investments they had made in the forest inventory and forest management plan. Second, the indigenous organisation *Indigena* started to collaborate with the artisanal loggers and did not oppose the overlapping land claims. *Indigena* rather encouraged the association to legally engage in forest management and timber exploitation. *Indigena* did demand that the association make some changes in the list of members before switching its identity to 'indigenous community', however: all non-indigenous members who did not actually live in the region (i.e. truck owners, timber traders) had to give up their membership.

However, *Indigena* was assisted by an NGO in the formulation and submission of its land claims under the Land Reform Law. This NGO opposed the increase in logging activities in the indigenous territory and also resisted the presence of non-indigenous members in the newly established 'indigenous community'. The precepts of the NGO were that the indigenous population should engage in forest management activities collectively, share all the benefits, engage in conservation practices rather than logging, and exclude all non-indigenous people from benefiting from 'indigenous' resources. These institutional norms of the NGO were implicitly connected to the Land Reform Law and therefore also introduced to the indigenous communities.

[1] A fictitious name.

Although *Indigena* did not see any problems with the logging association, they did recognise the importance of their indigenous identity as a means to get their land claims formalised. As they did not want to lose the NGO's support in this matter, they continued to publicly articulate their indigenous identity in order to strengthen land claims, and to appeal to the concept of 'noble savage'. They portrayed themselves as the indigenes the NGO wanted them to be, in favour of forest conservation, communal forest use and sharing benefits equally. However, at the same time they continued their activities with the logging associations and welcomed other indigenous communities in forest management and timber logging as well.

The way these events unfolded—the collaboration between *Indigena* and the association, and the collaboration of *Indigena* with the NGO—can be explained by taking into account the institutions embedded in practice and the practical considerations of the members of *Indigena.* The indigenes argued that those who work hard to get something have the right to benefit from it. Therefore, it was commonly regarded as appropriate that the artisanal loggers were welcome. In addition, the different identities of the artisanal loggers and indigenes as entrenched in the two laws were largely illusory: most artisanal loggers were also indigenes and both groups of people were equally involved in artisanal logging. Moreover, the involvement of the indigenous population in logging activities had been a reality for decades: logging was believed to be part of the traditional livelihood. Finally, the relation between the indigenous population and the logging service providers was strong, and had for decades enabled people to gain money from timber sales. Excluding logging from the artisanal loggers would significantly impact on the logging activities of the indigenous as well. The apparently surprising shift from association to indigenous community was thus merely practical. The continued collaboration with the NGO and taking an ideological stand were also practical considerations: the people did not want to lose the assistance of the NGO in their land claims.

In conclusion, the La Paz case on logging concessions in indigenous territory showed that the introduced institutions—the Land Reform Law and the Forest Law—based the allocation of land and forest user rights on types of forest users defined in terms of both ethnicity and occupation. People were considered to be either indigenes or loggers. In practice, the distinction between these groups was artificial and led to practices of bricolage. This explains why the *Indigena* organisation did not deem it necessary to exclude all non-indigenous inhabitants from the region from benefiting from the forest resources in their territory. As the example showed, the inhabitants of the *Indigena* territory could easily shift from their identity as artisanal loggers to their identity as indigenous people in order to claim user rights over a same patch of forest. Furthermore, the indigenous groups aligned with the land reform law and norms of the facilitating NGO for the sake of claiming, defending, and strengthening their rights, but seemed to become more pragmatic when constructing local arrangements for forest use. They did not consider it necessary to strictly follow the 'discourse' of the noble savage who engages in conserving activities only. Furthermore, the indigenous inhabitants

were also situated in a well-established, traditional way of using the forests, lasting social relationships between artisanal loggers and indigenous communities, and local pragmatic norms and beliefs. Consequently, the introduced institutions were thus met by this logic of practice. The final result is a patchwork of a variety of rules, such as Forest Law, and Land and Reform Law (which are different legal instruments), local social forest associations and indigenous forest use, and of NGO norms, and the embedded logging practices in the lowlands of Bolivia.

3.7 Issuing Logging Permits in the DRC

In the DRC, the 2002 Forest Code and the 2008 decentralisation law gives provincial governments more say about artisanal logging activities in their regions. Artisanal logging involves the logging and processing of trees in the forest by means of a pitsaw or chainsaw. Under these newly introduced regulations, the provincial governor has the power to accredit loggers and to issue them with artisanal logging permits for 50 hectares of forest. Furthermore, the national Ministry of Environment, Nature Conservation and Tourism (MECNT) is supposed to register all logging permits issued in the country but has no competency to issue artisanal logging permits itself.

Every year, the MECNT draws up a list of artisanal logging permits issued in the country. The list of small-scale logging permits for 2010 does not feature a single logging permit issued in Oriental province (northeast DRC). In this region, however, artisanal logging is a major economic activity. In Oriental province, loggers supply timber not only to the local markets but also regional markets that link the DRC with Uganda, Rwanda and Kenya (Benneker et al. 2012). Despite what the MECNT list suggests, most loggers do operate with some kind of logging permit. Logging is highly lucrative and state officials are very interested in issuing these permits, either formally or informally. All kinds of permits are issued in return for payment. For example, logging permits have been issued by the MECNT, even though it is not authorised to do so. Other logging permits allow portable sawmills to be used, although legally, only pitsaws and chainsaws are allowed. Also, logging permits are ‘inherited’ by one person from another. Most of these ‘permits’ are not issued by the governor, nor are the loggers accredited by the governor. The permits are often simple receipts showing that the loggers have paid certain fees or taxes in order to log a certain volume of timber or to log in a certain forest area. These documents are nevertheless accepted as valid by loggers, timber traders and the government officials who control timber transport. The issuing of timber permits in Oriental province has thus become a dynamic process characterised by locally embedded regulations and norms and a great interplay between loggers and state officials.

For a group of loggers in Mambasa in Oriental province, this means that they have to respond to introduced institutions that have already been reshaped by state officials. Formal logging permits are inaccessible to most of these loggers and they

have to navigate their way through a jungle of informal permits. Some loggers who are influential at the provincial level have received formal permits directly from the governor. Other less powerful loggers have only been able to negotiate permits from a locally based officer that allow them to log a limited timber volume. At least six different levels of government agencies have been identified that issue 'permits' and they each seem to serve a specific type of logger. Some individual loggers have fallen out of grace due to personal or family disputes or for being too mean. These loggers have been unable to respond to the multiple informal 'requirements' and have no access to logging permits. They specialise in avoidance strategies: they log in isolated places, sell timber cheaply in the forest or on the roadside to avoid controls at road blocks, avoid the intensively controlled harbours, concentrate on economically uninteresting timber species, etc.

The artisanal loggers in Mambasa have devised certain ways of dealing with this blurred mix of newly introduced and locally embedded institutions. In response to the multiple local rules surrounding the issuing of permits they used an old law—the 1949 colonial law oriented at industrial loggers only and that had fallen into disuse—to obtain a logging permit. In addition, they also turned to powerful traditional chiefs to ensure their support during the negotiations with government officials. The current Forest Code obliges the loggers to negotiate with the chiefs and then convert their permission into actual logging permits. Certain loggers make use of the military power of the Congolese army or rebel groups in order to avoid the need of having logging permits altogether. Lastly, some of the loggers organise themselves in associations to be accredited as loggers collectively and then several loggers share a single logging permit, which—strictly speaking—is illegal. These associations manage to negotiate the informal fees through their contact with the governor, who is to a certain extent able to control the government services' harassment of the loggers.

The case of logging permits in the DRC is an example of what happens when institutions are reshaped even before they are introduced to local communities. A report by Global Witness (2007) mentions multiple reasons why this has happened in the DRC; these include the absence of a provision in the introduced institutions of how to become accredited as a logger—which left accreditation to the discretion of the governor—and the absence of a definition of the type of forest in which artisanal loggers may operate. These institutional voids and gaps leave not only the state officials but also the loggers with room for manoeuvre. The loggers respond to this situation by making use of their position in the economy of Oriental province and the local institutions that are embedded in practice. Artisanal logging is highly lucrative and regarded by state officials as more important that sustainable forest use and conservation. Moreover, artisanal logging has always been the only type of logging providing timber to the local markets, as industrial logging companies export all the timber they log. In addition, artisanal logging is believed to be part of the traditional livelihood in Oriental province. And finally, the presence of traditional chiefs as strong negotiators in the issuing of permits is another important aspect in the bricolage practices of loggers. Loggers make use of this traditional power to strengthen their logging rights.

The example of issuing logging permits in the DRC is an example of bricolage upon bricolage. The introduced institutions—the 2002 Forest Code and the law on decentralisation—aimed to better organise one of the main economic activities in the Oriental province of the DRC: artisanal logging. In reality, these regulations had been reshaped by state officials before they arrived at the local level. State officials were interested in issuing informal logging permits, as this gave them a share of the money being made from logging. The result was an unusual situation in which these introduced but highly informal institutions were met by a local logic of practice. This logic of practice constituted traditional beliefs, social relationships and economic motives. Artisanal logging is a traditional way of logging in Oriental province and is entwined with customary land claims and traditional chiefs. Furthermore, artisanal loggers are not just 'loggers', they are situated in a much wider network of relationships with government officials, timber traders, chiefs, or the army. The loggers drew on these aspects to negotiate their logging permits. The result is that the introduced institutions did not lead to a better organisation in the issuing of logging permits. On the contrary, the institutional voids and gaps that existed in these introduced institutions were met and filled in by logics of practice, not only by the loggers, but also by the state officials.

3.8 Conclusions

This chapter started out by stating that research on institutions in local forestry has often focussed on designing and introducing optimal institutions. When these perspectives have been taken, institutions and their working have been analysed in terms of output, efficacy, efficiency and appropriateness. The perspectives depart from the assumption that optimally designed institutions can steer behaviour and imply that actors are rational, recognise the benefits of these institutions and will act according to its rules to obtain the benefits. However, these perspectives do not sufficiently explain why the introduction of designed institutions leads to different outcomes. By embracing a critical institutional approach and using the concept of bricolage practices, this chapter has argued that a focus on actors and their practices provides a more accurate account of what really happens when institutions are introduced to local communities. As shown in the cases, introduced institutions have a hard time influencing the behaviour of local actors. Actors' behaviour is situated in and follows a logic of practice. Much of the impact of the institutions thus depends on these local actors or bricoleurs and the way they reshape introduced institutions.

The case studies in this chapter have shown that local actors deal with introduced institutions by creating different patchworks of institutions in which emotional, moral, or social rationalities as well as economic rationalities play a role, in order to ensure a social applicability (Koning and Cleaver 2012). The heated arguments about land titles and the gossiping behind the backs of the field officers in the Papua New Guinea case showed that emotions were running high and that people were led not

only by rational motives but were also situated in their traditional culture. Instead of just adopting the principles of the ecotourism project, the local community tried to use these principles in order to pursue their own objective of making a stronger claim to the land. The Bolivian example on logging concessions describes the role of social networks when explaining why two types of land claims did not lead to a conflict. Social networks blurred the distinction between the two groups making that claim. As the introduced forest regulations made that artificial distinction, they were subsequently reshaped. The example from the DRC also shows that in the absence of well-functioning institutions, behaviour is situated in commonly accepted and well-established informal practices of issuing timber permits.

Bricolage practices are mediators between introduced institutions and the existing logic of practice. They enable situated local actors to piece together different institutional elements. This piecing together can be a very conscious process in which actors strategically select institutional elements that are useful. The example of Papua New Guinea in which the local exploited the idea of ecotourism in order to advance their claims to land illustrates this well. Bricolage practices can also be much more gradual and lead to coexisting and intertwined institutional frameworks for the same forest. The example of logging concessions in Bolivia showed that land claims made for forest management in an already claimed indigenous territory did not lead to a dispute over land. Rather, artisanal loggers were allowed to log in that area, as the indigenes saw artisanal logging as an indispensable and commonly accepted way of life. It did not cause a shockwave of events but simply grew to be that way. In the DRC example, the bricolage practices of loggers were very automatic responses to an institutional framework that had already been reshaped. In the DRC, bricolage practices were a completely embedded fact of life. The bricolage practices in the examples can thus be very conscious practices (as in the example from Papua New Guinea), unconscious (as in the example from the DRC), or somewhere in between (as in the Bolivian case). Conscious practices of bricolage take place when the introduced institution is perceived as too different from embedded institutions and the logic of practice. In unconscious bricolage practices, the introduced institutions are not as distinct or different. These practices can lead to a partial adoption of or compliance with introduced institutions, or to the introduced institutions being rejected. Whatever the outcome, local actors reshape introduced institutions through bricolage in such a way that they 'fit' the local rules, norms, and beliefs. That is to say that even when accepted, introduced intuitions follow a logic of practice, rather than an institutional logic.

This chapter shows that bricolage practices should not necessarily be perceived as negative. Actually, introduced institutions emerge through practices of bricolage. The examples show that conscious practices of bricolage can lead to an embedding of introduced institutions. This was particularly visible in the Bolivian case. In the DRC, where bricolage practices were less conscious, introduced institutions did not have an effect and a continuation of practice was observed. Therefore, introduced institutions need to be strong and actively introduced, in order to elicit conscious bricolage and creativity. Ultimately, the result of bricolage practices depends greatly on their connection or 'fit' with the existing logic of practice. This was seen in the

Papua New Guinea case, in which strong and actively introduced institutions in the end failed to connect to the logic of practice.

The concept of bricolage practices ascribes an important role to local actors, or bricoleurs. Without bricoleurs, introduced institutions cannot be effective or successful. Here lies the main difference with the institutional logic that allocates more attention to structural influences consciously chosen by actors. This chapter argues for a logic of practice in which the behaviour of actors follows certain contingent principles and does so mostly unconsciously. This has various implications for introduced institutions. First, introduced institutions need bricolage to emerge and exist at the local level. Second, introduced institutions need to relate to the local logic of practice in order to have any effect on behaviour. Even though the selected cases were chosen on the availability of data and on the fact that they are clear examples of bricolage practices, they do offer us insights in the practices of bricoleurs in the Global South. In addition, it also leads us to thinking that practices of institutional bricolage can happen in other places in the Global South and Global North as well and that we should not act naively towards them.

References

Arnold JEM (2001) Forests and people: 25 years of community forestry. FAO, Rome

Benneker C (2008) Dealing with the state, the market and NGOs: the impact of institutions on the constitution and performance of community forest enterprises (CFE) in the lowlands of Bolivia. Doctoral thesis, Wageningen University, Wageningen

Benneker C, Assumani DM, Maindo A, Kimbwani G, Bola Mbele F, Lescuyer G, Esuka JC, Kasongo E, Begaa S (2012) Le bois à l'ordre du jour. Exploitation de bois d'œuvre en RDC secteur porteur d'espoir pour le développement des petites et moyennes entreprises. Tropenbos, Kisangani

Bevir M (2005) New labour: a critique. Routledge, London

Bourdieu P (1977) Outline of a theory of practice. Cambridge University Press, Cambridge

Cleaver F (2001) Institutional bricolage, conflict and cooperation in Usangu, Tanzania. IDS Bull 32(4):26–35

Cleaver F (2002) Reinventing institutions: bricolage and the social embeddedness of natural resource management. Eur J Dev Res 14(2):11–30

Cleaver F (2011) Development through bricolage: institutions and natural resource management. Earthscan, London

de Koning J (2011) Reshaping institutions—bricolage processes in smallholder forestry in the Amazon. Doctoral thesis, Wageningen University, Wageningen

de Koning J, Cleaver F (2012) Critical institutional thinking in community forestry—setting out an agenda for future research. In: Arts B, van Bommel S, van Ros-Tonen M, Verschoor G (eds) Forest people interfaces. Wageningen Academic Publishers, Wageningen

Galvan D (1997) The market meets scared fire: land pawning as institutional syncretism in inter-war Senegal. Afr Econ Hist (25): 9–41

Giddens A (1984) The constitution of society: outline of the theory of structuration. Polity Press, Cambridge

Hall PA, Taylor RCR (1996) Political science and the three new institutionalisms. Polit Stud 44(5):936–357

Hughes R, Flintan F (2001) Integrating conservation and development experience: a review and bibliography of the ICDP literature. International Institute for Environment and Development, London

Kaimowitz D (2008) The prospects for reduced emissions from deforestation and degradation (REDD) in Mesoamerica. Int For Rev 10(3):485–495
Kalwij JJ, de Koning J (2000) Conservation in competition. Master thesis, Wageningen University, Wageningen
Karky BS, Skutsch M (2010) The cost of carbon abatement through community forest management in Nepal Himalaya. Ecol Econ 93(3):666–672
Lanzara GF (1999) Why it is so hard to build institutions. Desarrollo Economico-Revista De Cienc Sociales 38(152):925–952
Leach M, Mearns R, Scoones I (1999) Environmental entitlements: dynamics and institutions in community-based natural resource management. World Dev 27(2):225–247
Long N (2001) Development sociology: actor perspectives. Routledge, London
Long N, Long A (eds) (1992) Battlefields of knowledge: the interlocking of theory and practice in social research and development. Routledge, London
Lowndes V (2002) Institutionalism. In: Marsh D, Stoker G (eds) Theory and methods in political science. Palgrave, London
Lund C (2006) Twilight institutions: public authority and local politics in Africa. Dev Change 37(4):685–705
Mehta L, Leach M, Scoones I (2001) Editorial: environmental governance in an uncertain world. IDS Bull 32(4):1–9
North DC (1990) Institutions, institutional change and economic performance. Cambridge University Press, Cambridge
Nuijten M (1992) Local organization as organising practices—rethinking rural institutions. In: Long N, Long A (eds) Battlefields of knowledge: the interlocking of theory and practice in social research and development. Routledge, London
Ostrom E (1990) Governing the commons: the evolution of institutions for collective action. Cambridge University Press, Cambridge
Ostrom E (1991) Managing our common resources—introduction. Nat Resour 27(4):2–3
Paavola J (2007) Institutions and environmental governance: a reconceptualization. Ecol Econ 63(1):93–103
Rametsteiner E, Simula M (2003) Forest certification–an instrument to promote sustainable forest management? J Environ Manage 67(1):87–98
Ribot JC, Lund JF, Treue T (2010) Democratic decentralization in sub-saharan Africa: its contribution to forest management, livelihoods, and enfranchisement. Environ Conserv 37(1):35–44
Ritchie J, Lewis J (2003) Qualitative research practice: a guide for social science students and researchers. Sage Publications, London
Ros-Tonen MAF, van Andel T, Morsello C, Otsuki K, Rosendo S, Scholz I (2008) Forest-related partnerships in Brazilian Amazonia: there is more to sustainable forest management than reduced impact logging. For Ecol Manage 256(7):1482–1497
Sandberg J, Tsoukas H (2011) Grasping the logic of practice: theorizing through practical rationality. Acad Manag Rev 36(2):338–360
Sehring J (2009) Path dependencies and institutional bricolage in post-soviet water governance. Water Altern 2(1):61–81
Shepsle KA, Bonchek MS (1997) Analyzing politics: rationality, behavior, and institutions. W.W. Norton & Company Inc., New York
Thornton P, Ocasio W (2008) Institutional logics. In: Greewood R, Oliver C, Suddaby R, Salin-Anderson K (eds) (2000) Handbook of organizational institutionalism. Sage, Thousand Oaks
Witness G (2007) Rapport final de missions de contrôle dans le cadre de l'étude d'un Observateur Indépendant en appui au contrôle forestier en RDC, 19 juillet—11 octobre 2007. Global Witness, London
Worah S (2000) International History of ICDPs. In: UNDP (2000) Proceedings of integrated conservation and development projects lessons learned workshop, 12–13 June 2000, UNDP/World Bank/WWF, Hanoi

Chapter 4
What Institutions Do: Grasping Participatory Practices in the Water Framework Directive

Jelle Behagel and Sonja van der Arend

4.1 Introduction

Under the Water Framework Directive (WFD), which came into force in 2000, EU member states are required to adapt the institutions that organise their water management in accordance with the model of integrated river basin management (Biswas 2004; Rauschmayer et al. 2009). The WFD introduces river basins as the primary unit of management through a number of formal requirements, such as the drafting and reporting of River Basin Management Plans (RBMPs). In the process in which these RBMPs are drafted, informing and consulting the general public is legally required; whereas active involvement of interested parties is to be encouraged. The WFD—in preamble 14—states that public participation is a key factor for successful implementation:

> The success of this Directive relies on close cooperation and coherent action at Community, Member State and local level as well as on information, consultation and involvement of the public, including users. (EC 2000, preamble 14.)

Consequently, article 14 of the directive calls for the active participation of societal groups:

> Member States shall encourage the active involvement of all interested parties in the implementation of this Directive, in particular in the production, review and updating of the river basin management plans. (EC 2000, article 14.)

Although this is not a *de jure* requirement to organise participation—one can imagine ways of encouraging participation without actually organising it—it is so *de facto* (Rauschmayer et al. 2009), specifically in combination with the reporting requirements stipulated by the WFD. Indeed, in common with most member states, the Netherlands have taken article 14 of the WFD as a strong incentive to design and organise participation: In the years leading up to the publication of the RBMPs in 2010, Dutch government officials have created or modified a considerable

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number of participatory institutions in order that they might play a key role in the process of implementing the WFD. During an interview conducted by the authors, the national coordinator of the implementation of the WFD in the Netherlands at the time commented on his own role as follows:

> Every year we have made governmental notes built up by following the line: first, societal groups, then the bureaucratic considerations, and then the political arena. We have organised everything: [the national consultation body], three times a year the sounding boards in the [sub-river basins], and below that the area based processes.
>
> This structure has been fully directed so that it has become unavoidable […] for all the groups to be confronted with [public participation]. We fully staged that in order to drag everyone into the process.

The quote shows that participation had been deliberatively designed to actively involve all societal groups and that considerable effort was made to organise formal participatory processes.

Even so, the organisation of public participation in the WFD has not been viewed as particularly successful by everyone in the Netherlands. An evaluation of the implementation of the WFD in the Netherlands carried out by Delft University of Technology (Ten Heuvelhof et al. 2010) revealed that officials and civil servants were generally positive and believed that societal groups had been listened to sufficiently, whereas most societal groups did not (Ten Heuvelhof et al. 2010, p. 78). Several societal groups (e.g. those for nature conservation, recreation, and drinking water) have felt frustrated with what the participatory institutions offered and sometimes dropped out of participatory processes. This divergence of opinion and experience is remarkable given the effort invested in organising participation. Other than being remarkable, it also raises the issue of legitimacy. When societal groups become frustrated with participatory institutions and do not feel listened to, this can have detrimental effects on democratic legitimacy (Abelson et al. 2003). Furthermore, when societal groups pursue venues outside of formally organized participatory institutions to accomplish their goals, it can undermine the authority of these institutions (Lowndes et al. 2001).

The diverging valuations of processes of participation led us to question to what extent it is possible to design and organise participation that is not only successful in the eyes of organisers, but is also legitimate in the eyes of participants. Research on participation in water management by Cleaver and Franks (2005) has shown that designers and organisers alike often have an unrealistically high level of trust in the efficacy of participatory institutions (see also De Koning and Benneker, this volume). Moreover, institutional approaches to participation can be criticised for a failure to understand the social, cultural and political contexts in which participation takes place (Cleaver and Franks 2005; Fischer 2006). Accordingly, we set out to find out how the design and organisation of participation in response to the requirements set by the WFD affected participatory practices in water management in the Netherlands. To this end, we apply a practice based approach to the design and organisation of participation. We will focus on what participatory institutions do and how the established practices of participants resist being shaped. By drawing on practice theory, we conceptualise the introduction of new (participatory) institutions as more or less deliberate attempts to change different fields of

practice. The disparity that we encounter between the considerable effort invested in organising participation and the negative evaluation of a number of aspects of the resulting participatory processes by societal groups will be fleshed out by showing the tension that unfolds between purposefully designed participatory institutions and the established fields of practice in which participants are situated. We identify three fields of practice, which are (1) the public sphere, (2) the governance network, and (3) the economic sphere, and analyse how or to what extent practices were changed with the introduction of participatory institutions.

The chapter offers a reading of participatory institutions and practices in the context of the implementation of the WFD in the Netherlands at the levels of the nation, river basin, and region. In the following section, we will describe how we understand the linkages between institutions and practices in a practice based approach. Next, we apply this understanding to shed light on the case study that we carried out. The case study is confined to the Netherlands and spans the period from the adoption of the WFD in 2000 up until the publication of the RBMPs in 2010. It addresses both national and regional levels of public participation and was carried out with specific attention to participatory practices. That is to say that we did not follow formal events only, but also examined informal forms of participation. The case study draws on 23 qualitative open interviews conducted in 2008 and 2009, approximately one year after most regional processes had concluded and at the time when the RBMPs were drafted, of which some are cited in the text (see Annex 1). During the interviews the interviewees were asked to give their own historical account of the implementation of the WFD, occasionally being prompted with key events by the interviewer. In addition, the interviewees were asked to give their personal opinion on the implementation process. The interviewees were selected on the basis of their participation in organised participatory processes, presence in governance networks, and snowball sampling. The final section discusses the limits of institutional design. It does so both in terms of the possibility of achieving democratic and governance ambitions by deliberately introducing institutions, and in terms of the extent to which participants view participatory institutions as legitimate. We conclude by offering an answer to the question of whether it possible to 'grasp' participatory practices.

4.2 What Participatory Institutions Do

According to Goodin (1996), institutions serve as collective constraints for individual agents and groups who pursue their respective projects. In addition, institutions shape the patterns of human interactions and the results that individuals achieve (Ostrom 1992). Ostrom (idem) defines an institution as the set of rules that is followed by a set of individuals. These rules impact on incentives, which means that institutions operate in an indirect manner to achieve or frustrate outcomes. In other words, institutions are simultaneously enabling and constraining and are never directly concerned with the output of a project or a policy process, but rather with the practices in which these outputs come about. They work on these

practices by creating spaces where interactions take place and by setting the norms and rules of the game.

Designing new institutions for public participation entails the creation of new spaces where governmental and societal actors can meet (Cornwall and Coelho 2007) and the introduction of new roles (Rowe and Frewer 2005) that imply certain norms and rules of conduct. Thus, designing institutions for public participation entails two major elements: first, creating a participatory meeting place in space and time and establishing its boundaries (for instance, a series of workshops in a community centre); and second, setting up formal, generally accepted roles, norms, and rules of conduct within these boundaries (e.g. an independent chair, unanimous decision-making procedures, the type of stakeholders invited, certain methods for conflict resolution, etc.). However, as in liberal democracies governmental and societal actors usually already have spaces where they interact, and do so according to established norms and rules, participatory institutions do not so much create practices where formerly there were none, but instead can be considered to be an attempt to change existing practices. In order to understand what these attempts imply, we now describe in some detail how we conceptualise practice.

We understand a practice to be an ensemble of doings, sayings and things, situated in, and performative of, a specific field of activity. Such an ensemble has a logic of practice. When we use the term logic, we do not mean to say that such a practice fully conforms to a set of rules, but rather that 'practice has a logic which is not that of logic' (Bourdieu 1977, p. 109). A logic of practice is able to organise the doings and sayings of actors by means of a few generative principles (Bourdieu 1977). Such principles provide a common sense of how interactions take place (Blackmore 2010). As a logic of practice is defined by its practical relation to a situation, it is most often implicit. The situations that define a logic of practice do not occur at random, but are constituted in a field of practice. A field of practice, on an abstract level, is a system of positions and relationships among positions (Costa 2006). Concretely, actors and institutions occupy these positions by creating spaces, assuming roles, setting norms, and following rules. A logic of practice is implied in the relationships between these positions and cannot be reduced to one of them.

A field of practice and its logic unfold in time and space. In other words, actors and institutions are *entwined* in practice (Sandberg and Tsoukas 2011); they do not come into being separately, but emerge and become real in their mutual relationships (Giddens 1984). This gives practice a certain materiality or embodiment which 'tends to guarantee the "correctness" of practices and their constancy over time, more reliably than all formal rules and explicit norms' (Bourdieu 1990, p. 54, cited in Sandberg and Tsoukas 2011, p. 344). In other words, the spaces, roles, norms, and rules that make up a field of practice tend to fit the principles or logic of practice that govern the doing and sayings that make up a practice as such. What is correct in a practice is therefore not so much an issue of truth or the following of formal rules as it is the fit of a practical logic with the field of practice.

Given our understanding of practice, we view participatory institutions as a deliberate attempt to change the structure of positions in the field of practice with

the aim of introducing new principles or a logic of practice. By designing a space where participation take place, new situations are created that reorder the field of practice by creating new relationships between established positions (e.g. of state and civil society, or between business groups and NGOs). Moreover, the devising of roles, norms, and rules of conduct causes positions to shift or new positions to be created. When a field is reordered according to these new situations and positions, the result can be the emergence of new generative principles in the logic of practice. For example, some deliberative democrats seek to create 'ideal speech situations' through discursive designs that create the role of a facilitator who can mediate between actors and thereby change their relationships to one another (Dryzek 1987).

The field of practice in which actors are situated constitutes a meaningful, unfolding totality, and not a set of isolated and abstractly linked variables such as interests, rules, resources, incentives, or goals (Bourdieu 1990; Sandberg and Tsoukas 2011). That is to say that organisers and participants cannot be fully detached from the roles they play outside of participatory processes, nor can participatory institutions provide isolation from the wider fields of practice in which officials, civil servants, and participants are situated. Such fields of practice inevitably entail an uneven distribution of resources and a diversity of interests that are at odds with each other (Costa 2006). As such, a field of practice in which a logic of practice takes shape will necessarily be characterised by different and probably conflicting principles of action, as well as by power inequalities. Therefore, the idea of a universally applicable model of design is challenged by a practice based approach. The variability and dynamics of the fields of practice in which the design is introduced, and the inevitable shaping of this design in the field of practice make each participatory institution unique. Moreover, we see participatory institutions at work in different fields of practice simultaneously, as they cater for different goals.

We identify two main groups of goals of participatory institutions: democratic and instrumental. Democratic goals that are often ascribed to participation include public acceptance, empowerment, inclusion, consensus building, and deliberation (e.g. Beierle 1999; Rowe and Frewer 2000; Webler et al. 2001; Cooke and Cothari 2001; Innes and Booher 2004, amongst others). These goals are often linked to a specific field and logic of practice. They are aimed at extending and improving the public sphere. When we consider goals such as public acceptance and empowerment, then these can be understood to seek to extend the public sphere in the direction of (and sometimes at the cost of) government. Democratisation of the workplace, neighbourhoods, or the educational system are goals long held by participatory democrats (Arnstein 1969). Goals such as consensus building and deliberation are more aimed at improving or transforming the public sphere, by improving the quality of engagement and deliberation by the public (Fung 2003) and by having arguments take precedence over the positions of actors (Calhoun 1993). As such, democratic goals can be seen to direct the design of participatory institutions towards attempts to change the field and logic of practice in the public sphere.

The instrumental goals we identify entail the improvement of decisions and policies, policy efficiency and efficacy, and goal achievement (Lowndes et al. 2001;

Woltjer 2002). These goals direct participatory institutions more towards the role that they can play in strengthening or creating governance networks (Sørensen and Torfing 2005), in the wake of the shift from government to governance (Pierre 2000; Arts and Leroy 2006). They are thus aimed at extending and strengthening governance networks that take on functions that the state is no longer willing or able to take on by itself. The aim of instrumental goals of participation then is to change the role of societal actors from bystanders to active participants in policy making, and from those that are demanding action by the state to partners in implementation. Instrumental goals also include the goals of the participants: to promote their stakes and values given a limited amount of time and energy (van der Arend and Behagel 2011). Participants engage in participatory processes to achieve things that would be difficult or impossible to achieve through their private efforts (Fischer 2006). So they operate in an economic sphere, in addition to a public sphere and governance networks. We will describe the field and logic of practice of the public sphere, the governance network, and the economic sphere in more detail in the following section, and let them structure our subsequent analysis.

4.3 Fields and Logics of Practice

The first field of practice that participatory institutions can be seen to work in is the public sphere—the open, visible space of deliberation and meaning-making where interests and perspectives are articulated, exchanged and confronted, issues are put on the agenda, and public opinion somehow emerges. As a field of practice, the public sphere is characterised by voluntary relations based on shared convictions and habits. The fully established organisations and less organised movements in civil society are a crucial element in the ongoing process of group formation, association, and dissociation that is the public sphere. They often articulate interests, values, and viewpoints before these are explicitly expressed or consciously felt by those they seek to represent. Between stakeholder organisations a continuous game of relative positioning may be observed: an ongoing movement of associating and dissociating. Representative organisations engage in public opinion formation, disagreement, taking sides, forging coalitions without ever coalescing permanently with another organization, seeking centre stage for the interests represented, expanding the group they speak for, etc. All this is led by voluntary association, goal achievement, and public visibility as a key logic of practice.

A second field of practice in which participatory institutions are at work is that of the governance network. Unlike the relationships in the public sphere, relationships in policy networks are characterised by mutual dependencies, by sustained direct interaction between actors, and by a certain level of professionalism (van der Arend 2007). These relationships include lobbying, partnerships, and the pursuit of legal options. A central notion in governance thinking is to conceive of governance networks as foci for a new form of public management: network

management (Kickert et al. 1997). This managerial perspective is closely related to the notion of institutional design of participation. Both work from the assumption that it is possible and desirable to externally design and organise other people's practices. To design institutions for public participation means to create new formal places where governmental and societal actors can meet and where new principles of action (including implicit rules and norms) can be introduced.

A third field of practice is the economic sphere in which participants are situated. Societal groups are organisations that need to efficiently convert resources into results (Mayer 1991, p. 62). Accordingly, participants act according to economic principles of efficiency and scarcity. Participants have to negotiate salaries with their staff, hire affordable office space, choose strategically between their own multiple goals and possible courses of action, and secure their income. Different types of participants have diverging ways to acquire and reproduce the means necessary to represent and pursue their goals. Some stakeholder organisations are operated on the basis of voluntary or obligatory membership, others get the bulk of their income from government funding. In some organisations, most of the work is done by volunteers; others are mainly run by a professional staff. Such differences relate to diverging positions in the economic field, with specific advantages and flaws under specific circumstances.

4.4 The Practice of Participation in the WFD in the Netherlands

Below, we will show how the introduction of participatory institutions during the implementation of the WFD in the Netherlands worked on each of three fields and logics of practice described above. Our aim is not only to ascertain how successful participatory institutions were in changing the logic of practice according to one or more of the goals stated above, but also to provide insight into why participants often undervalued the legitimacy of these institutions. In Sect. 4.4.1 we describe how public participation was designed and organised for the implementation of the WFD in the Netherlands. We then move on to the practices of those who were expected to make use of the newly designed institutions as participants: the employees of NGOs and interest organisations with a stake in river basin management. We will show what the participatory institutions did in the three fields of practice in which these participants were situated. Section 4.4.2 describes how the participants are positioned in the public sphere as representatives of social interests, values, and groups. Section 4.4.3 shows that participants are situated in a governance network in which they engage into the practice of governance. Section 4.4.4 situates the participating organisations in an economic sphere. In each of these sections, the field of practice is described as an ensemble of spaces, roles, norms, and rules with an operational logic of practice. The impact of the participatory institutions on the order of the field and the logic of practice is analysed as it occurred during the implementation of the WFD up until the publication of the RBMPs in 2010.

4.4.1 The Design and Organisation of Public Participation in the WFD

Although the WFD encourages participation, it does not offer a set of prescribed measures to achieve or promote public participation, but only offers a limited set of design choices (Ker Rault and Jeffrey 2008). That is to say that there is no blueprint for the implementation of public participation. In general, the lack of detailed guidelines is inherent to the nature of framework directives, as it is the responsibility of EU member states to implement them. To stimulate active involvement, a number of official participatory institutions have been created in the Netherlands over the years. In 2004, a new structure for intergovernmental cooperation between different levels of government in the Netherlands on water policies was introduced, that mirrored the division of the sub-river basins.[1] It became the primary institutional context for the implementation of the WFD, with the similarly newly created 'Coordination Office of Dutch River Basins' (CSN) as its organisational hub. At this point, the department of Water Works at the ministry of Transport, Public Works and Water Management (V&W) began to put in place the formal organisation of active involvement in the implementation process at the national level. The main participatory institute at the national level was a deliberative body of societal groups (*Overlegorgaan Water en Noordzeeaangelegenheden* (OWN)), which was linked to the junior minister of V&W. The status of this body was to advise on general issues, based on consensus. The same societal groups were also invited to contribute their knowledge in thematic clusters within the structure for intergovernmental cooperation. The civil servants at the ministry did not design public participation at the regional level, as they had no wish to interfere in what they called 'the bottom–up process' of the WFD and the responsibilities and decisions of the lower tiers of government in the country (municipalities, provinces and regional water boards[2]).

Most local and regional governments at the sub-river basin level in the Netherlands began implementing the WFD in about 2005. The officials responsible in each of the seven sub-river basins devised similar structures. The main regional societal groups in a sub-river basin participated in the deliberative body of a sounding board that offered advice on general managerial issues. One level lower, and slightly later, the water boards all set up their own sounding boards, which consisted of societal groups. In 2006 and 2007, the water boards also organised so-called 'regional processes', to discuss and decide upon the regional goals and measures to be reported to the EC in the RBMPs. In total, there were around a 140 of these regional processes in the Netherlands. In most sub-river basins, the main actors to participate were the municipalities. In some cases, local and regional stakeholders were in the same committee as representatives of the lower tiers

[1] In the Netherlands, there are sub-river basins of four international river basins, the Rhine, the Meuse, the Scheldt, and the Ems. In total, seven sub-river basins exist in the Netherlands.

[2] Water boards (*waterschappen*) are sector-specific regional authorities that manage water quality and quantity. These authorities have the right to levy tax and have an elected board.

of government; other water boards organised separate sounding boards for societal groups.

The three levels at which formal public participation took place showed differences, as well as similarities. The differences between national, river basin, and regional level bodies are mainly in the topics discussed during meetings. At national level, there was scope to discuss a general view on the implementation of the WFD. OWN dealt with the overall progress of the implementation of the WFD and the associated legislation, general measures (such as the appointment of water bodies and the setting of ecological standards), and economic and societal costs. In turn, the sounding boards at sub-river basin level dealt with managerial issues, decisions, and reports. At the regional level of the water boards and the regional processes, participants were mostly involved in the planning of measures. At this level, measures for attaining water quality goals were discussed in terms of their feasibility, cost, desirability, and efficiency. The style of the design of the participatory processes was similar in the three levels of participation, but differed in the issues that were discussed. At all levels, the participants were generally 'the usual suspects': those societal groups that were mostly already taking part in water policy issues. Furthermore, all participatory bodies had an 'advisory' status, which is to say that decision-making power remained in hands of the respective water governors, such as the water boards, the provinces, and the junior minister of V&W. Advice from the national body (OWN) to the junior minister had to be consensual, which meant that all the parties represented in OWN had to agree. The sounding boards at the river basin level were mostly consultative. They were primarily designed to reflect and comment on management plans, and not so much to develop policy. At the regional level, the sounding boards and working groups at the level of the water boards and the 'regional processes' were strongly involved in the selection of water quality measures, although they had no formal decision-making power. The selection of measures was sometimes set up as a joint process, in which societal parties together with civil servants from the water boards and municipalities would identify a set of measures during a number of meetings. At other times, societal parties would work in separate sounding boards. Both types of meeting were usually heavily directed by civil servants from the water boards—who would be present in considerable numbers—or by independent consultancies, depending on the water board in question. Participation at all levels worked on the fields of practice in which the participants were situated, as we will now discuss.

4.4.2 Extending and Improving the Public Sphere?

Organised public participation requires the establishment and design of new public spaces, where new roles (including implicit rules and norms) can be introduced. In the spirit of Article 14 of the WFD, a new public sphere would help stakeholders to do their representational work: to promote the goals of their constituencies in the implementation of the WFD and the drawing up of RBMPs. This spirit may be interpreted in

several ways, such as to empower stakeholders and be inclusive, to promote cooperation between stakeholders, or to foster public deliberation on water quality and integrated river basin management. In the various sounding boards and workshops that formally took place in the process of implementing the WFD in the Netherlands according to these interpretations, a number of issues came up. In terms of empowerment, decision-making power was kept firmly in the hands of the formal authorities in the existing institutional structure: the national designers of participatory processes and their organisers were reluctant to give up their decision-making power. The organisation of participation led to a greater inclusion of societal groups in water policy, but the general public remained all but absent. Accordingly, when we conducted our interviews in 2008 and 2009, many respondents stated that in their view there was no real active involvement of interested parties (let alone of the public).

> Yes, participation in the WFD is threefold, isn't it? Informing the public takes place and so does consultation. But if you consider active involvement, then I still have to say: [Government officials] are not fulfilling that requirement. They do not give body to …the active involvement. (R1)

This representative of an environmental group did not feel empowered to influence decision-making. Interestingly, not all groups that participated considered this to be a problem: the agricultural and business groups in particular stated that they were content with an advisory role. In general, they were satisfied with how governmental authorities were handling the implementation of the WFD and considered themselves to be monitors of the process, rather than active participants. As such, they were comfortable with the position created for them. At regional level, greater participation was possible. The joint search for a programme of water quality measures that was organised by most water boards gave some power to societal organisations initially, albeit informally. Interviewees characterised some of these processes as a good way to secure their interests: they made sure that their interests were mentioned in management reports, and in some cases even wrote text for inclusion in reports. In addition, societal groups (the organisation for water recreation, HISWA, for instance) contributed actively and creatively to the selection of measures. However in most cases, the submitted texts and creative measures did not make it to the final documents:

> And then what happens? Then in the final documents that issue has been moved to the appendix. The whole recreational boating sector is no longer mentioned in the main document; it has been completely removed. (R2)

There were several reasons why the input of some interest groups did not make it to the final documents. In this specific example, it was a result of institutional boundaries between ministries. The ministry of V&W, which handled the WFD, was not allowed to make judgments about boating, as this was the domain of the Ministry of Agriculture, Nature and Food Safety. Other reasons to exclude measures at a higher level were costs and the fear of committing to measures vis-à-vis Brussels. This shows that not only participants but also officials were sometimes uneasy about the reordering of the field of practice by the organisation of

participation. Positions were held tight and leadership of decision-making processes was not relinquished. In such instances, the lack of formal decision-making power led to disappointment among societal groups and eventually reduced their involvement in the organised participatory processes. The principles of empowerment and decision-making based on arguments rather than positions were not shared by all the actors involved and meant different things to those who did adhere to these principles. The possibility for the principle of empowerment of stakeholders to become part of a logic of practice in the public sphere was thwarted by the lack of uptake of the outcomes of participatory processes in formal decision-making.

The principle of cooperation has not been given great attention in the design and organisation of the participation in the WFD. Nonetheless, some design choices have led to more cooperation. For instance, the fact that OWN could only give consensual advice obliged its constituent parties to come to a common understanding. Similarly, the joint search for a programme of measures led to a reordering of the field, in so far that societal groups needed to deal with each other and work together. In the Netherlands, most societal groups are on speaking terms and uphold a certain ethics of 'professionalism' (see Sect. 4.4.3), which means, *inter alia*, that they are transparent about their interests and the actions they take to pursue them. As such, increased cooperation can be explained by the strong institutional constraint that the demand of offering advice unanimously poses and the already existing principle of professionalism. However, the principle of cooperation that was part of the participatory processes did not always transfer successfully to the public sphere. For instance, after a programme of measures had been selected in a regional process and had to be made official by the water board and the province, the following happened:

> After [the selection of a programme of measures] everyone starts to shout and yell and everybody gets mad: nothing should happen in that nature area, LTO[3] and the farmers who live there say. And subsequently the water board says 'there is no popular support' and the province says 'there is no popular support'. Well, nothing happens then in the end. (R3)

The quote shows how a logic of practice was successfully changed in the practice of participation, but that it disintegrated—so to speak—immediately after the participatory process was over, when actors reverted to established principles of representing the interests of their constituencies. These principles proved to be more reliable than the principles that a participatory process could bring.

The degree of empowerment that participants experienced, their positions in the public sphere, and the way in which participants are accustomed to pursue their interests largely determined how at ease they felt with the positions offered by the newly designed participatory process, and this also influenced how willing they were to be part of such a process. Differences between participants can be ascribed to diverging interpretations of the spirit of active involvement, and also to how well the spaces and roles that participation offers match the field of practice in

[3] Dutch Federation for Agriculture and Horticulture (Land en Tuinbouw Organisatie).

which participants are situated. Sometimes, participants have the same expectations, and sufficient institutional restraints and incentives are put in place to reorder a field of practice to such an extent that its logic changes, as was the case with increased cooperation. But more often, the goal of extending and improving the public sphere through principles of empowerment and deliberation failed, as both governmental and societal actors felt more at ease interacting from their established positions. Participatory venues could change the field of practice temporarily, but could not be said to successfully transform the public sphere. In the entwinement of practice, the practices that constitute a public sphere depended not so much on design choices but rather on the pre-existing logic of practice.

4.4.3 Changing the Logic of the Governance Network

As actors and institutions are constituted only in the entwinement of practice, the very existence of stakeholders and representatives indicates that they already 'do and say' according to a logic of practice. This section illustrates how a logic of action in a governance network hindered the workings of the meeting places organised in the WFD. Despite their already overwhelming number, the formally designed participatory events were definitely not the only meeting places where governments and stakeholders discussed the new EU water policies and plans. The governance network in which decisions about the WFD are discussed and influenced was not as clearly demarcated to a specific time, place and sector as the institutional design of participation assumes. Although it had a certain unity, it was made up out of nested and overlapping networks that spread through time and place, and covered several policy fields. At regional level, the major, broader field of practice for our interviewees was the regional network where civic and governmental policy professionals discuss and negotiate planning issues in general; i.e. the entire range of policies regarding water, environment, spatial planning, nature, economic development, housing, agriculture, and so on. At national level, the network seemed slightly more confined to the separate policy issue of water, as water is more closely linked to a single ministry and field of expertise.

In the interviews on participatory practices, representatives of societal groups mentioned many other places where they tried to exert their influence on the WFD implementation. These places differed from the newly designed participatory places in that they were either informal, not clearly demarcated or not newly created, or all of the above. To most NGOs, some of these informal, blurred, and pre-existing places for participation were more important and more effective to further their goals than those formally designed for it. This employee of a regional nature organisation told us:

> We focus specifically on the people who hold the pens, the people who write these WFD plans. […] For instance at the water boards, in the end it is they who write the River Basin Management Plans and the Programmes of Measures. Well, we succeeded to contribute a lot to the Programme of Measures for the WFD. […] Like Natura 2000, the WFD is an

> enormous circus. [At the formal meetings] half the day is spent explaining the directive, because at each meeting there are always new people, time and again. So at one point we said: this is a waste of time, were not going there anymore. Because we just want to communicate our preferences directly. (R3)

In other words, the spaces for public participation and the roles such participation offered did not link up with the logic of practice in governance networks on how to influence policies and plans. Likewise, employees of societal groups used and expanded their contacts in the municipal councils, the water boards, and other groups, to influence the implementation of the WFD. Others worked directly with individual farmers to make covenants to carry out specific water quality measures on their own land. That is to say that these parties continued to perform the logic of practice that they were accustomed to.

The same set of key stakeholders and decision makers in a region or in a broad national policy field encountered each other and interacted frequently on many occasions, both formal and informal. One of our respondents related how people influence the political agenda informally and come to define formal policies:

> They meet at a party and tell each other: I have this problem, I am annoyed by that issue. And they pull out their diaries, and plan an informal meeting, like: we should discuss that issue one day. […] A small group of three, four, five people, key figures, meet each other two, three times at a social gathering. And two or three times they hear: I'm working on this issue, or I've got a problem with that issue too. And then, at some point they have the same sense of urgency, and they find a moment. And then it takes place not at a party, but in a meeting room. In the corridors [at the social gatherings, parties, etc.] they test the water [to find out] what the problems are. And when several organisations have a shared problem, then they start with informal meetings. […] And then they give it a name, like: we'll call it a covenant meeting. And sooner or later this word shows up in a newsletter, and government gets to know about it, and they pull up a chair as well. And that's how it gets a life of its own. And then at some stage it is official. Then it is a policy. (R4)

Certainly, this description of the policy process is not new. Policies have come into being like this for ages. That does not mean that the informal institutions in such networks are universally agreed upon or invariable. For instance, this same respondent said how much she welcomed the fact that the relationships in the networks in her region were slowly becoming less personal and more professional. In the words of Bourdieu, they were becoming 'objectified' (Bourdieu 1977, p. 187). With this picture of governance networks in mind, one comes to understand the limited efficacy of designing spaces for participation. What can be designed is formal meetings, where decisions are made public and official. In many ways, however, these decisions have only a limited impact on the logic of practice by which things are said and done.

The main thrust of instrumental goals of improving decision-making, policy efficiency, and goal achievement is for participatory institutions to introduce new roles for participants to become active in policy formulation and partners in the implementation of measures, thereby changing the logic of practice in that field. Accordingly, preventing other participatory activities was not an aim of the ministry of V&W either, as it explicitly stated that, next to the officially organized meetings at

the national level, "the NGOs involved were free to use other channels available to them to advocate their interests" (Ovaa and Ottow 2006, p. 8). Societal groups did indeed often act as active partners in governance, but according our respondents this was not so much the result of participatory institutions. Much more, it was an existing practice that was made up of roles, rules, and norms that could not easily be practised in participatory processes because of the alternating composition of parties that participated in and the largely informative set-up of the meeting. Nonetheless, the spaces for participation were conducive to increased and professionalised interaction between societal groups themselves and between them and government (national, provincial, or local). They provided space for interaction and could formalise the input of participants. As such, the logic of practice of a governance network does not mainly consist of the rules and norms in the books of administrative law, or of the consensus-based roles in the formal participatory exercises. Rather, it is couched in a field of practice that has informal rules of engagement in the networks of people with relevant positions in administrative, political, public, and civil organisations.

4.4.4 The Economics of Participation

Goal achievement is a major issue for any stakeholder. If societal groups cannot publicly exhibit their activities directly, they should be able to present solid results of what they do to their constituencies. This is not only a matter of accountability or representation, but also of creating resources by securing funds or time from members or obtaining subsidies. These resources need to be spent economically. The great number of participatory processes surrounding the implementation of the WFD in the Netherlands did not match well with the capacities and resources available to participants. A frequently heard comment was that there were simply too many participatory processes. Most societal groups found it took too much time, effort, and knowledge to participate in all the participatory sessions organised. One of the respondents described this vividly:

> During the participatory processes a lot of parties dropped out […], also because it was all very technical—the information you receive—and it's all during working hours. And there is also no remuneration: you have to pay for it yourself. […] In the end it was only us larger parties. […] I asked VNO–NCW[4] to join, but they could not manage that in terms of staffing either, because there were so many regional processes happening simultaneously. (R4)

The WFD implementation process totalled over 150 distinct participatory bodies which met frequently and put great pressure on societal groups. Most groups were invited to participate at every level at which participation took place, and it was not uncommon for one individual to attend the national deliberative body as well as multiple sounding boards connected to the sub-river basins.

[4] The Confederation of Netherlands Industry and Employers (VNO–NCW).

Similarly, some of the people who participated in the water board meetings and the regional processes also participated in the sounding boards of the sub-river basins. These overlaps can mainly be attributed to the fields of practice in which participants were situated before participation in the WFD was introduced: many societal groups engage with government at national level in order to further their goals and simply do not have many employees. Consequently, water policy is usually not the only issue that these individuals need to address:

> For those business organisations [to participate in all meetings] is just very difficult, because it is just a part of your workload. And, regrettably, a small part at that. There are so many different subjects about which you need to know something because there is no more capacity within your organisation. (R5)

Public participation started relatively late, especially at the lower level of water boards. As most participatory meetings at this level focused on programmes of measures, many events had to take place in a relatively short time period. The sounding boards of the sub-river basins were also pressurised by the high pace of the WFD implementation process. As a result, large amounts of information were circulated just days before sounding boards would meet, which meant that those who lacked the time or knowledge to process the information were unable to participate meaningfully. One respondent (R6) described this pace as 'killing'.

The complexity of the WFD exacerbated the difficulty for societal groups to participate in a meaningful way. According to the national coordinator:

> The inner circle, those who are directly involved in the implementation of the WFD, consists of about a hundred people, within the Netherlands. The next circle of people already has a lot of trouble following the process. (R7)

Indeed, the WFD is so complex in terms of ecological goals, monitoring requirements, and administrative demands, that it became very difficult to comprehend for people who are not involved with it daily. According to one respondent (R8), not even the governor of the water board could keep up, so how could stakeholders, let alone the public? In this sense, complexity issues had their effect on the capacity issues of societal groups as well. Although most groups have local departments or affiliations, these lower-tier organisations were mostly unable to cope with the level of knowledge required. What was more, discussions floundered in complex issues that no one could really make clear sense of. The question of whether the WFD set 'obligations of intent' or 'obligations of result' became extremely contentious in the Netherlands (see Behagel and Turnhout 2011). It occupied elected officials, civil servants, lawyers, and interest groups for years, without ever resulting in a common understanding. Fear of these 'obligations of result' resulted in many policy measures that had been proposed by interest groups being left out of programmes of measures. So, complexity not only led to unease among participants, but it also negatively reinforced the attempt to establish a new logic of practice in participatory processes. Ignoring the measures proposed during participation caused frustration, especially in environmental groups, and subsequently diminished their involvement.

This section shows that public participation in the Netherlands needed to draw on a highly skilled and thoroughly organised civil society in order to be meaningful. Such a civil society was not equally developed at all levels, and nor could it be, given the confines of the economics of representation. This is not surprising if we consider that the societal groups were shaped in the entwinement of the positions they already inhabited and the principles they were implicitly following. Groups accustomed to lobby at national level, such as VNO–NCW, could successfully participate in national venues, but did not have enough staff to send delegates to the regional meetings with the water boards. Groups more concerned with representing values and having a high public profile, such as the environmental groups, were present at many levels and thus had to deal with an enormous amount of work and complexity. Capacity issues overloaded civil society in general and reduced the impact that participatory processes could have had on the logic of practice of participants. As the participants realised that it was unlikely they would achieve their goals in the participatory institutions of the WFD, they did not wholeheartedly inhabit the spaces and roles that these venues offered.

4.5 Conclusion: Grasping Participatory Practices

Our analysis shows that fields of practice are not level surfaces, but are very uneven terrains with a diversity of positions and outlooks that cannot be smoothed out by participatory institutions to create a level playing field for all participants. Indeed, the impact of newly designed institutions in such terrains is uneven, and often reproduces or skews the existing positions and roles in a field of practice. Moreover, the way in which different spaces created by the design of participatory institutions were suitable for participants to pursue their goals depended highly on the different practices that participants were entwined in. Additionally, some positions created by the reordering of a field of practice were more acceptable to some participants than to others.

In general, we have seen how the design of participation can fail to take into account the existing field of practice in which participants are situated, and that this reduces the impact that the organisation of participation can have on the logic of practice that participants are engaged in. A failure to empower participants diminished the possibilities for participatory institutions to make a real impact on the principles that govern how actors interact in the public sphere. Furthermore, the roles offered by participatory institutions did not align well with the existing logic of practice of the governance network. Although the spaces created by participatory institutions were conducive to higher modes of interaction in the governance network, they mostly offered formalisation of interactions in the governance network *ex post*, thereby attracting attention away from the main forms of political action that societal actors engaged in (Fischer 2006). Like all formal, public meetings on policy, a public participation event is only the final act of an emergent, yet carefully nurtured process of informal ‘decision making’ constituted by a logic of practice that is

stronger than the incidental design of official places, norms, and rules that are enacted during a limited number of formal participation meetings. Another major factor contributing to the impact of the newly introduced participatory institutions was the huge strain they put on the resources of participants, making it difficult for them to meaningfully engage in the policy process. Consequently, many participants shunned the participatory venues and instead continued to influence policy making within the logic of practice they were accustomed to. As such, the institutional design and organisation of participation seemed to be no more than a semi-conscious effort to change the ordering of a field of practice and the logic of practice that participants follow.

The introduction of participatory institutions was convincingly incentivised by article 14 of the WFD and succeeded in that many occasions for participation were available for participants, and societal groups attended these events. But the democratic and governance ambitions that are often associated with the introduction of participation were less convincingly present in the design of the participatory institutions, and neither did they amount to a considerable change in the practices of participants. The various normative and instrumental goals proved partly contradictory and can be seen to require trade-offs. For instance, being inclusive of a wide range of societal actors was experienced as hindering decisive action in governance networks. But the informal lobbying strategies that are accepted ways of interacting in a governance network were equally considered to infringe on the democratically selected measures in regional processes. Moreover, by placing too much strain on the resources of participants, neither democratic nor instrumental goals were likely to be met. The result of all this was that participants became frustrated and disappointed in what participatory institutions had to offer.

The disappointment of many societal groups in the participatory institutions of the WFD has seriously harmed the legitimacy of the institutions, and possibly even the entire WFD implementation process in the Netherlands (Ten Heuvelhof et al. 2010). In academic literature, legitimacy is generally conceptualised as consisting of two dimensions: acceptance and justification (Bernstein 2011; Behagel and Turnhout 2011). Acceptance as legitimacy usually refers to the outcomes of policy making, but can equally be applied to the rules of policy making and the institutions that play a role in this process. In this respect, the participatory institutions of the WFD in the Netherlands do not score very high in terms of legitimacy. We can trace this low level of legitimacy to the mismatch between the spaces and roles that these institutions created and the field of practice that participants are situated in. Justification as legitimacy depends on the actors' goals and on whether actors see these as worthy of aspiring to. Here, the survey of Ten Heuvelhof et al. (2010) reveals a more mixed picture. Actors who were comfortable with the logic of practice in the governance network considered participation mostly from an instrumental perspective, and although there were some mismatches with their field of practice, did not judge it negatively. Those who sought empowerment and transformation of the public sphere were less satisfied, as on the one hand the design of the participatory institutions left them wanting in terms of empowerment, and on the other hand the limited impact of participatory institutions on the public sphere could not realistically bring about a

turn towards deliberation. Our focus on practices shows us that legitimacy cannot be achieved by design alone. For instance, participation that is more specifically tailored for a single purpose, such as strengthening democracy, is likely to erode the enthusiasm required for participation, policy making, and improving water quality, as it leaves less opportunities to engage in the accustomed and reliable interactions of the governance network.

Neither the designing of participatory institutions that specifically cater to a certain set of norms and goals, such as 'empowered participatory governance' (Fung and Wright 2001), nor the providing of 'recipes' for the public sphere (Fung 2003) is as interesting as discovering how an existing logic of practice is already available to build upon. Rather than trying to accomplish lofty democratic ideals by a standard recipe, or to pragmatically grasp all the potential of governance networks to further the instrumental goals of improving water quality, it would be more in line with our understanding of participatory practices to approach participation from a more open starting point. Allowing various actors to engage with each other in the ways they are accustomed to and building on and incrementally transforming established logics of practice promises to be a more productive way of actively involving societal groups in policy making. Like all meetings, any new event can be a breeding ground for new informal contacts and relations, producing new informal institutions and outcomes, and leading to new ways of doing and saying. As such, the democratic and instrumental value of direct, informal contacts between governments and civil society, however opaque, conflict-ridden and asymmetrical they may be, should not be underestimated. They can help us trace and understand participatory practices and the ways in which they are impacted by newly designed participatory institutions. Thus, the notion of participation as practice opens up a mode of research that to us seems much more interesting and challenging than a generic, criteria-based evaluation of formal participatory institutions (as for instance proposed by Chess and Purcell 1999 or Rowe and Frewer 2000). Those who ascribe all the outcomes, successes and failures of public policy making to institutional design and the formal spaces and roles of decision making, fundamentally misunderstand the nature of policy practices and will be groping at participation, not grasping it.

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A.1 Annex 1: List and dates of interviewees cited in this chapter (all interviews were in Dutch and have been translated by the authors)

R1: A spokesperson for *Natuur & Milieu* (an environmental organisation), 31 June 2008.
R2: A spokesperson for *HISWA* (the organisation for the Dutch water sports industry and water sports enthusiasts), 17 July 2009.

R3: A spokesperson for *Stichting Het Zuid-Hollands Landschap* (a provincial landscape protection foundation), 8 April 2009.
R4: A spokesperson for *LTO Glaskracht* (the platform for greenhouse horticulturists), 17 April 2009.
R5: A spokesperson for *Bouwend Nederland* (an association for the construction industry), 9 April 2009.
R6: A spokesperson for *Stichting Reinwater* (a foundation fighting water pollution), 15 April 2009.
R7: National coordinator of the WFD in the Netherlands, 2 July 2008.
R8: A spokesperson for *Milieufederatie Zuid-Holland* (a provincial environmental organisation), 7 April 2009.

References

Abelson J, Forest P-G, Eyles J, Smith P, Martin J, Gauvin F-P (2003) Deliberations about deliberative methods: issues in the design and evaluation of public participation processes. Soc Sci Med 57(2):239–251

van der Arend SH (2007) Pleitbezorgers, procesmanagers en participanten. Eburon, Delft

Arend SH, Behagel JH (2011) What participants do. A practice based approach to public participation in two policy fields. Crit Policy Stud 5(2):169–186

Arnstein SR (1969) A ladder of citizen participation. J Am Inst Planners 35(4):215–224

Arts B, Leroy P (eds) (2006) Institutional dynamics in environmental governance. Springer, Dordrecht

Behagel JH, Turnhout E (2011) Democratic legitimacy in the implementation of the Water Framework Directive in the Netherlands: towards participatory and deliberative norms? J Environ Policy Planning 13(3):297–316

Beierle TC (1999) Using social goals to evaluate public participation in environmental decisions. Rev Policy Res 16(3–4):75–103

Bernstein S (2011) Legitimacy in intergovernmental and non-state global governance. Rev Int Polit Econ 18(1):17–51

Biswas AK (2004) Integrated water resources management: a reassessment. Water Int 29(2):248–256

Bourdieu P (1977) Outline of a theory of practice. Cambridge University Press, Cambridge

Bourdieu P (1990) The logic of practice. Polity Press, Cambridge

Blackmore J (2010) Policy, practice and purpose in the field of education: a critical review. Crit Stud Educ 51(1):101–111

Calhoun C (1993) Civil society and the public sphere. Publ Cult 52:67–80

Chess C, Purcell K (1999) Public participation and the environment: do we know what works? Environ Sci Technol 33(16):2685–2692

Cleaver F, Franks T (2005) How institutions elude design: river basin management and sustainable livelihoods. Bradford Centre for International Development, Research Paper No. 12

Cooke B, Kothari U (eds) (2001) Participation: the new tyranny? Zed Books, London

Cornwall A, Coelho VS (2007) Spaces for change? The politics of citizen participation in new democratic arenas. Zed Books, London

Costa RL (2006) The logic of practices in Pierre Bourdieu. Curr Sociol 54(6):873–895

Dryzek JS (1987) Discursive designs: critical theory and political institutions. Am J Polit Sci 31(3):656–679

European Commission (2000) Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy. Official J Eur Communities L327:1–72

Fischer F (2006) Participatory governance as deliberative empowerment: the cultural politics of discursive space. Am Rev Publ Adm 36(1):19–40
Fung A (2003) Survey article: recipes for public spheres: eight institutional design choices and their consequences. J Polit Philos 11(3):338–367
Fung A, Wright EO (2001) Deepening democracy: innovations in empowered participatory governance. Politics Soc 29(1):5–41
Giddens A (1984) The constitution of society: an outline of the theory of structuration. University of California Press, Berkeley
Goodin RE (1996) Institutions and their design. In: Goodin RE (ed) The theory of institutional design. Cambridge University Press, Cambridge, pp 1–54
Innes J, Booher D (2004) Reframing public participation: strategies for the 21st century. Planning Theory Pract 5(4):419–436
Ker Rault PA, Jeffrey PJ (2008) Deconstructing public participation in the Water Framework Directive: implementation and compliance with the letter or with the spirit of the law? Water Environ J 22(4):241–249
Kickert WJM, Klijn E-H, Koppenjan J (1997) Managing complex networks: strategies for the public sector. Sage, London
Lowndes V, Pratchett L, Stoker G (2001) Trends In public participation: part 1—local government perspectives. Public Adm 79(1):205–222
Mayer M (1991) Social movement research and social movement practice: the U.S. pattern. In: Rucht D (red.) Research on social movements. Campus Verlag, Frankfurt, pp 47–120
Ostrom E (1992) Crafting institutions for self-governing irrigation systems. ICS Press, San Francisco
Ovaa E, Ottow B (2006) Actieve betrokkenheid van maatschappelijke partijen bij de implementatie van KRW/WB21. Evaluatie van de voorgestelde werkvormen. Rijkswaterstaat-RIZA
Pierre J (ed) (2000) Debating governance: authority, steering and democracy. Oxford University Press, New York
Rauschmayer F, Berghöfer A, Omann I, Zikos D (2009) Examining processes or/and outcomes? Evaluation concepts in European governance of natural resources. Environ Policy Gov 19(3):159–173
Rowe G, Frewer LJ (2000) Public participation methods: a framework for evaluation. Sci Technol Hum Values 25(1):3–29
Rowe G, Frewer LJ (2005) A tyopology of public engagement mechanisms. Sci Technol Hum Val 30(2):251–290
Sandberg J, Tsoukas H (2011) Grasping the logic of practice: theorizing through practical rationality. Acad Manag Rev 36(2):338–360
Sørensen E, Torfing J (2005) The democratic anchorage of governance networks. Scand Polit Stud 28(3):195–218
Ten Heuvelhof E, van der Heijden J, van der Arend S, Broekhans B, van Bueren E, Harteveld C, en Ruijven T (2010) Evaluatie van de implementatie van de Kaderrichtlijn Water. Technische Universiteit Delft, Delft
Webler T, Tuler S, Krueger R (2001) What is a good public participation process? Five perspectives from the public. Environ Manage 27(3):435–450
Woltjer J (2002) The *public support machine*: notions of the function of participatory planning by Dutch infrastructure planners. Plann Pract Res 17(4):437–453

Chapter 5
Invited Spaces and Informal Practices in Participatory Community Forest Management in India

Sailaja Nandigama

5.1 Introduction

The concept of gender-equal participation has occupied the central stage in many community-based natural resource management (CBNRM) interventions for the past two decades. As a practice, gender mainstreaming can be defined as a process to promote gender equality (Walby 2005).[1] Though gender mainstreaming has become popular internationally as a strategy for gender-equal development, the UN-led review (conducted in 2005) exposed that many issues stand in the way of realising the gender-equal participation of women at various levels. Moser and Moser (2005), in their review of gender mainstreaming polices in international development institutions, highlight that major attention has been given at the national and international level to institutional inputs such as gender training, accountability and organisational culture, and that negligible work has been done on assessing the operational outcomes and impact on gender equality, such as improvement in terms of women's participation and empowerment. At the micro-level, relations of power and agency (Cornwall 2003) limit the opportunities to enhance gender-equal participation within communities. Another analytically significant factor inhibiting the realisation of gender mainstreaming is using the concept of 'community 'as a de-politicised unit of analysis, which leads to the social hierarchies and gender differences being overlooked (Guijt and Shah 1998). This chapter contributes to these debates by exploring actors' practices and their

[1] 'Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.' (UN Economic and Social Council 1997, p.28).

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influence on the quality of women's participation in a community-based forest management intervention in rural Andhra Pradesh, India.

While the majority of studies point out the gap between the intention (formal provisions) and the practice (actual implementation) in the gender mainstreaming interventions, they fail to represent the dynamics based on actors' practices which result in this gap. This chapter argues that actors' everyday practices, their situationalities and their gender roles exert considerable influence on their behaviour in formal participatory spaces. This is done through examining actors' practices (in both the formal and informal realms) in order to analyse the extent to which the everyday interactions influence the actual implementation of the gender-equal participatory interventions. Situated agency is defined for this chapter as agency exercised by women and other community-based actors while they make choices relevant to their everyday lives and have only a partial perspective on their available options. Situationality is defined here as a temporal and spatial condition in which actors find themselves, 'to the extent that they get challenged by it to act upon it' (Freire 1970/1995, p. 90). Thus, situatedness is a state of being, which serves as a point of reference for the actions of actors. In Adavipalli village, for instance, the women members go by the prevailing traditional practices of being submissive and docile in formal spaces, while at the same time making decisions that contribute to their livelihood security.

How do every-day informal social practices influence the implementation of decentralised forest governance interventions aimed at promoting gender-equal participation? This chapter explores this question against the backdrop of prevailing informal practices and the different roles men and women perform in these practices. Formal and informal domains are analytically separated in this study, so as to be able to observe their mutual interactions that lead to tensions, synergies and meeting points. In actual practice though, actors operate simultaneously in both realms. This chapter demonstrates that the formal and the informal come together in the practices of actors. For the purpose of this study, formal spaces are defined as 'invited spaces' that are provided for or opened up by governments, other external agencies and NGOs. In contrast to these, informal spaces are defined as those institutions initiated by the community-based actors for themselves, as well as those emanating from within the everyday practices and interactions of the community members (see Cornwall 2004). The informal norms and practices are understood here as more endogenous to the community than those initiated by the external actors.

The de-politicisation of the concept of 'gender equality' at the international level could be explained as an offshoot of the increasingly instrumental application of a series of 'gender tools and techniques' which would result in measurable outcomes. Quite often, counting the number of women participating in the meetings, or documenting the frequency of the meetings—or doing both—becomes the measure of gender mainstreaming, rather than an analysis of the levels of the actual transformations in gender relations on the ground (Kabeer 2005; Resurreccion and Elmhirst 2008). This is also due to the fact that the existing mainstream positivist research methodologies often fail to capture the

nuances involved in mapping women's empowerment, as they often reflect the complex power dynamics at community level. By contrast, the ethnographic qualitative methodologies used in this research do provide ways of approaching the complex social practices of community actors participating in externally initiated conservation and development interventions.

This chapter is based on the case study of a village engaged in a community forest management intervention in the state of Andhra Pradesh (AP), located in the south of India.[2] The case study of Adavipalli (pseudonym) village provides insights into the gender-related practices in the implementation of the Andhra Pradesh Community Forest Management (APCFM) intervention.[3] Several gender mainstreaming measures have been initiated in AP in order to foster women's direct and equal participation in the Forest Protection Committee popularly known in the local language as Vana Samrakshana Samiti (VSS).[4] In this chapter I draw a parallel between the official gender mainstreaming provisions of the APCFM intervention, and, the ways in which the Adavipalli community members adopted these in practice. Here I focus especially on the participation of women in the 'invited spaces' through the VSS.[5] The concept of space is defined here after Lefebvre (1991, p. 24), as 'a social product…it is not simply "there", [as] a neutral container waiting to be filled, but is a dynamic, humanly constructed means of control and hence of domination, of power'. Analysing the concept of space in this multi-dimensional sense renders sharpness to the current analysis, to capture the power dynamics and informal practices influencing the participation of women.

The influence of gender, caste, and class on actors' participation in community-based natural resource management (CBNRM) organisations has been well-documented by many scholars in the context of the Indian subcontinent (Agarwal 2001; Agrawal and Gibson 2001; Lama and Buchy 2002; Sarin 1998, 2001; Nandigama 2009). During the last two decades, gender mainstreaming policies have gained ground in conservation and development interventions in this part of the world. In early 1990s alone, both India and Nepal started promoting state-sponsored CBNRM interventions under the name of 'Joint Forest Management' (JFM), an initiative which involved thousands of forest-dependent communities.

[2] Administratively, India is divided into states, each of which is further divided into districts and blocks, with the village councils at the lowest rung of the state administrative units.

[3] APCFM intervention is the second phase of what is popularly known as the Andhra Pradesh Joint Forest Management (APJFM) intervention (1994–2000), which was implemented by the AP state government with sponsorship from the World Bank. APCFM was introduced in Andhra Pradesh as a spin-off from the APJFM, with additional emphasis on the participation of community actors in general and women in particular, to foster gender- equal participation along with community development and forest conservation.

[4] The local language in Andhra Pradesh is *Telugu.* For practical reasons, this was the language the author used to collect and process most of the qualitative ethnographic data.

[5] Invited spaces' refer in this context to the formal spaces created by the interventionists (the Andhra Pradesh state and the World Bank) earmarked for participation of community members, including women.

By the early 2000s, there were more than 84,000 forest protection committees in India (Agarwal 2009, p. 2786) implementing gender mainstreaming policies.

NGOs, nation-states and international organisations often base their gender mainstreaming models on the assumption that actors such as women and the poor lack the opportunities to participate despite their willingness to do so. Hence the provision of participatory spaces for the women and the poor become major aspects of designing development interventions. Another often overlooked assumption behind the creation of invited participatory spaces is that the community actors are free to participate in these spaces as soon as they become available. Women's participation gets influenced by subtle social dynamics at play. These include the preparedness of women to speak up in public, to overtly challenge the power inequalities, and in some cases even to face social rejection for articulating their opinions in front of village elders. Studies that are attentive to these issues have criticized the instrumentality of these gender mainstreaming interventions and raised questions regarding the role of the community dynamics in influencing the functioning of the formal invited spaces and the nature of women's participation in them (Guijt and Shah 1998; Agarwal 2009; Nandigama 2009). Community dynamics, including the relations of power and agency, and the perceptions of actors, are reflected in actors' interactions and everyday practices. Analysing actors' situatedness thus becomes crucial in order to understand the functioning of formal invited spaces aimed at achieving gender equality. It is hypothesised here that Adavipalli women exercise their situated agency while participating in these invited spaces at the VSS. The role of informal practices and the power relations in determining actors' situatedness is also analysed here, to make sense of the operational challenges involved in mainstreaming gender in Adavipalli community.

This chapter is divided into five sections. The first introduces the analytical focus of the chapter and the second briefly describes the research setting and methodology. The third section presents the observations and findings related to the self-images and gendered practices of women and men participating in the intervention. The fourth section discusses the implications of these perceptions and practices for the gender mainstreaming process through the Adavipalli VSS. The fifth and final section of the chapter presents concluding remarks and policy implications of these findings for future gender mainstreaming projects in socially stratified communities.

5.2 Methodology and Research Context

5.2.1 Methodology

In this study, actors' everyday interactions and social practices were recorded using a qualitative ethnographic case study methodology (Miles and Huberman 1994; Ritchie and Lewis 2003) oriented towards an adaptive and contextual

exploration of actor interactions at the community level. I undertook a circular and non-linear method of qualitative data collection and analysis during my 12 months stay in the community in 2004 and 2005. I returned to update the data in 2009 (for 4 weeks) and 2010 (for 5 weeks). The most crucial tools I used for collecting the qualitative data were participant observation, in-depth interviews and focus group discussions. These were coupled with oral histories, in order to account for the key actors' participation over the years. This ethnographic mode of enquiry allowed observations to be made on the subjective meanings women and men of Adavipalli gave to their everyday roles, interactions and networking practices.

5.2.2 Selection of Research Site

Adavipalli is located in the Kadapa district of the Rayalaseema forest region. Ten villages in the sampled forest range of Kadapa district were visited for a baseline survey before a purposive sampling method was employed to narrow the choice to one village. The choice fell on Adavipalli, a village that actively participated in the World Bank sponsored forest conservation intervention from 1994 to 2010. Adavipalli was selected as the research site because of its historical engagement with the APCFM intervention, its highly stratified social composition and human–landscape relationships, and the presence of an active functional female vice-president of the VSS—something the other forest protection committees assessed in the baseline survey did not have. It was felt that the presence of a socially active female member in a position of power could potentially influence how members (whether male or female) participated in the Forest Protection Committee. All these factors combined made Adavipalli an ideal case for observing the dynamics of participation.

5.2.3 Background Information on Adavipalli

As explained above, high social stratification of Adavipalli is an ideal case to observe the caste, class and gender dynamics influencing women's participation in the formal participatory spaces at the VSS. There are four major caste groups in this village. The Reddy (FC) the Yadava (BC) and other backward castes, the Mala (SC) and the Yanadi (ST).[6] The FC and BC communities of the village own most

[6] There are several castes recognised by the Indian constitution. This recognition serves as the basis for providing positive discrimination (in provision of social services like health, education and employment opportunities) for the socially backward castes such as the ST (Scheduled Tribes), the SC (Scheduled Castes) and the BC (Backward Castes). The FC (Forward Castes) caste groups are treated in India as socially forward caste groups, and hence are not covered by the positive discrimination policy.

of the fertile lands of the village. Class differences operate across various castes in the village and determine networking possibilities for all actors. A small portion of the SC (Mala and Madiga) and ST (Yanadi) community have been able to lease land from landowners but must pay them half of the income from the crops. At the time of the fieldwork, the total number of households in Adavipalli village was 72 and the total population was around 400. The majority of the population (70 %) depended on agriculture; whereas, only 30 % owned the agricultural land of the village. Women across all four caste groups were found to have limited formal entitlements to farm land or land for cattle grazing in comparison to their male counterparts. Hence, most lower-caste women in Adavipalli negotiated their access to these resources through bargaining informally with their male counterparts and local landlords. Apart from engaging in seasonal agriculture labour, the majority of people in the lower castes engaged in the non-timber forest produce (NTFP) collection and sale and the VSS-related labour. The ST (the Yanadi) had been allotted a separate colony on the periphery of the main village, due to their active networking with the local elite and the foresters during the intervention. They also engaged in animal husbandry, collection of NTFP and work in forests through VSS-related activities to supplement their household economy.

5.2.4 Key Actors and Institutions in APCFM Intervention

The key actors who participated in the APCFM intervention at the local level include the AP state forest department (APFD); the facilitating NGO; and the community members.[7]The Andhra Pradesh state government, the Government of India and the World Bank operated from a distance, and occasionally interacted with the local communities. Vana Samrakshana Samiti (VSS) is the two-tier community-based Forest Protection Committee (FPC) in charge of implementing the intervention at the grassroots level. The VSS functions at two levels: the executive committee (EC) and the general body (GB). The EC is made up of elected or nominated members and includes a president and vice-president. It acts as the administrative body of the VSS. The GB is formed by all households of the village by default. The EC makes functional and financial decisions on forest conservation activities to be carried out by the villagers. The GB has the right to discuss the action plans formulated by the VSS, and their implementation at the grassroots level.

[7] Pseudonyms are used in this chapter for protection of the confidentiality of respondents, including the local community actors, the forest department officials and the facilitating NGO personnel.

5.2.5 Gender Policy in APCFM Intervention (Formal Provisions)

One of the main policy components of the APCFM intervention is the promotion of equal opportunities of participation for men and women in the community forestry activities. The APCFM intervention aims to achieve these goals by providing female and lower-caste community members a better launching platform to engage in the decision-making processes of the VSS. In order to ensure gender equality in the APCFM intervention, one male and one female member from each household of the village were made provisional members of the VSS general body. Most significantly, the ruling that there should be at least 50 % women members in the EC raised the minimum number of female members to eight out of fifteen members. In addition to this, the clause that either the president or the vice-president must be a female member also provided ample space for women's participation in the top-level decision-making processes at the VSS (GO Ms. No. 13, 12.02.2002, Govt. of Andhra Pradesh).

5.3 Implementation of Gender Mainstreaming

The process of implementation of the gender mainstreaming measures at the Adavipalli VSS was heavily influenced by power relations and informal norms and practices followed by the actors, including the women themselves. Actors' everyday interactions and practices, as well as their participation in the VSS, were in turn influenced by the (self) images of femininities and masculinities prevailing at the community level. In a way, the actors' interactions in the VSS also served as reflections of their everyday practices, their gendered roles and perceptions, thus bringing the formal and informal realms together. To demonstrate that actors' perceptions and self-images mirrored their conduct both in the informal and the formal realms, the following sections list the qualitative observations emanating from the Adavipalli community.

5.3.1 Self-Images and Roles of Men and Women

Women and men of the Adavipalli community base their everyday life on certain traditional norms and customs around 'acceptable social behaviour' rooted in notions of femininities and masculinities. These gender-based norms and perceptions were captured through mapping their self-images. Participant observation was primarily used as a technique of data collection throughout the fieldwork period. This served as the basis for developing a comprehensive understanding of Adavipalli community life in general and the gender-based norms around social behaviour in particular. Group discussions and interviews were held simultaneously, to complement and verify the observations made through participant observation. Focus group discussions were also held in separate and mixed groups, to discuss how these self-images

influenced their respective participation in the VSS. Individual interviews with VSS members (both male and female) were conducted as a follow-up exercise, to check for gaps in data on self-images, perceptions and gender roles. All these techniques and data were triangulated to validate the findings. It is noted that actors' self-images reflect the prevailing social constructs of femininities and masculinities, also guiding the behaviour of men and women at both household and community level. These self-images of men and women also provide clues for understanding their behaviour in invited spaces of participation, such as membership and leadership of the VSS. It is clear from this analysis that the roles actors played in the VSS reflected their roles in the community—as demonstrated below in Boxes 5.1 and 5.2.

5.3.1.1 Box 5.1 Self-images of men and women of their roles in the household/community

What is it that a 'woman' symbolises for you?	
Women's responses in order of preference:	Men's responses in order of preference:
• Home is where woman is	• Family pride and respect
• Hard worker	• Mother of my kids
• Mother	• Follower, helps me in running our home
• Bonding family together	• Selfless and sacrificing for family
• Responsible for home	• Responsible for cooking, feeding children and taking care of my parents
• Sign of family honour	• Looks after my home
• My dowry is a burden for my family	• Helps me in the field
• Woman's life is made hard by God	• Gives me love and respect
• Cooking, and feeding and raising children	• My old age investment
• Giving respect and love to man/husband	• Brings money and property (dowry) in marriage
• Taking care of family health	• I go home to her
• Household chores	• Hardworking wife and mother
• No time for myself	• Implements my decisions inside and outside our home
What is it that a 'man' symbolises for you?	
Women's responses in order of preference:	Men's responses in order of preference:
• Father of my children	• Breadwinner
• Breadwinner	• Head of the household and controller
• Decision-maker	• Decision-maker

(continued)

(continued)

What is it that a 'woman' symbolises for you?	
• Oppressive and bossy	• Leader and financial planner
• Sometimes physically abusive	• Owner of everything
• Cares for me and my kids	• Leader
• Leader and financial planner	• Problem solver
• Owner of everything (land, house, cattle, etc.)	• Respect in community
• Head of the household and controller	• Wealthy among peers
• I am not respected without him	• Powerful
• I must listen to him even if I don't like to	• Hardworking person
	• Father and husband
	• Without a man, a woman is not valued

Source Focus group discussions and interviews conducted by the author (2005)

As clearly shown in Box 5.1, from the perspective of women, relatively more emphasis is placed on the multiple roles women play as mothers, wives, daughters-in-law and in general as good and responsible women, and on the problems they encounter within and outside households. Women saw men as leaders, breadwinners, decision makers and patriarchs who do not have to face the problems of women. Women also highlighted their biological roles within and outside the household as an issue affecting their mobility and public participation. Women did not perceive leadership as part of their self-image. Both at the community level and the household level, women attributed their men the status of leadership and the power of decision-making. Men did not perceive leadership or decision-making as a characteristic of women. Instead they highlighted that women are followers at both the household and community level.

Box 5.2 lists the practices of men and women as Adavipalli VSS members. The group of respondents included male and female EC members. Both groups were asked 'What do you do as a VSS member?'

Q: what do you do as a VSS member?	
Responses of female members in order of preference:	Responses of male members in order of preference:
• Attend meetings on invitation; Show up when there is inspection of VSS	• Lead my caste group through VSS membership

(continued)

(continued)

Q: what do you do as a VSS member?	
• Attend general body meetings when required	• Organise and attend VSS meetings
• Sign the minutes book and other documents when asked	• Make decisions through negotiation and lobbying
• Approve decisions made by the VSS, in a supportive role	• Deal with NGO and APFD personnel • Confront if needed
• Inform other VSS (general body) members about VSS work	• Make and approve VSS decisions
• Use this membership as constructively as possible, maintain community respect and caste group respect and family honour by being a good woman	• Discuss financial matters • Inform female members when they are needed at VSS • Communicate with village community about the VSS- related developments

Source Focus group discussions and interviews conducted by the author (2005)

5.3.1.2 Box 5.2 Male and female VSS members on their practices

A comparative analysis of Boxes 5.1 and 5.2 indicates that there is a positive correlation between actors' self-images and perceptions, and the way they behaved in the VSS in actual practice. This was also confirmed by my observations and participation in the community and the VSS. For instance, female members did not refuse to sign the minutes book, even when they had not been invited to the VSS meetings. The male members often did not find it important to ask the female members for their opinions, as they considered themselves to be in control of the decision-making process in the VSS. This analysis could also explain why female members kept to household chores, while preferring to be represented by their men in the VSS meetings. The statement made by the majority of the male VSS members that they 'inform female members when they are needed' (see Box 5.2), indicates that female EC members were not always part of the VSS activities and/or decision-making processes, unless men felt this was necessary. This also directly corresponds to what men expressed as their perception of the role of women within and outside the household—i.e. a follower and one who implements their decisions (see Box 5.1). This clearly indicates that actors' self-images have a direct influence on their actual practices in the VSS as members.

5.3.2 Actual Practices Around Women's Participation in Adavipalli VSS

As explained above, women's participation in the VSS was greatly influenced by their everyday interactions and the customary norms and practices of the

community. Actors' everyday interactions in Adavipalli were based on their livelihood trajectories, access to and control over productive resources (farm, non-farm and forest-based), as well as their caste and class-based networks. With few exceptions, all the community-based actors were interested in the CBNRM intervention and sought to benefit from participating in it. These benefits usually ranged from social visibility, to gaining access to productive resources in the village and the forest for achieving livelihood security. Benefits such as access to health, education and food security were at the top of their priority lists. Participant observation of the Adavipalli community revealed that men (from all castes in general) placed a premium value on their VSS membership. They considered being a VSS member to be a symbol of social status, as well as of power. Although women were observed not to attach too much value to their VSS membership, they definitely recognised the added benefits a VSS membership could bring to their households' livelihood security. In Adavipalli, participant observation showed that some female VSS members used their membership in the VSS as leverage to gain additional access to employment, non-timber forest products, and other productive resources. It was also observed that the formal policy mechanisms were implemented only superficially by both male and female members, which made the participation of women in the VSS shallow over a period of time.

While engaging in an ethnographic exploration of village life, I also collected the opinions of male VSS members on women's participation in the VSS. Almost all the men interviewed claimed that it was good for women to participate and that they totally supported women's participation. I found their responses to be orchestrated, more or less uniformly scripted, positively highlighting the benefits of women's empowerment through participation in the VSS, while their actions in actual practices contradicted these claims (focus group discussion and participant observation by the author in 2005). The following paragraphs substantiate these observations.

Despite the clear formal provisions, the rules and regulations of the Adavipalli VSS were mended in practice to accommodate the already existing informal relations of power and caste, class, and gender-based protocols. Though open election or nomination was required, actual practice reinforced the status quo: for example, the dominant caste elder was nominated as the VSS president, and a female (Lalithamma) from a politically well-connected elite family was nominated as the VSS vice-president because the rules (GOAP Ms. No. 13) of VSS required a woman to be president or vice-president. The remaining female members were nominated from the Scheduled Castes and Scheduled Tribes and Backward Castes. In some cases, they were not informed by their husbands that they had been nominated as VSS members, and their husbands actually represented them at meetings.

The VSS executive committee was supposed to meet every month to discuss the progress of forest-related work plans and decide on VSS activities in the future. The Project Implementation Plan (PIP) of Andhra Pradesh Forest Department (2002) considered this as a crucial platform to represent women's needs and livelihood aspirations within the VSS-based planning (Andhra Pradesh Forest Department 2002). In actual practice, Adavipalli VSS meetings were held in

closed groups, with very few female members attending. Female members (of all caste groups) of the VSS attended these meetings only occasionally, as the timing of the meetings (usually in the evening) conflicted with their household chores and routines. Lalithamma, the vice-president of the VSS, was present at the EC meetings only when they were held in her own courtyard. When the meetings conflicted with her daily chores she would seek an audience with her cousin (new elite leader Samayya) for a briefing. Commenting on the relatively privileged position of Lalithamma, one of the female members claimed,

> Lalithamma is part of them [the new elite class], and so the meetings happen in her place…she can speak up in the meetings if allowed by the new elite leader…. Sometimes even her words are not taken seriously…. Whenever I attend a meeting on invitation, I find myself alone and outnumbered by men, so I would keep quiet, unless asked to speak.

However, Lalithamma also complained that most of the time her cousin and other male members met in private, to decide on the course of action, and then came to her to get her approval, as she was the vice-president. Women from well-off families generally stayed away from the biannual VSS general body meetings, as they were not expected to challenge the notion of 'socially acceptable female behaviour'. The lower-caste women from the SC, ST and BC communities attended these meetings only when their men explicitly asked them to join. The SC and ST women claimed that they were primarily invited to attend these meetings to contribute to the numbers, as stipulated by the facilitating NGO. Often, men would volunteer to represent their women (wives, sisters, daughters etc.) at these meetings. A female EC member from the Yanadi tribe (ST) said,

> We don't attend these meetings without getting an [explicit] invitation from our men…. when there is a need they will invite us, if they don't ask us to come, it means we are not expected or needed there…. Moreover, who will cook for my children if I sit in these meetings for hours together?

An important factor impacting women's participation in the Adavipalli VSS was the irregular information flow to the female members. In the participant observation as well as the focus group discussions with Adavipalli community members, it was found that this exclusion of women members from direct communication mainly stemmed from the view that men represent their own households, and that they can inform their women of relevant information from the VSS on a need-to-know basis (if any). Thus, whatever information came from above (e.g. the APFD or the facilitating NGO personnel), was passed on to some of the male members of the VSS. These male members in turn used their discretion in passing the information on to their women. At every level, some people (both men and women) were excluded and it was observed that the women VSS members were usually at the bottom of this VSS 'information chain'.

Other issues that influenced the participation of women in VSS meetings include the perceptions of the community members, and the local norms around acceptable female behaviour (see Boxes 1.1 and 1.2). Perceived benefits and losses of participation by female members played a major role in determining their participation in the VSS activities. A cross-section of women said that the fear of tarnishing family pride and respect prevented them from acting independently,

being outspoken and straightforward at the VSS general body and EC meetings. Women also seemed to let men represent them on the pretext that they were complying with the norms and traditions to be followed by a good housewife. A female member claimed that she was able to command respect in her community by being submissive to the men, and by showing that she was not interested in VSS matters. A majority of female members perceived losing respect in their community and household as an unworthy cost, and preferred to be inactive at the VSS meetings. When probed further, female VSS members explained that they traded in their official entitlements (membership and decision-making power in EC) in favour of being in the good books of the new elite leaders.

Women also expressed their inability to spend long hours in the VSS meetings as they knew in advance that their mere presence in the VSS would not tilt the decision-making in their favour. As one ST woman member put it,

> Our being or not being there [in the VSS] is not what matters for us…it is our capacity to negotiate with the VSS leaders and village elders which delivers us our livelihoods…openly challenging these powerful men (and women) is more likely to cut me and my family out of their good books and eventually from our livelihood sources…I can communicate better by being silent in the (VSS) meeting, and do what they expect me to do in the public meetings…this would definitely give me a private audience with these leaders to place my requests in front of them, this could not be done in VSS meeting or in public…my VSS membership gives me this capacity to negotiate…

In Adavipalli VSS both men and women had equal rights to participate by virtue of their membership. However, the female members of the VSS emphasised the fact that it is much more stress-free for women to get things done in their favour without actually challenging the patriarchal norms. The costs of openly challenging the patriarchal norms not only put the women in the spotlight, but also made it less easy for them to lead their everyday lives.

For men too there were costs of speaking openly on behalf of their women, as they would be branded as being slaves to their wives. Just as the women strove to adhere to their womanliness among their peers, so did Adavipalli men also try to adhere to the practices of upholding their masculinities among their peers. Hence, they adapted the demands of women, they represented them as their own at the community and at the VSS level. At the household level, however, the costs were also high for men if they did not pass on the demands of their women. Women usually told their men that if they did not succeed, they might as well not come back home. Thus, women exploited the same social constructions of gendered roles, femininities and traditional practices to their advantage. Taken at face value, and without probing deep into the real negotiations around these practices, it might seem that the traditional norms and patriarchal structures are rigid and unchangeable.

In spite of not being active members of VSS, or participating in its meetings, women played crucial roles in the informal domain in Adavipalli. Women in Adavipalli devised a variety of strategies to ensure that their needs and interests were considered. For instance, Lalithamma often used her influence to get the demands and interests of women communicated in the VSS meetings. For instance, when signatures of the women members were needed for a mid-term

evaluation, the VSS leadership made some concessions to the women on access to NTFPs in the forest. In turn, Lalithamma and the other female VSS members used these occasions as opportunities to voice their livelihood needs. In the process, Lalithamma also gained the trust of the other women and the VSS male members. On the other hand, the male members also gave some concessions and rewards to the women belonging to the VSS, by granting the women rights to collect boda grass (a type of thatch) and certain other varieties of NTFP as a reward for their non-interference in the VSS matters on a day-to-day basis.

Lalithamma learned over time that not being publicly active as the VSS vice president and not challenging the authority of her cousin Samayya (the new elite leader) gave her a lot of social respect as well as control over other lower-caste women in the Adavipalli community. She also attended a couple of training workshops organised by the APFD and facilitated by NGOs at the district headquarters. Due to this exposure and increased mobility of Lalithamma, the other women and some of the men from her own and other castes treated her with respect and started actively networking with her through daily interactions. Due to the leverage she gained informally, Lalithamma could present the demands and interests of other women in the EC meetings as mentioned above. The fact that Lalithamma has gained that trust from the other community members indicates a steady progress in her ability to negotiate with the VSS male members, albeit at an informal level. This shows that factors like kinship ties, networks and social position in the community helped women to indirectly influence the decision-making at VSS level, particularly when backed up by spaces created through formal institutions aiming at gender mainstreaming.

5.4 Findings and Discussion

Drawing on the experiences from the Adavipalli case study, this chapter argues that gender mainstreaming is a multi-layered transformative process rather than simply a measurable project outcome, as is proposed by the development interventions (see Moser and Moser 2005). Actors' practices in both the formal and informal realms had a direct impact on the implementation of gender mainstreaming project within the context of Adavipalli. Women's participation in the formal spaces, as the Adavipalli case demonstrates, reflected the informal norms and practices of the community rather than following the trajectory of formal rules and regulations stipulated by the interventionists. Though women were marginalised and used as token representatives in the formal arena, they ended up bargaining informally for better livelihood options, and indirectly influencing VSS functioning because they were backed up by their formal (VSS) memberships.

It is crucial to recognise here that the availability of the formal participatory spaces and institutional memberships provide women and the marginalised with opportunities for renegotiating the existing power structures in their highly stratified rural communities. Though the formal spaces exist amidst the omnipresent

power relations, their spill-over effects become significant in re-ordering the status quo and in increasing the bargaining capacities of the less powerful actors like women. Since actors (women and men) in this case exercised their situated agencies, they favoured trading-in their formal roles for more discrete and indirect ways of negotiation through the informal networking. As a result, women's participation in the Adavipalli VSS was twisted to suit the informal practices and community-based gender dynamics. Women preferred informal ways above the formal institutional set-up since this did not match their social situation and status. They preferred being submissive instead of challenging the existing relations of power in the community, and being inactive in the formal arena (VSS) for fear of incurring unfair penalties such as the loss of their livelihood securities.

Various participatory practices adopted by the Adavipalli people exemplify the major argument of this chapter, namely that the actors' self-images and perceptions of their social roles and their local practices directly influence their participation in invited spaces. The formal and the informal interactions are brought together through actors' practices and their ability to exercise situated agency in the Adavipalli context. In turn, these practices influence the participation of women and other marginalised actors, producing intended as well as unintended consequences for different actors. The intended consequences for the female VSS members included increased bargaining power, mobility and visibility within their households and community; the unintended consequences included decreased visibility, marginalisation and token representation of women in the formal participatory spaces of VSS.

Achieving women's direct and gender-equal participation in the VSS, eventually leading to their empowerment was the major objective/intended outcome of the gender mainstreaming policy of the APCFM intervention. However, in practice, what constituted the ideal outcome for the interventionists did not conform with what local actors (especially women) envisioned they would gain from the intervention. My intention here is not to argue that achieving conformity of goals and objectives between community-based actors and interventionists would eliminate the gap between policy and practice. Instead, I believe that the experience of Adavipalli case demonstrates that, irrespective of the goals and objectives of the policy and aspirations of its subjects, gender mainstreaming policy becomes strongly intertwined with local community-based practices when it hits the ground. Hence, projects become deeply embedded in people's interactions and gendered perceptions and self-images.

Meinzen-Dick and Zwartveen (2001, p. 73) explain that there are two factors that determine the extent of participation of men and women in natural resource management organisations. They are (1) rules of membership, which determine eligibility to participate, and (2) the balance of costs and benefits derived from involvement, which influences individuals' decisions of whether or not to participate. In the Adavipalli VSS too, both men and women officially have equal rights to participate, by virtue of their membership. However, the fact that the women had to stand up against men as equals and make decisions regarding forest use and conservation through the VSS, rang alarm bells for the women of the Adavipalli community. Women's concerns were based on their situational assessment of the social and personal costs they would incur for challenging the powerful actors. The

fear of challenging the norms of acceptable female behaviour and the existing status quo were among the most important concerns for women while playing their roles as Adavipalli VSS members.

Formal institutional provisions for facilitating women's participation in the Adavipalli context were also infused by the gendered self-images and roles played by men and women in their everyday life. Apart from the issue of inappropriate timing of the meetings, other issues that negatively influenced the direct participation of women in the VSS meetings were the unwelcoming attitude of the male members, the lack of acceptance and unwillingness to adapt to a female member's mobility and involvement, the norms around acceptable female behaviour, and finally (and most importantly) the female members' own perceptions of the costs of direct participation. The female members of the Adavipalli VSS maintained that for them as women it was easier to get things done in their favour if they did not openly challenge the patriarchal norms and status quo of the community. As mentioned earlier, the costs of openly challenging the patriarchal norms not only put the women in unnecessary spotlight, but also limited their possibilities of successfully pursuing their more pressing livelihood needs.

Adavipalli women aimed at gaining access to resources in different ways (through informal networking with the powerful actors) than intended by the interventionists. As this case has demonstrated, VSS-based deliberations and decision-making were activities strictly conducted by certain men behind closed doors, despite the provision of gender-equal spaces. Once the decisions were arrived at, they were presented as points for discussion and approval in front of the female vice-president of the VSS. Buchy and Subba (2003, p. 320), from the experiences of community forestry of Nepal, also document these trends. They mention that, '…men first discuss issues among themselves and reach a consensus. Then they may come to women's group to get their decisions confirmed by the women, who accept their decisions without opposition'. Nevertheless, Adavipalli women have learnt to circumvent the patriarchal power relations and practices to their advantage, by adapting their participation in the VSS executive committee. From the interventionist perspective though, these informal practices could be argued as contributing to the perpetuation of the 'invisibility' of women members (Agarwal 1997, pp. 26–28; Arora 1994, p. 695) in the formal arenas. However, women appreciated the opportunities they gained, and experienced increased visibility and mobility informally through the presence of the formal institutions of the Adavipalli VSS over a period of two decades.

5.5 Implications for Future Gender Mainstreaming Projects

This chapter has demonstrated how gender-equal participatory mechanisms are perceived, reflected upon, adapted, used, and contextualised by both women and men of the Adavipalli community. Local practices influenced actors' interactions and their respective roles in gender mainstreaming spaces of participation. The gender mainstreaming policy was utilised by both women and men from the lower

castes, albeit with caution against unnecessary consequences of participation. The actors' capability to exercise situated agency encouraged them to innovatively engage with both the formal and informal institutional mechanisms.

This chapter discussed the latent tensions between 'gender' and 'participation' in a CBNRM context, at the socio-political level. It was observed that what the interventionists initiated as a gender mainstreaming policy was taken over by the local actors (both men and women), and was turned into a locally acceptable and feasible set of community-based practices. What the intervention visualised as empowerment in formal spaces (without actually defining what it meant) was not part of the community actors' agenda. While the participation of women in the formal spaces remained at best tokenistic and marginalising, women were successful in turning the same set of practices to their advantage, to ensure tangible gains such as access to productive resources in the village and the forest. Their continued engagement with informal networking within the community (backed up by their formal memberships) also increased women's visibility and influence over a period of time. Thus, what the intervention set to achieve in the formal spaces started taking root through community-based practices, interactions and networks. These developments point towards a need for top–down gender mainstreaming interventions to be adapted towards more flexible and accommodative policy arrangements.

The internationally sponsored CBNRM interventions currently have less scope in their design to accommodate these dynamics in gender mainstreaming. Even today, in the Project Implementation Documents (PID) of bilateral CBNRM interventions, 'gender-equal participation' is considered 'real' only when it happens in the 'formal invited spaces'. This fails to recognise the substantial as well as incremental improvements occurring in women's and other marginalised actors' lives outside the formal arena. Meinzen-Dick and Zwarteveen (2001, p. 79) indicate that the dynamics of natural resource management in South Asian societies cannot be properly understood from a gender perspective if attention is limited to the formal organisation alone. Even in the Adavipalli's context, it is rather naive to limit the analysis and evaluation to the formal arena of participation, as this pushes the evaluators to come up with shallow judgments of success and failure.

Policy evaluators and planners aiming for a comprehensive overview from a gender perspective have to give equal appreciation to both the intended and unintended consequences, without dismissing one or the other. As demonstrated by the Adavipalli case, the tokenism of women as members in the VSS also co-produced the positive effects on women's mobility and visibility at the informal level. A comprehensive evaluation of women's involvement in both formal and informal spheres is likely to give a holistic picture of the real transformations in the institutions of gender, caste and class. This analysis highlights the need to redefine the scope of evaluating women's participation in both the informal and the formal participatory spaces in highly stratified rural communities. Revisiting gender mainstreaming as an on-going dynamic, multi-layered process located in situated practices of social actors could open up a sympathetic analytical frame for future interventions.

References

Agarwal B (1997) Environmental action, gender equity and women's participation. Dev Change 28:1–44

Agarwal B (2001) Participatory exclusions, community forestry and gender: an analysis for South Asia and a conceptual framework. World Dev 29(10):1623–1648

Agarwal B (2009) Gender and forest conservation: the impact of women's participation in community forest governance. Ecol Econ 68(11):2785–2799

Agrawal A, Gibson CC (eds) (2001) Communities and the environment: ethnicity, gender, and the state in community-based conservation. Rutgers University Press, London

Andhra Pradesh Forest Department (2002) Andhra Pradesh community forestry management: project implementation plan (PIP). APFD, Hyderabad

Arora D (1994) From state regulation to people's participation: case of Joint Forest Management in India. Economic and Political Weekly, pp 619–97

Buchy M, Subba S (2003) Why is community forestry a social- and gender-blind technology? The case of Nepal. Gend Technol Dev 7(3):313–332

Cornwall A (2003) Whose voices? Whose choices? Reflections on gender and participatory development. World Dev 31(8):1325–1342

Cornwall A (2004) Spaces for transformation? Reflecting on issues of power and difference in participation in development. In: Hickey S, Mohan G (eds) Participation: from tyranny to transformation. Zed, New York

Freire P (1995) The pedagogy of the oppressed. Continuum, New York (Original work published in 1970)

Guijt I, Shah MK (eds) (1998) The myth of community: gender issues in participatory development. Intermediate Technology Publications, London

Kabeer N (2005) Is microfinance a "magic bullet" for women's empowerment? Analysis of findings from South Asia. Econ Polit Wkly 29:4709–4718

Lama A, Buchy M (2002) Gender, class, caste and participation: the case of community forestry in Nepal. Indian J Gend Stud 9(1):28–41

Lefebvre H (1991) The production of space. Verso, London

Meinzen-Dick RS, Zwarteveen M (2001) Gender dimensions of community resource management: the case of water user's associations in South Asia. In: Agrawal A, Gibson C (eds) Communities and the environment: ethnicity, gender and the state in community based conservation, Rutgers University Press, London

Miles MB, Huberman AM (1994) Qualitative data analysis: an expanded sourcebook, 2nd edn. Sage Publications, Thousand Oaks

Moser C, Moser A (2005) Gender mainstreaming since Beijing: a review of success and limitations in international institutions. Gend Dev 13(2):11–22

Nandigama S (2009) Transformations in the making: actor-networks, elite-control and gender dynamics in community forest management intervention in Adavipalli, Andhra Pradesh, India. Doctoral Thesis. Shaker Publishing B.V, Maastricht

Resurreccion BP, Elmhirst R (eds) (2008) Gender and natural resource management: livelihoods, mobility and interventions. Earthscan, London

Ritchie J, Lewis J (eds) (2003) Qualitative research practice: a guide for social science students and researchers. Sage Publications, New Delhi

Sarin M (1998) Community forest management: whose participation…? In: Guijt I, Kaul Shah M (eds) The myth of community: gender issues in participatory development. Intermediate Technology, London

Sarin M (2001) Empowerment and disempowerment of forest women in Uttarakhand, India. Gend Technol Dev 5(3):341–364

United Nations (1997) Report of the Economic and Social Council for 1997, A/52/3

Walby S (2005) Gender mainstreaming: productive tensions in theory and practice. Soc Polit Int Stud Gend State Soc 12(3):321–343

Government Orders

GO Ms. No. 13. (2004). AP community forest management project: comprehensive orders. Government of Andhra Pradesh

GOAP (1993c) Dated 11.11.1993 Providing guidelines for formation of VSS. G.O. Issued by the Environment, Forest, Science & Technology Department. No. 224

GOAP (1996) Dated 07.12.1996 Providing comprehensive orders on JFM. G.O. Issued by the Environment, Forest, Science & Technology Department, No. 173

GOAP (2000) The Andhra Pradesh Vana Samrakshana Samiti and joint forest management rules. Draft Rules

GOI (1990) Government of India resolution on joint forest management. Ministry of Environment and Forests. New Delhi, Government of India

GOI (2000) Strengthening of joint forest management. Ministry of Environment and Forests, New Delhi, Government of India

Part III
The Global-Local Nexus

Chapter 6
Global Forest Governance: Multiple Practices of Policy Performance

Bas Arts and Innocent Babili

> *Many people have come to the conclusion that the international forest policy process has reached an impasse (…) After taking stock of the abundance of international agreements, processes and initiatives that are of consequence to forest-related issues, we would argue this is not the case—there is a large amount of interest and political will in addressing forests at the international level.*
>
> McDermott et al. 2007, p. 119

> *Success and failure do not exist 'in nature', independent of the observer, but are constituted in social interaction among a wide variety of actors (…). This raises the question of why some policies and projects are regarded as a success/failure and with which consequences.*
>
> Van Assche et al. 2011, p. 1

6.1 Introduction

Boay village, Babati district, Tanzania, July 2009—Often, as a European, you forget how cold it can be in Africa. This morning we travelled from Babati town to Boay village in the Northern, mountainous part of the district, close to the border of Kenya, a trip of about one and half hours over red sandy roads that slowly but surely climb into the mountains. When we reach the village, we find cloud-surrounded houses and trees. After about ten members of the village forest committee have arrived for a group interview, we decide to decamp to the nearby forest, which is managed jointly by the committee and the district forest department, in the so-called Joint Forest Management (JFM) programme. This is even better, despite the freezing cold, because the interview is now really 'on-site'. We want to talk about how the JFM rules on forest use and management, which were introduced about 15 years ago, have impacted on the traditional forest institutions of the village, such as the protection of sacred forest patches and tree species. At the end of the group interview, one member of the village forest committee asks us about the possibility of starting a REDD project in their forests with the help of our connections. We are surprised. The idea of REDD—Reduced Emissions from

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Deforestation and Forest Degradation—is to pay developing countries money for conserving their forests, because that would contribute to mitigating climate change. But at the time, it was a new policy: it had been introduced in climate change negotiations only two years previously. Yet this global idea had already been heard of in this remote area of Africa. Later, we were told that the villagers learnt about REDD from other European researchers who had visited their area.

The story above shows how strong the global-local nexus in governance is. The world has become flat, according to globalisation theorist and *New York Times* columnist Thomas Friedman (2006). So if we talk about global forest governance, we should not forget about these horizontal links and focus solely on negotiations and conflicts in United Nations (UN) offices. Global ideas, norms and rules, for example on REDD, travel from the global to the local and may make differences on the ground. In turn, practices and experiences in specific sites may feed into national and international dialogues on forests (Arts 2004). This horizontal perspective of 'glocal' networks in which ideas and norms travel to remote places is very different from the conventional and vertical way of looking at global forest governance . In such accounts, the concepts of 'international regime' and 'national politics' are key (Rittberger 1993). A regime refers to rules (from principles to procedures) that govern international issues such as security or the environment. Besides being interested in regime design at the international level, regime scholars are also interested in regime effectiveness at the national level: whether the regime objectives are realised within the countries that are party to it. Often, from a regime perspective, it is argued that global forest governance has largely failed. Firstly, deforestation and forest degradation are still going on globally, despite many international policy initiatives to reduce or stop them, and secondly, the regime lacks a legally binding international treaty that can enforce change upon countries. But if we take the first perspective of the 'glocal networks' as a starting point, then a different picture emerges that puts the idea of 'failure' into critical perspective.

In developing our argument, we will build on: (1) interpretive policy analysis and evaluation (Wagenaar 2011); (2) discursive institutionalism (Schmidt 2008); and (3) practice theory (Schatzki 2002). Interpretive approaches consider policies as 'systems of meaning' that constitute multi-interpretable realities of policy problems, solutions and evaluations. This point of departure implies that policy successes and failures are not discovered out there, but instead are actively constructed, or 'performed', by evaluators, in a way that depends on the evaluators' theoretical perspectives, evaluative methods, personal values, and the like. The second concept, discursive institutionalism, is an example of interpretative policy analysis, through which scholars try to understand how new ideas and discourses feed into institutional arrangements of rules, norms and beliefs, and, via these arrangements, impact on human behaviour. Yet discursive institutionalism has been criticised for being too focused on *formal* institutional arrangements and too silent on how, in practice, people *enact* ideas and rules, and with what consequences; hence, it is criticised for not being practice based. In this chapter we have therefore added practice theory to discursive institutionalism. This also fits in well with the above idea of 'glocal networks', because practice theory is interested in how people and their doings, sayings, and things are connected spatially and temporally. We will then merge these

three conceptual building blocks, to create the concept of 'multiple practices of policy performance'. This concept refers to two things: (1) the various effects global forest governance potentially produces on the ground; and (2) the different ways in which evaluators might interpret such effects.

In terms of terminology, we prefer 'global governance' over 'international regime' or 'international policy' (although we will sometimes use these terms to relate to the literature). The reason is that 'global' recognises the global political spaces beyond the nation state more than 'international', and 'governance' recognises the relevance of private actors and regulation in governing forests more than 'regime' or 'policy'. Global governance should, however, not be considered an autonomous layer above national or local politics, but instead as being part of 'glocal networks', as indicated above. Also, in this chapter we focus merely on local practices in the global South and not on those in UN offices or national departments. To illustrate our arguments, we will present in-depth case studies of participatory forest management and forest certification in Tanzania, and show how these practices are co-shaped by global ideas, norms and rules. Strategically, practices that seem to work, i.e. produce positive effects on forests and/or local communities on the ground, have been selected to put the 'failure account' into critical perspective.

The starting point of the chapter is nonetheless the failure of global forest governance, as argued by various scholars. Section 6.2 goes into the first argument for failure (deforestation), Sect. 6.3 into the second (no forest treaty). Both are put into critical perspective. In Sect. 6.4, we will introduce our own theoretical framework, built upon the concepts of discourse, institution and practice, to interpret global forest governance differently. The notion of 'multiple practices of policy performance' is introduced in Sect. 6.5. Then we turn to empirics in three steps. Firstly, global discourses and norms related to the two Tanzanian case studies are identified and briefly introduced (Sect. 6.6); secondly, participatory forest management in Babati district is dealt with (Sect. 6.7) and, thirdly, forest certification in Kikole community (Sect. 6.8). While the cases are being analysed, global ideas and norms and national policies and local practices become intertwined. Finally, in Sect. 6.9, the conclusions are presented and their implications considered.

6.2 The Assumed Failure of Global Forest Governance

The general perception on the performance of global forest governance is that it has largely failed. The key arguments for this failure, both in science and popular media, are twofold: (1) deforestation has continued globally, despite many international policy initiatives that have tried to stop or reduce it, and (2) the international forest regime lacks a legally binding core, an international forest treaty 'with teeth', which addresses forest issues and problems, including deforestation (Dimotrov 2005; Humphreys 2006; McDermott et al. 2007; Rayner et al. Rayner 2010). According to the Food and Agriculture Organization (FAO) 2010 global forest assessment, every year we lose about 13 million hectares of forests worldwide—an area about four

times bigger than the Netherlands. Hotspots of deforestation are found in Australia, Brazil, Congo Basin and Indonesia. Deforestation has many consequences for people, biodiversity and climate: about 2 billion people depend on forests for their livelihoods one way or the other; about half of the world's biodiversity in plants and animals is found in tropical rainforests, which cover around 6 % of the earth's surface; and deforestation and forest degradation are responsible for about 15–20 per cent of the human-induced climate change problem (Stern 2007; Wilson 2006). Important drivers of deforestation are (1) forest conversion for agricultural purposes, whether small-scale for local livelihoods or large-scale for commercial agriculture, such as cattle ranching, palm oil, soya and biofuels; (2) the creation of infrastructure, such as roads, development projects and dams for hydro power; (3) the harvesting of timber, particularly the cut-and-run method that does not sustain the forest base; and (4) biophysical and climatic conditions that enable or stimulate deforestation (easy access for humans, valuable tree species, etc.) (Geist and Lambin 2001; Scouvart et al. 2007). The causes underlying these drivers are considered to be, amongst others: economic factors (poverty, economic development, globalisation, transnational companies), demographic factors (such as increasing population pressure in many forested areas), cultural factors (such as values and norms related to nature and society) and political and institutional factors (such as war and conflicts; and the absence, weakness or non-implementation of policies, laws and regulations).

Without denying the actual or potential devastating consequences of forest conversion in specific areas, both for people and nature, a number of counterarguments may put things into perspective. Firstly, the 2010 FAO global forest assessment also acknowledges that the figure of 13 million hectares of annual deforestation is a *gross* one and takes no account of compensatory reforestation, the planting of new forests, or natural regeneration. When these are factored in, the net rate is 'only' around 5 million hectares, so the world gains about 8 million hectares of forests a year. Of course, the forests gained are mainly plantations (about 5 of the 8 million hectares), which have a bad image (Sands 2005): poor in biodiversity, often planted at the cost of land uses that would be more beneficial to people and having adverse environmental effects (on the hydrology, soil, landscape quality, incidence of fire, etc.). But plantations are useful too: they provide timber and non-timber forest goods, as well as forest services such as erosion prevention on slopes, carbon sequestration and even (some) biodiversity. Secondly, the figures for forest cover change in the 2000s are more positive than those of the 1990s (FAO 2010). Annual deforestation was about 20 per cent lower in the first decade of the new millennium than in the 1990s. Of course, these aggregate figures should be handled with care. There may be dramatic differences between areas in terms of the local situation and the changes over time. Moreover, there is fierce debate about the credibility and reliability of the FAO figures, because national inventories of different kinds and of different quality are integrated and up-scaled into one global dataset, producing all kinds of problems and controversies (compare Chap. 9 of this book on the construction of European biodiversity datasets). It has even been suggested that the errors involved in the global estimates may undermine the reliability of aggregate forest trends and the evidence for overall forest decline (Grainger 2008).

A third and final counterargument to the 'deforestation narrative' (Pülzl 2010) concerns the so-called phenomenon of 'forest transition', which can at least partly explain the decline in net deforestation rate. Meyfroidt and Lambin (2011) define a forest transition as 'a national-scale shift from a shrinking to an expanding forest area'. Both in Europe and North America, countries have gone through such transitions in their history, but today a number of developing countries (e.g. China, Chile, Vietnam and India) are also experiencing a shift from deforestation to forest expansion. Meyfroidt and Lambin (2011) distinguish five pathways that are potentially behind forest transitions: (1) the economic development pathway (which leads to less pressure on the forests through, amongst others, agricultural intensification, urbanisation and substitution of forest-related products); (2) the forest scarcity pathway (which increases timber and NTFP prices, the will to invest and political pressure to take action); (3) the state forest policy pathway (which, if acted upon, implies more and better conservation and sustainable use of forests); (4) the smallholder land use intensification pathway (e.g. through agroforestry, forest gardens and re/afforestation of abandoned lands); and (5) the globalisation pathway (while this process contributes to deforestation, it can also enhance forest conservation and management by bringing new approaches, technologies and knowledge). But these pathways are contingent upon socio-economic and political developments in specific areas, and unexpected events might intervene. Hence, the form and timing of a national forest transition are hard to predict for regions and countries. On the basis of comparative research, however, Palo and Lehto (2012) claim that certain preconditions are key: private forest ownership that is respected, market institutions that work, appropriate public policies and good governance. Together these factors should increase the economic value of forests and decrease the opportunity costs for sustainable forest management.

To sum up: at an aggregate level, worldwide per year we lose a forest area that is about four times the size of Netherlands, but this is largely offset by forest gains. One mechanism that can explain forest expansion is the phenomenon of forest transition: the shift from forest loss to forest gain that various countries are currently going through. However, the pathways to this transition may differ substantially for each region and country. Therefore, we should look beyond aggregate deforestation data at global level, and instead focus on forest *dynamics*—either deforestation or forest transitions—and the pathways behind these in *specific* regions, countries and areas. And we should so in particular because of the doubts about the reliability of aggregate figures in global datasets.

6.3 Global Forest Governance: Regime or *Non*-Regime?

Besides continuous deforestation, the other key argument used to support the claim that global forest governance has largely failed is the absence of an effective forest regime. Generally, a regime is described as principles, norms, rules and procedures that govern a given issue area in international relations (Arts 2000; Krasner 1982).

Examples of such issue areas are international trade, development cooperation or the global environment. Dimitrov et al. (2007), however, speak of a *non*-regime in the forest case, because *legally binding* rules that can be enforced upon countries and, through them, upon forest users are absent. This is remarkable, according to Dimitrov et al., because the circumstances seem to have been favourable for such a regime (high value of forests, high rates of deforestation and forest degradation, and strong political pressures from NGOs). Indeed, there have been several attempts by the international community to adopt a legally binding instrument (LBI) specifically for forests, but all have failed (Hoogeveen and Verkooijen 2010; Humphreys 2006; Pülzl 2010; Rayner et al. 2010). Most observers attribute this failure to the diverse forest values and interests of the various countries around the world: some countries have much forests, others do not; some produce timber, others mainly import it; some countries prioritise the economic value of forests, others the environmental value; some consider forests as a global common good, others as a natural resource to be governed nationally, and so on. Therefore, international forest negotiations have always been very complex and conflict-ridden, and an LBI has never come into being. As an alternative, many of the countries and NGOs involved have turned to other, multiple, options for forest governance: non-binding, private and public–private rules and mechanisms. Hoogeveen and Verkooijen (2010) call this the *portfolio* approach.

The question is whether or not non-binding initiatives constitute a regime. Regime theorists have been arguing this question for decades (Humphreys 2006; Krasner 1982; Rittberger 1993; Young 1980). Some prefer the strict option of an issue-specific binding 'treaty regime' (Dimitrov et al. 2007; Visseren-Hamakers et al. 2011); others prefer the broad option of a 'regime complex' that may contain soft law too, i.e. voluntary and private rules, as well as binding conventions on related topics (Rayner et al. 2010). If, as is our preference, the latter perspective is adopted, then the main elements of the current international forest regime complex are the following:

- Non-legally binding instruments, for example adopted by the UNCED Rio Conference in 1992 ('Authoritative Statement on Forests' and Chap. 11 of Agenda 21) and by the United Nations Forum on Forests (UNFF) in 2007 ('Non-Legally Binding Instrument on All Types of Forests'). These instruments aim at promoting ideas and norms related to the conservation and sustainable use of forests worldwide (Hoogeveen and Verkooijen 2010).
- Voluntary instruments of international organisations like FAO, UNFF and Forest Europe, such as National Forest Programmes (NFPs) and Criteria and Indicators (C&I) for sustainable forest management (Rayner et al. 2010).
- Programmes and procedures of international organisations and bodies, such as FAO (agriculture and forestry), UNFF (forest dialogue in the UN), International Tropical Timber Organization (ITTO; timber trade), UN Commission for Sustainable Development (the role of forests in sustainable development), and the World Bank (design and funding of forest programs and projects, particularly in developing countries) (Humphreys 2006).

- Private instruments, such as certification programmes, to promote sustainable forest management and sustainable production and consumption of timber in the international chain and the market (e.g. Forest Stewardship Council, FSC, and Program for the Endorsement of Forest Certification, PEFC) (Cashore et al. 2004).
- Programmes and procedures of public–private partnerships, such as the Round Table of Sustainable Palm Oil (RSPO) and the Collaborative Partnership on Forests (CPF) (Visseren-Hamakers and Glasbergen 2007).
- Legally binding treaties on forest issues that cover only part of the international forest agenda, such as the International Tropical Timber Agreement (ITTA), which aims at the expansion and diversification of trade in tropical timber (Humphreys 2006).
- Legally binding treaties on related topics, such as CITES (to ban or limit trade in endangered species), RAMSAR (protection of wetlands), UNFCCC (climate change), UNCCD (prevention of desertification) and CBD (conservation and sustainable use of biodiversity) that all in their own way relate to forest issues (respectively: endangered tree species, forests in wetlands, carbon stocks, anti-erosion measures and forest biodiversity) (Rayner et al. 2010).
- Bilateral agreements, such as the Forest Law Enforcement, Governance and Trade (FLEGT) initiative of the EU and certain timber-exporting tropical countries, to ban illegally logged timber from the European market via timber-tracking systems, public procurement policies and due diligence regulations for the private sector (Beeko and Arts 2010).

If the broad regime complex perspective is adopted, it is of course *non*-sense to maintain the proposition of a forest *non*-regime. Many ideas, norms and rules on forest and forest-related issues are indeed available internationally, as the above overview shows, so we assume that a forest regime exists, although it definitely does not address all the underlying drivers of deforestation and forest degradation (such as agricultural expansion, unrestricted forest concessions, or forest fires). The next question, of course, is whether such (mainly non-binding) ideas, norms and rules have implications for forestry, forest protection and forest-related livelihoods worldwide. Dimitrov (2005) is very clear on this. He contends that these are all symbolic and impotent institutions that governments nonetheless adopt to produce a smokescreen—as if they are doing something to respond to forest problems and political pressures—while their national interests prompt them to be inactive on forests at the international level. So, voluntary norms are adopted, but without any intention of really affecting countries and forest users on the ground. Humphreys (2006) too is quite pessimistic about the ability of the international forest regime to halt deforestation and degradation. Although he adopts a broader definition of a forest regime than Dimitrov, his conclusions are similar. He talks about a crisis in global forest governance. Because it is in the interests of countries and corporations to continue exploiting forests unrestrictedly worldwide, international rules on forest protection and sustainable forest management remain limited and ineffective.

We disagree with these 'failure accounts' of the international forest regime, at least partially. Besides putting the aggregate deforestation data in critical perspective, as was done in Sect. 6.2 above, our main argument below is that international ideas and discourses on sustainable forest management and forest conservation have been institutionalised in (inter)national norms and rules, which in turn have co-shaped local practices of forest use and management. To elaborate this argument, we introduce discursive institutionalism, practice theory and the terms 'multiple practices of policy performance' in the next two sections.

6.4 Institutions, Discourses, Practices

Discursive institutionalism has emerged from the debate on institutional dynamics (Schmidt 2005). Most institutional approaches have been well able to explain stability or continuity in terms of collective action—through norm-directed behaviour, standard operating procedures, path dependency or institutional logics—but have been much less able to account for institutional change and dynamics. One answer to this challenge has been discursive institutionalism, which attributes such dynamics to ideational and discursive change that 'trickles down' in institutions and practices (Blyth 2002; Hajer 1995; Schmidt 2008). Within this perspective, social dynamics are explained by new ideas and discourses that emerge in society—including in science—and force institutions to adapt or even to disappear. Well-known examples of discursive-institutional change are: (1) the shift from Keynesianism to Monetarism in economics in the early 1980s, a shift that induced fundamental reforms in the welfare state, and (2) the introduction of perestroika and glasnost by Gorbatsjov in the Soviet Union in the late 1980s, which led to the fall of communism (Schmidt 2005).

In discursive institutionalism, a discourse is generally described as the representation, communication and framing of ideas in social interaction that may or may not become institutionalized in social practices (Arts and Buizer 2009). Whether, how and when specific ideas become dominant, in other words 'get institutionalised', and others do not, may depend on many factors, e.g. credibility, relevance, resonance, consistency and coherence of ideas and discourses (Schmidt 2008). If perceived as legitimate by large groups of actors, they will deploy adherent and repetitive behaviour in accordance with those ideas, thereby 'anchoring' them in socially-embedded rules, norms and beliefs. Therefore, institutions are not something 'external' or 'given' (unless they are forced upon a community by external interventionists), but internal and contingent to social practices. They are continuously (re-)produced by agents through communicative interaction which makes both institutional continuity and change understandable. To analyse this linkage, Schmidt (2008) makes the distinction between people's 'background ideational ability' to make sense of and act upon rules, norms and beliefs and their 'foreground discursive ability' to deliberately maintain or change institutions.

Discursive-institutionalism is, however, criticised for being 'light' or 'thin' on discourse theory (Arts and Buizer 2009). It comes close to Habermasian approaches of discourse, which are deliberations based upon communicative rationality (Habermas 1996). This position can easily lead to an analysis of words, language and text without taking account of the social practices which are inherently intertwined with discourses (Hajer 1995). Also, the focus of discursive institutionalism is mainly on formal institutional arrangements, so deviations from or the reshaping of ideas, norms and rules in informal everyday practices can easily be overlooked (Cleaver 2002). Inspired by the practice based approach of this book, we would therefore like to add insights from critical institutionalism and practice theory to discursive institutionalism. Critical institutionalism shifts analytical focus from rules, norms and beliefs *as such* to their actual *enactment* in daily practices (Cleaver 2002; De Koning 2011). By doing so, critical institutionalists claim that rules, norms and beliefs are neither simply followed nor literally implemented, but instead are actively re-interpreted, re-negotiated and re-shaped by agencies, often producing different outcomes than the rules of the game predict. These scholars refer to this process as 'institutional bricolage', as it shows how people act as 'bricoleurs', responding strategically, or improvising with rules, norms and beliefs (see Chap. 4 of this book).

Practice theory also focuses on what is actually being done by human beings in concrete situations, sites and settings, but shifts attention away from institutions as key elements of social life towards social practices as a whole. In this book, a social practice is viewed as an ensemble of doings, sayings and things in a field of activity (compare Wagenaar and Cook 2003; Schatzki 2002). This approach takes the life-worlds of people in certain social or professional fields as points of departure and analyses them in an integrated manner, taking into account, for example, situated agencies, bodily movements, local knowledge, people's narratives, socially-embedded norms, and the material and living things people relate to (Reckwitz 2002; Wagenaar 2011). While doing so, it tries to do justice to the complexity of social life and the situatedness of human beings. It also wishes to counterbalance the formalistic and reductionist conceptualisations of human behaviour and society in much social theory (Bevir 2010). For example, Bourdieu (1990) posits the 'logic of practice' versus rational choice and institutional choice theories. He maintains that the drivers of human behaviour are neither rational calculations nor the conformation to rules, norms and beliefs, but instead are the generative principles of specific social practices. And these logics can only be retrieved from interpreting practices *themselves* from the inside, not from externally applied formal theories or ideal-type models, such as rational choice and institutionalism. Finally, practice theory criticises the often assumed hierarchical relationship between agency and structure in social affairs—or in our case, between global context and local sites—and posits instead a more horizontal worldview.

The combination of discursive institutionalism and practice theory implies a number of things for the analysis and understanding of the interface between global forest governance and in situ forest practices: (1) a 'logic of practice' perspective should be kept in mind while interpreting actors, discourses and

institutions in concrete situations, sites and settings; (2) therefore, global ideas, norms and rules should be linked to what people actually do and say on the ground, through a 'glocal network' perspective; and (3) it should be acknowledged that 'external' policies and institutions, such as those from global forest governance, do not hierarchically determine local practices, but co-shape these in interaction with situated actors.

6.5 Multiple Practices of Policy Performance

The above theoretical framework is in the tradition of interpretative policy analysis (Hajer and Wagenaar 2003; Wagenaar 2011). In this field, policies are not considered 'given' plans, laws and regulations that address 'objective' problems, but systems of meaning that define societal phenomena *as* policy problems in the first place and that are differently interpreted by various actors in the policy field in the second. This interpretive position has consequences for policy evaluation. No longer can a policy be conceptualised as a closed circle—or a policy cycle (Dunn 2003)—of linear connections between policy objectives, policy implementation and policy evaluation: a cycle in which objectives are first fixed, then implemented through certain means and evaluated on the basis of the fulfilment of these objectives. In the interpretive alternative, however, objectives are considered as multi-interpretive and dynamic, with implementation as a complex, messy and contingent process whereby policies are re-negotiated and reshaped 'on the ground', and evaluation is a performative act. Hence, successes or failures are neither given nor discovered, but actively *performed* by evaluators, in accordance with their theoretical approaches, evaluation methodologies and personal values and attitudes (Mosse 2005; Van Assche et al. 2011). Interpretative researchers engaged in evaluation studies prefer to do in-depth case studies or ethnographic studies to reconstruct, together with local practitioners and professionals, the enactment of external policies in local practices. Here, it is not the achievement of pre-fixed policy goals that is the focus of analysis, but the way people interpret, value, act upon and reshape such goals.

The failure of global forest governance recounted above has been 'performed' by certain authors, who have referred to a number of regime objectives that have not been fulfilled (reduction of deforestation and adoption of a legally binding forest treaty). Below, however, we will present another narrative of the same regime, pointing at two 'success stories' for forests and communities on the ground. We call this phenomenon 'multiple practices of policy performance'. Global forest governance is considered as producing various effects by different evaluators; hence, we observe multiple scientific practices of performing success and failure in this field. But the terms also have another meaning, referring to policy performance in local practices *per se*. Policies *do* something, produce effects, both intended and unintended; they are biased, include and exclude things, enable some and constrain others, and attach specific roles to people, thus

interfering in local power structures (Hajer 1995; Mosse 2005; Van Tatenhove et al. 2000). In that sense, they create—or try to create—realities in accordance with their own images and values. This type of performance can also be referred to as 'performativity': how discourses, datasets or policies become self-fulfilling prophecies, through naturalising limited and biased information as 'the truth' and through disciplining agencies to perform prescribed doings and sayings (Nash 2000; Van Assche et al. 2011). However, from critical institutionalism we also learn that agencies are to be considered 'bricoleurs', who have the capacity to improvise upon, to strategically respond to, to resist, or to ignore external policies, informed as they are by their own socially-embedded practical logics (Bourdieu 1990; Cleaver 2002; De Koning 2011). Policy effects are therefore always the result of the performativity of policies on the one hand and, on the other, of their enactment by agents in specific sites.

Below, we will analyse and evaluate two local cases of policy interventions in Tanzania that are nonetheless strongly related to global ideas, norms and rules: participatory forest management and forest certification. In doing so, we will use the concepts as indicated above. First, the emergence and contents of global discourses on both issues will be highlighted. Secondly, the institutionalisation of these discourses in international norms and national policies will be assessed. And in a third step, the two local Tanzanian cases will be described. The aim is to analyse practices of participation and certification and to understand how global ideas, norms and rules are performed by people on the ground and feed (or do not) into their logics of practice. The first two steps are based on a literature review, the third step on data collected by in-depth fieldwork by means of interviews, focus group discussions, surveys and participatory observation.

6.6 Global Forest Discourses and Norms

In a review paper, we charted the emergence and change of various forest discourses at global level since the 1970s, as distinguished in the scientific literature (Arts et al. 2010). The discourses ranged from those on tropical deforestation, wood fuel, protected forest areas and forest decline (the classical ones) to those on sustainable forest management, forest biodiversity, indigenous knowledge, forests and climate change, biomass and forest governance (the more recent ones). Two of these discourses are particularly relevant for identifying the 'discursive roots' of our two Tanzanian case studies on participation and certification. One is the discourse on sustainable forest management (SFM), the other is the discourse on forest governance.

SFM became particularly relevant to the forestry sector after the 1992 UN Conference on Environment and Development in Rio de Janeiro (UNCED). In the aftermath of that conference the concept of sustainable development became popularised, although it was originally mainstreamed by the Brundtland report *Our Common Future* in the late 1980s (WCED 1987). It refers to a development style that meets the needs of the present without compromising the needs of future

generations; hence, poverty should be eradicated as soon as possible, while the earth system should be preserved for the future. The sustainability concept, though, was far from new. Interestingly, it originated in German forestry during the 19th century (Rayner et al. 2010; Wiersum 1995). At that time, the notion of 'sustained yield' was introduced, to balance human needs for forest products with the production capacity of the forests ('harvest equals increment'). It was a response to the deforestation, forest degradation and timber scarcity in Europe at that time (due to war, clearing, fires, cultivation, lack of regulations, etc.). At a later stage, the concept of sustainable yield was broadened, because its production-oriented focus could not offer solutions to other forest-related problems (such as environmental deterioration and lack of social welfare around timber production sites). Ecological and social dimensions were subsequently added, and recently the concept of SFM has emerged. Today, SFM is based on the three pillars of sustainable development—economic viability, ecological sustainability and societal legitimacy—whereas the UN Forum on Forests considers SFM to consist of seven dimensions that should be sustained and improved for the future (forest resources, biological diversity, forest health/vitality, productive functions, protective functions, socio-economic functions and governance framework).[1] SFM, or variants thereof, such as sustainable management of forests or forest ecosystem management, has become institutionalised as a norm in various instruments of the international forest regime, both public (Non-Legally Binding Instrument on All Types of Forests) and private (Forest Stewardship Council), both binding (Convention on Biological Diversity) and non-binding (Rio Forest Principles; National Forest Programs; SFM Criteria and Indicators). Also, SFM now forms the basis of most forest policy and management around the world (FAO 2010). There are, however, many routes to Rome, so there are many ways to govern SFM – including community participation and forest certification.

Traditionally, the state has been very dominant in governing forests, not only in Europe (let alone in the Socialist East before 1989), but also in the colonies and in the post-colonial era (Scott 1998). In order to prevent a Tragedy of the Commons (Hardin 1968), it was believed that the state should regulate ownership and access to natural resources such as forests, as otherwise private resource users—in their continuous pursuit of personal gain—would jointly erode the resource base. In many cases, however, colonial, post-colonial and also capitalist and socialist states proved to be even worse managers of the forests than ordinary people: (1) by exploiting the resource to the extreme, often putting local livelihoods at risk, (2) by issuing concessions to private companies or public enterprises without any effective monitoring mechanism in place, and (3) by being absentee managers, leaving the forests open to local, often illegal, use (Humphreys 2006; Peluso 1992). This situation led to increasing criticism from different angles. There was opposition by grass-roots movements, which fought for local forest rights; there was pressure from international organisations and donors, who advocated

[1] http://www.un.org/esa/forests/index.html.

sustainable forest management; and there were protests by NGOs, which claimed the need for forest conservation (Agrawal et al. 2008). For all these reasons, many countries around the world have recently reformed public forest policy and law—a process which is called 'forest governance' or 'good forest governance'.

Current forest governance mainly comes in three forms: (1) decentralisation, (2) participation, and (3) marketisation (Agrawal et al. 2008; Lemos and Agrawal 2006). The central idea behind Participatory Forest Management, or PFM, is that local management of forests, either by communities or jointly with forest departments, is more effective than management by central state institutions, because 'ownership', either *de juro* or *de facto*, is given back to the people. As long ago as the early 1970s, the idea of community participation was being put into practice in a few countries, advocated by NGOs and scientists and intensively discussed in the FAO at global level (Arnold 2001). Later, these ideas became norms in international law, both as hard and soft law, e.g. in Agenda 21, the Rio Forest Principles, the Convention on Biological Diversity and the Non-Legally Binding Instrument on All Types of Forests. Such ideas and norms have also permeated to national levels, or strengthened already existing participatory approaches in countries. For example, India, Nepal, Mexico, Bolivia, Kenya and Tanzania have pioneered different forms of PFM since the early 1990s, and many countries, from Ethiopia to Albania, have followed. Today, about 25 per cent of the world's forests are (co)managed by local communities (FAO 2010).

An example of marketisation is forest certification (Cashore et al. 2004; Visseren-Hamakers and Glasbergen 2007). It entails a market-based mechanism of independent labelling and monitoring that aims to guarantee to both consumers and producers that timber products originate from sustainably managed forests. Global debates on forest certification started back in the 1980s in the ITTO (International Tropical Timber Organization), but for years countries could not agree on a system (Humphreys 2006). Frustrated about this government failure, non-state actors took the lead themselves. The first international organisation for forest certification was the Forest Stewardship Council (FSC), established in 1993. Because this was an NGO-led initiative, with quite stringent requirements on SFM, business initiatives followed later; today, the largest is the Programme for the Endorsement of Forest Certification (PEFC). Together, the FSC and PEFC now cover nearly 400 million hectares forests worldwide (about 10 per cent of the world's forests) and thousands of companies and products, although most of these are located and traded in the global North.[2] FSC standards are now used in 80 countries and PEFC in 30. Recently, the FSC standards have been further modified, to include specific standards for small-scale and community-managed forests (De Pourcq et al. 2009; Wiersum et al. 2011).

[2] http://www.fsc.org/77.html; http://www.pefc.org/.

6.7 Participatory Forest Management in Babati District, Tanzania

Decentralisation of forests started in Tanzania in the early 1980s (Blomley et al. 2008; Kajembe and Nduwamungu 2004). The Local Government (District) Authorities Act of 1982 empowered the village councils to propose bylaws related to natural resources management, while the district councils were given the power to approve these bylaws. This process of decentralisation was also reflected in the development of the National Land Policy of 1995 and the National Forest Policy of 1998. These two policies recognise the active participation of local communities and local government in the management of land and forest resources. Under this new umbrella of decentralisation, participatory forest management (PFM) was adopted in Tanzania too. Over time, the Tanzanian PFM approach developed into two approaches: joint forest management (JFM) and community-based forest management (CBFM). Under the JFM arrangement, which is applied mainly in national or local forest reserves, the forest rights are usually held by the government and the communities, assisted by the district forest office, are the local managers. Under the CBFM arrangement, on the other hand, local people are both owners and managers. It applies to 'village forest lands'. Since the villages that are dealt with below are under different forest regimes—both JFM and CBFM—we will continue using the general notion of PFM.

This case study focuses on four villages in Babati district in Northern Tanzania (Babili and Arts, forthcoming). A pilot PFM scheme has been running in that district since 1994. Previously, the forests close to the villages functioned in practice as open access regimes, so deforestation and degradation were severe. It was hoped that the PFM programme would help reverse these trends, by a combination of 'rights' and 'responsibilities': the forest revenues and rights were (partly) returned to the communities, who, in exchange, were made responsible for managing the forest actively and responsibly. International donors (from Sweden (SIDA) and Norway (NORAD) were closely involved in setting up the programme. Through them, global ideas and norms strongly associated with the international donor community, and national policies strongly linked with the Tanzanian government, entered local spaces. The donors provided PFM methodology and facilitated the design and setting up of the projects in the villages. The latter was done in a participatory way. The project designs were discussed with the villagers, and the village councils played a key role in the design and implementation. Initially, the projects faced opposition, as villagers feared that PFM would imply restrictions to the access to and use of forest resources they had previously enjoyed, and thus they feared for their forest-dependent livelihoods. This opposition was softened through argumentation and deliberation (because livelihoods would be threatened in the long run anyway, given current deforestation and degradation trends) and by amending the programme (allowing local people to play a bigger role). The result was that the PFM projects were ultimately adopted by majority voting in the village councils.

Practically, PFM would imply many things: a forest village committee being set up; new rules on forest use and management; zoning of the forests; reforestation and afforestation; restrictions or even bans on timber harvesting, cattle grazing and charcoal production; a system of permits, sanctions, fees and fines; a system of monitoring (forest guards); and a contract with the district forest department. In other words, the new idea of PFM brought with it an entire 'institutional package', which started to interfere with daily practices and local institutions. In particular, there was resistance to restrictions on grazing and 'illegal' use (because livestock are crucial for villagers' livelihoods). In one village, a ban on grazing was announced twice and then lifted twice. Here we observe 'bricolage practices' (see Chap. 4) in relation to a rule that did not match the logic of practice on the ground. In addition, fines and fees were regularly adapted over time: increased to reduce illegal use, or lowered to accommodate resistance (again in the case of grazing). And the new rules, norms and beliefs did not automatically match the traditional, socially-embedded institutions. The role of the elders in sacred forest management was challenged by the village forest committee, the importance of ritual forest patches diminished, and the protection of catchment forests and certain tree species according to customary law lost some of its meaning, and was replaced by PFM rules. In addition, the village councils and the forest committees sometimes disagreed about authority: who had a say in what, and when. A final observation on 'the package' is that the roles of the district forest department and of its forest officials in the field did not totally vanish in PFM, but they did change dramatically: from issuing commands and fining people to facilitating a new management system. Such roles were, of course, not immediately internalised, so here too, conflicts arose now and then.

From the literature we learn that the results of PFM in various countries—e.g. India, Nepal, Mexico, Bolivia, Kenya—have so far been reported as 'mixed' (Charnley and Poe 2007; Mustalahti and Lund 2010). Where success is reported, this usually relates to the condition of the forest rather than to enhancing local livelihoods or empowering local people. Also, PFM has itself been the subject of serious power struggles. Elite capture in village forest committees has frequently been reported, as have conflicts between forest officials and communities over valuable timber resources and land rights. This Tanzanian case, though, can be seen as atypical in terms of various indicators (income, governance, forest condition). A survey of nearly 400 households in the four villages in 2008 yielded the following results (Babili and Arts, forthcoming):

- About 85 % of the respondents had observed an improvement in the forest condition since the introduction of PFM. They mentioned an increase of the forest cover, more reliable water springs, growth of more grasses (fodder!), reintroduction of some lost tree species (for example African teak), less soil erosion on forested slopes, and an increase of wildlife, particularly monkeys and leopards (which was welcomed by the forest rangers, but received with mixed feelings by the villagers, because monkeys may destroy harvests and leopards prey on animals which are also useful for people). Some of these perceptions, particularly relating to the change in forest cover, could be validated by GIS data. A time

series of satellite images of the four village forests under PFM—about 2,800 hectares in total—revealed an increase in forest cover over time. Whereas this cover declined by about 50 hectares in the 1990s, in the first decade of the 21st century there was a gain of about 100 hectares (bearing in mind that PFM started in 1994 and that the population pressure in the area has increased since then).

- About 90 % of the respondents considered that a number of governance indicators had improved since the introduction of PFM. The relationship with the district forest department and forest officials had strongly improved, they were being held much more accountable than they had been in the past, and there were more opportunities for people to participate in the forest institutions.
- PFM scored worst in relation to its impact on livelihoods and income. About 80 % of the respondents reported their income had remained the same since the introduction of PFM. Household income data from the survey also show no statistically significant differences between forest-related income before and after the introduction of PFM. One can react to this result in two ways. One is with concern, because in the end, it must be possible to earn a livelihood in this impoverished region, so any management system—PFM or otherwise—should produce enough income, or better, *more* income, to improve the livelihood situation of the poor. On the other hand, given all the restrictions that came with PFM by comparison with the open access situation that had existed previously, the fact that incomes had remained more or less at the same level was not such a bad result.

All in all, PFM performed quite well in this region. And others have also reported some fairly successful PFM practices in Tanzania (Blomley et al. 2008). So, an idea that started off as being general and globally discussed, travelled around the world as a norm, became institutionalised in national policies and local practices, and the local people experienced the resulting effects on households and forests on the ground as being generally beneficial. In this case, global forest governance can be envisaged as a strong global–local nexus: starting from the FAO offices in Rome, going to the SIDA offices in Stockholm and then to the government departments in Dar es Salaam and, finally, to the villages in Babati district.

6.8 Forest Certification in Kikole, Tanzania

Kikole is a small community of about 250 households in Southeast Tanzania (Salasala 2011). Since 2004, it has managed a forest area of about 450 hectares under the PFM programme (see above). This forest is rich in African blackwood (*Dalbergia melanoxylon*) that is well suited for carving statues and making music instruments. Until recently, this timber was sold on the local market for low prices, and although the forest was being managed under a statutory management plan under PFM, illegal logging remained a huge problem. In order to try to halt this, the regional NGO Mpingo Conservation and Development Initiative (MCDI) started to engage communities in a Forest Stewardship Council (FSC) group certification process in order

not only to conserve and sustainably manage the resource, but also to foster local livelihoods by legally harvesting and selling timber on the international market. Kikole became part of this initiative, and after a transitional period of education, capacity building, change of forest use and management practices and external auditing, the community-managed forest was awarded an FSC certificate in 2009. Hence, through MCDI, Kikole entered the global certification community, which endorses particular ideas, norms and rules that henceforth started to co-shape everyday life related to forests and trees in this village too.

In 2010, the first certified timber was harvested—worth about USD 1,800 and destined for the UK market. This sum of money was largely spent on public investments (drinking water, health care). In addition, the FSC project delivered jobs, built organisational capacity, raised the community's profile and reconfirmed local ownership of the forests (Salasala 2011). Shifting cultivation in the forests and forest fires have diminished, whereas wildlife—particularly elephants and monkeys—has increased (although most locals are not happy with this; see below). But the most important result was that the community could now sell blackwood at a price that was about 400 times higher (!) than before, i.e. the difference between the local (mainly) illegal market and the global certified market. It has often been claimed that the price premium of FSC is low, or even absent, but in this case, the situation is clearly different (De Pourcq et al. 2009).

This result is all the more remarkable since FSC certification has generally been a complicated business for local communities. Whereas about 25 % of the world's forests are under some system of community management, less than 5 % of FSC certification is community-based.[3] Also, case studies show that it is difficult for communities—and often not attractive socio-economically—to get or keep a certificate after external auditing (De Pourcq et al. 2009; Wiersum et al. 2011). And if a community does succeed in obtaining certification, it is usually very dependent on external support—from NGOs, donors, foresters, timber sellers and buyers, etc. What will happen when this support is withdrawn? In the case of Kikole too, the role of external supporters is huge. The NGO MCDI has already been mentioned. This NGO is sponsored by WWF, BP, Conservation International, and Norway, amongst others, which—by the way —also makes it susceptible to global ideas and norms, not least when trying to get donor funding. And market demand in the UK is very dependent on the Sound and Fair Campaign, which actively lobbies the musical instrument industry to buy the Tanzanian certified blackwood. The vulnerability of the initiative is moreover increased by adverse effects locally. Some of FSC's requirements are at odds with local practices and logics. For example, conflicts between humans and wildlife, particularly elephants, have increased. Whereas these animals used to be kept away by fires, now that it is forbidden to burn forest they are again becoming a nuisance in the villages, forests and fields. Alternatives to keep them at bay (e.g. burning pepper in the forest) have not yet proven to be effective. And a ban on shifting cultivation is not necessarily a good thing for all households from a livelihood perspective.

[3] http://www.fsc.org/77.html.

The case of Kikole community certification under FSC is an exceptional (although not perfect) success story, because certification resulted in an income premium that had never previously been experienced. Additionally, the revenue was invested to benefit the local people, jobs were created, and the condition of the forest improved. Yet problems remain related to encounters between humans and wildlife, shifting cultivation and a strong dependence on external donors and niche markets, and this makes the initiative rather vulnerable. Nonetheless, on the whole, admission to the global certification community seems to have produced positive effects for this community so far.

If we take both cases from Tanzania together, it is tempting to assume that they might be part of a more general 'smallholder pathway' towards a forest transition in Tanzania (Meyfroidt and Lambin 2011). After all, both cases show an improvement in the condition of the forest. Others, too, have also shown that PFM in Tanzania is effective (Blomley et al. 2008). Yet, as a whole, Tanzania is still losing forest (about 1 per cent, or over 400,000 hectares, of its area annually; FAO 2010). So it seems that more Babatis and Kikoles as well as more pathways than the smallholder one will be needed to push the country towards a national forest transition.

6.9 Conclusion

Governance success and failure are performed by evaluators, not discovered. In this chapter, an account of global forest governance failure is juxtaposed with our own account of two 'global' success stories. Table 6.1 below summarises the main arguments of these two accounts in this chapter (so the table cannot be generalised). Aggregate figures on worldwide deforestation and a legal argument that the international forest regime is in fact an ineffective *non*-regime are at odds with various and country-specific pathways of forest transitions and two positive experiences with participatory forest management and forest certification in Tanzania, both strongly influenced by global ideas, norms and rules. The global forest governance failure is informed by a strict definition of a regime, i.e. a *treaty* regime, our account by a much broader interpretation of a regime *complex*, in which voluntary ideas, norms and rules are also considered relevant. Moreover, these are assumed to travel from the global to the local, and vice versa, through networks of forest departments, scientists, policy makers, donors, companies, NGOs, social movements, etc. This is a rather horizontal way of looking at the world, which stands in opposition to the vertical one of mainstream regime theory, which assumes that only hierarchical power embedded in the hard law of a treaty regime can change national politics. Theoretically, both accounts are different too: institutions and interest as key concepts on the one hand, and discourses, institutions and practices on the other. Finally, the evaluations were done differently: an assessment of the achievement of regime objectives on the one hand, versus

Table 6.1 Comparison of different accounts of success and failure in global forest governance

Global forest governance	Account of 'failure' (global forest governance literature)	Account of 'success' (this chapter)
Main arguments	1. Deforestation continues; 2. No legally binding forest treaty	1. Pathways of forest transition; 2. Success stories of participatory forest management and forest certification
Theoretical perspective	Treaty regime	Regime complex; discursive institutionalism; practice theory
Worldview	Vertical: international regimes and national politics	Horizontal: ideas, norms and rules travel through 'glocal' networks
Assessment	Regime effectiveness; goal achievement	People's and researcher's interpretations of the local performance of global ideas, norms and rules

people's interpretations, as reconstructed by the researchers, of the local performance of global ideas, norms and rules on the other.

It is of course up to the reader to decide which of the two accounts is the most persuasive. Yet, we would argue that interpretive policy analysis and evaluation are to be preferred because a few aggregate, de-contextualised and reductionist indicators can never fully capture the richness, complexity and messiness of how global governance relates to social fields and practices, nor fully grasp their performance in terms of success and failure, as experienced by those involved. This is not to say, by the way, that an interpretive account of global forest governance will necessarily describe, or 'perform', success stories (or that mainstream regime theory will always identify failure; as said, the table cannot be generalised in these terms). Here we have focused on cases in which positive effects on forests and people have been reported by the communities, to counterbalance narratives on global forest governance failure. But of course, there are many practices out there that might point at problems, difficulties and dilemmas as well (for example, communities that lost their certification after three years, participatory forest committees hijacked by village elites, community forestry that makes no difference to the forest, fraudulent use of the FSC label, corruption in forest management, social conflicts due to new local forest institutions, etc.). Therefore, a focus on other cases of participatory forest management and forest certification elsewhere in the world would probably have produced different outcomes. But that is exactly what is meant by the concept 'multiple practices of policy performance'.

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References

Agrawal A, Chhatre A, HardinHardin R (2008) Changing governance of the world's forests. Science 320:1460–1462

Arnold J (2001). Forests and people. 25 years of community forestry. FAO, Rome

Arts B, Appelstrand M, Kleinschmit D, Pülzl H, Visseren-Hamakers I et al (2010) Discourses, actors and instruments in international forest governance. In: Rayner J, Buck A , Katila P (eds) Embracing complexity. Meeting the challenges of international forest governance. IUFRO World Series 28, 57–74

Arts B (2000) Regimes, non-state actors and the state system. A structurational regime model. Eur J In Relat 6(4):515–544

Arts B (2004) The local-global nexus. NGOs and the articulation of scale. J Econ Social Geogr 95(5):498–511

Arts B, Buizer M (2009) Forests, discourses, institutions. A discursive-institutional analysis of global forest governance. For Policy Econ 11:340–349

Assche K. van, Beunen R, Duineveld M (2011) Performing success and failure in governance. Dutch planning experiences. Public administration (article in press)

Babili I, Arts B (forthcoming). Institutional change and performance in decentralized forest management in Babati district, Tanzania Babati district, Tanzania (paper in preparation)

Beeko C, Arts B (2010) The EU-Ghana VPA: a comprehensive policy analysis. Int Forestry Rev 12(3):221–230

Bevir M (2010) Democratic governance. Princeton University Press, New Jersey

Blomley T, Kerstin P et al (2008) Seeing the wood for the trees. An assessment of the impact of participatory forest management on the forest condition in Tanzania. Oryx 42(3):380–391

Blyth M (2002) Institutions and ideas. In: Marsh D , Stoker G (eds) Theory and methods in political science. Palgrave McMillan, Houndmills and New York

BourdieuBourdieu P (1990) The logic of practice. Polity Press, Cambridge

Cashore B, Auld G, Newson D (2004) Governance through markets. Forest certification and the emergence of non-State authority. Yale University Press, New Haven

Charnley S, Poe M (2007) Community forestry in theory and practice. Where are we now? Annu Rev Anthropology 36:301–336

Cleaver F (2002) Reinventing institutions. Bricolage and the social embeddedness of natural resource management. Eur J Dev Res 14(2):11–30

De Pourcq K, Thomas E, van Damme P (2009) Indigenous community-based forestry in the Bolivian lowlands. Some challenges for certification. Int Forestry Rev 11:12–26

Dimitrov R (2005) Hostage to norms. States, institutions and global forest politics. Global Environ Polit 5(4):1–24

Dimitrov R, Sprinz D, DiGuisto G, Kelle A (2007) International non regimes. A research agenda. Int Stud Rev 9:230–258

Dunn W (2003) Public policy analysis. An introduction. Pearson Education Ltd, Upper Saddle River, NJ

FAO (2010) Global forest resources assessment 2010. Food and Agriculture Organization, Rome

Friedman T (2006) The world is flat. The globalized world in the 21st Century. Penguin Books, London

Geist H, Lambin E (2001). What drives tropical deforestation? LUCC Report Series No. 4

Grainger A (2008) Difficulties in tracking the long-term trend in global forest area. PNAS 105(2):818–823

Habermas J (1996) Between facts and norms. Polity Press, Cambridge

Hajer M (1995) The politics of environmental discourse. Ecological modernization and the policy process. Oxford University Press, Oxford

Hajer M, Wagenaar H (eds) (2003) Deliberative policy analysis. Understanding governance in the network society. Cambridge University, Cambridge

Hardin G (1968) The tragedy of the commons. Science 162:1243–1248

Hoogeveen H, Verkooijen P (2010) Transforming sustainable development diplomacy. Lessons learned from global forest governance. Doctoral thesis. Wageningen University, Wageningen
Humphreys D (2006) Logjam. Deforestation and the crisis of global governance. Earthscan, London
Kajembe G, Nduwamungu J (2004). Participatory forest management participatory forest management in Tanzania. A paradigm shift. Paper presented at the Earth Day on April 22, 2004 at the Auditorium of the American Embassy, Dar es Salaam, Tanzania
Koning J. de (2011) Reshaping institutions. Forest policy in Bolivia and Ecuador. PhD Diss, Wageningen University, Wageningen
Krasner S (1982) Structural causes and regime consequences. Regimes as intervening variables. Int Organiz 36(2):185–206
Lemos M, Agrawal A (2006) Environmental governance. Annu Rev Env Resour 31:297–325
McDermott L, Carroll AO', Wood P (2007) International forest policy. The instruments, agreements and processes that shape it. United Nations Forum on Forests Secretariat, New York
Meyfroidt P, Lambin E (2011) Global forest transition. Prospects for an end to deforestation. Annu Rev Env Resour 36:343–371
Mosse D (2005) Cultivating development. An ethnography of aid policy and practice. Pluto Press, London
Mustalahti I, Lund J (2010) Where and how can participatory forest management succeed? Learning from Tanzania, Mozambique, and Laos. Soc Nat Resour 23:31–44
Nash C (2000) Performativity in practice. Some recent work in cultural geography. Prog Hum Geogr 24(4):653–664
Palo M, Lehto E (2012) Private or socialistic forestry? Forest transition in finland versus deforestation in the Tropics. Springer, Dordrecht
Peluso NL (1992) Rich forests, poor people. Resource control and resistance in Java. University of California Press, Berkeley, Los Angeles and Oxford
Pülzl H (2010) Die politik des waldes. Böhlau, Wien
Rayner J, Buck A, Katila P (eds) (2010). Embracing complexity. Meeting the challenges of international forest governance. IUFRO World Series 28
Rittberger V (ed) (1993) Regime theory and international relations. Clarendon Press, Oxford
Salasala N (2011) Impact of FSCFSC on social welfare. The case of Kikole community Kikole community-based forest project in Tanzania. MSc Thesis: Wageningen University, Wageningen
Sands R (2005) Forestry in global context. CABI, Oxfordshire
Schatzki T (2002) The site of the social. A philosophical account of the constitution of social life and change. The Pennsylvania State University Press, Pennsylvania
Schmidt V (2005) Institutionalism and the state. In: Hay C, Marsh D, Lister M (eds.) (2005). The state: theories and issues. Basingstoke: Palgrave
Schmidt V (2008) Discursive institutionalism. The explanatory power of ideas and discourse. Annu Rev Political Sci 11:303–326
Scott JC (1998) Seeing like a state. How certain schemes to improve the human condition have failed. Yale University Press, New Haven and London
Scouvart M, Adams R, Caldas M et al (2007) Causes of deforestation in the Brazilian Amazon. A qualitative comparative analysis. J Land Use Sci 2(4):257–282
Stern N (2007) The economics of climate change. The stern review. Cambridge University Press, Cambridge
van Tatenhove J, Arts B, Leroy P (eds) (2000) Political modernization and the environment. The renewal of policy arrangements. Kluwer Academic, Dordrecht
Visseren-Hamakers I, Glasbergen P (2007) Partnerships in forest governance. Global Environ Change 17:408–419
Visseren-Hamakers IJ, Arts B, Glasbergen P (2011) Interaction management by partnerships. The case of biodiversity and climate change. Global Environ Polit 11(4):89–107
Wagenaar H (2011) Meaning in action. Interpretation and dialogue in policy analysis. M. E. Sharp Inc, New York

Wagenaar H, Cook S (2003). Understanding policy practices: Action, dialectic and deliberation in policy analysis. In: Hajer M , Wagenaar H(eds). Deliberative policy analysis. Understanding governance in the network society. Cambridge University, Cambridge pp. 139–171

WCED (World Commission on Environment and Development) (1987) Our common future. Oxford University Press, Oxford

Wiersum F, Humphries S , van Bommel S (2011). Certification of community forestry enterprises. Experiences with incorporating community forestry in a global system for forest governance. Small-Scale Forestry (article in press)

Wiersum KF (1995) 200 years of sustainability in forestry Lessons from history. Environ Manage 19(3):321–329

Wilson E (2006) Nature revealed. Selected writings 1949–2006. The Johns Hopkins University Press, Baltimore

Young O (1980) International regimes: problems of concept formation. World Polit 32(3): 331–356

Chapter 7
The Practice of Interaction Management: Enhancing Synergies Among Multilateral REDD+ Institutions

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7.1 Introduction

During the second half of the twentieth century, hundreds of international environmental agreements were developed (Mitchell 2003). During the past few decades, these intergovernmental regimes have increasingly been complemented by private governance initiatives of market and/or civil society actors (Cashore et al. 2004; Glasbergen et al. 2007), creating a complex governance system of public, hybrid (public–private) and private steering mechanisms that are working towards sustainable development (Biermann et al. 2009; Hoogeveen and Verkooijen 2010; Visseren-Hamakers and Glasbergen 2007; Young 2002).

Due to this rising density of international arrangements, the number of interactions among these institutions is also expanding (Young 2002). These developments have raised several questions in regime and governance literature, including questions on how these institutional interactions are affecting individual regimes (Leebron 2002; Oberthür and Gehring 2006; Young 1996), and how these interactions could be managed in order to improve the effectiveness or efficiency of the interacting institutions (Oberthür 2009; Oberthür and Stokke 2011; Van Asselt 2007). However, interaction management, defined as 'conscious efforts by any relevant actor or group of actors, in whatever form or forum, to address and improve institutional interaction and its effects' (Stokke and Oberthür 2011: p. 6), has until today mainly been discussed theoretically; few empirical analyses of interaction management have been conducted so far (see e.g. Oberthür and Stokke 2011; Visseren-Hamakers et al. 2011). Consequently, little is known about how actors involved in sustainable development diplomacy manage interactions in practice, although the call for 'institutional synergies' is increasingly becoming mainstreamed into global negotiations, and institutional interactions are actively being managed. A good example is the Joint Liaison Group, through which the secretariats of the three Rio conventions (the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biological

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Diversity (CBD), and the United Nations Convention to Combat Desertification (UNCCD) collaborate (Jóhannsdóttir et al. 2010).

The call for institutional collaboration is neither new, nor unique to sustainable development issues. However, the proliferation of international instruments, especially those relating to global forest governance, has made the need for interaction management on this issue particularly urgent. Forests are addressed in different treaties, conventions, and international organisations in connection with various other issues, including climate change, trade, biodiversity and agriculture (Rayner et al. 2010). An important example is the current effort to reward developing countries for reducing emissions from the forest sector (REDD+), which has progressed significantly since the idea was launched in 2005 and formally included in the negotiations of the Conference of the Parties (COP) of the UNFCCC in Bali in 2007.

The goal of this chapter is to expand our understanding of the practice of interaction management on the issue of REDD+. It studies the manner in which synergies are being addressed in the current negotiations in and beyond the context of the UNFCCC on REDD+, formally defined as reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. The chapter particularly focuses on the interaction management of the three global programmes on REDD+, as they form the core of the institutional architecture: the Forest Carbon Partnership Facility (FCPF), the Forest Investment Program (FIP) and UN-REDD. We believe our case study on REDD+ has been in place long enough to compile track records that can be evaluated systematically. Given our practical experience in and theoretical knowledge of the governance and diplomacy of a range of other complex global public goods issues, such as biodiversity, agriculture and climate change, we expect our findings to have relevance in these domains as well.

For our analysis we conceptualise interaction management as a practice, thus we apply a practice based approach. In doing so, the chapter also aims to contribute to the advancement of the institutional interaction debate, and connect to the on-going debates in regime and governance research by approaching the interactions and their management from a new theoretical angle. Applying a practice based approach to the field of international environmental politics can be considered a relatively new contribution, not only to the interaction management debate but also to practice theory, since only a few authors have discussed policy, politics, diplomacy or International Relations from a practice perspective (see e.g. Neumann 2002; Wagenaar and Cook 2003).

The chapter is structured as follows. We will further conceptualise interaction management from a practice based approach in Sect. 7.2. In Sect. 7.3 we will first sketch the policy background of REDD+, after which we analyse REDD+ interaction management in detail, applying the approach presented in Sect. 7.2. In the final section we discuss the analysis and present our main findings.

7.2 Conceptualisation of Interaction Management as a Practice

As stated above, this chapter aims to inform the theoretical debates on institutional interaction and interaction management by providing insights into the practices of interaction management in current REDD+ negotiations.

To date, the institutional interaction literature has focused largely on discussing and 'mapping' the *interactions* among different international regimes or institutions (Haas et al. 1995; Oberthür and Gehring 2006; Young 1996), and on developing theoretical frameworks by which to understand the differing nature of these interactions (Gehring and Oberthür 2009). The literature shows that institutions influence each other's development and effectiveness negatively, neutrally or positively. More recently, a small community of scholars has taken on the task of studying *interaction management*. Though this literature on institutional interactions and interaction management has contributed importantly to our understanding of international environmental agreements, since most of the cases analysed are environmental regimes, its approach has remained rather rational, managerial and a-political. The basic assumptions are that institutions interact because their issues are related and that negative interactions can be improved simply by managing them. Also, although the role of actors or agency in institutional interaction is recognised, the debate remains highly institutional. The main premise is that the rules of one institution influence those of another. Furthermore, the literature to date has tended to be more instrumental than analytical, providing little insight into how interactions are managed or why they are being managed in the way they are.

In order to fill these gaps in current analyses, we would like to introduce a 'practice turn' to the debates on institutional interaction and interaction management. This is will allow us to provide a more political analysis of how institutional interactions are managed in practice. We do so by applying a practice based approach to REDD+ interaction management: we conceptualise interaction management as a practice. Using the analogy of a dramaturgical perspective (Goffman 1959), the practice based approach allows us to take a look 'back stage', where interaction management practices are being shaped through the everyday activities of the actors involved. This runs contrary to the current research on institutional interactions and their management, which have usually remained 'front stage', analysing how regimes formally interact, and how the actors involved in the institutions manage these interactions in official activities and procedures, such as through the Joint Liaison Group. The practice based approach is also reflected in the research methodology that we have used. The fact that one of the authors has been involved in managing the institutional interactions on REDD+ as a practitioner has enabled us to give a 'back stage' account of the interaction management practices. In this chapter, we reflect on this 'back stage' experience through the lens of the practice based approach. With this approach, we thus aim to understand how the institutional interactions on REDD+ are being managed, and why they are being managed the way they are.

As presented in Chap. 1, a *practice* can be understood as 'an ensemble of doings, sayings and things in a specific field of activity' (Arts et al. this volume). Practice theory studies how people are involved in social practices, how practices (re-)produce social relations, and how practices, structures and institutions relate to one another (Bourdieu 1977; Foucault 2000; Østerlund and Carlile 2005; Reckwitz 2002).

Practices have been thoroughly studied in the field of organisational studies, with a focus on knowledge sharing and learning. An important concept in these studies is the *community of practice*, which refers to a set of relations among persons and activities over time, in relation with other and overlapping communities of practice (Lave and Wenger 1991). Other authors use similar concepts, including 'bundles' of practices and arrangements, which are composed of practices and material arrangements (Schatzki 2005), or networks of practice, which are social networks of actors who engage in common practices and thereby enable knowledge flows among them (Brown and Duguid 2001). These networks are broader than communities of practice and can include various such communities. Individuals are thus viewed to interact with one another in communities, bundles or networks of practice that enable them to share knowledge. These communities, bundles or networks are developed and perpetuated over time, and can overlap, connect or conflict. Here, we will apply the most commonly used term: community of practice.

Most of the practice literature focuses on how individuals are involved in and interact with one another in communities of practices. Several authors relate these practices as performed by individuals to organisations. Schutze and Orlikowski (2004), for example use a practice lens to show how inter-organisational relations are developed by the everyday actions by members of the organisations, and Orlikowski (2002) shows how organisational knowing is constituted and grounded in the everyday practices of the organisation's individual members. These insights can also be used, however, to study how political actors, such as states or NGOs, are part of and sustain communities of practice.

Practices are thus developed, shaped and perpetuated through communities of practice, in a process of common learning and knowledge sharing among the actors. Through this common process, a *logic of practice* is developed. An important characterisation of practices is a 'routinised type of behaviour' (Reckwitz 2002: p. 249), and it is in this routinization or patterning of behaviour that a logic, a certain way of doing and saying things, is developed (see also Arts et al. this volume), even though a logic of practice can also change over time. For our purpose, uncovering the—development of the—logic of practice in REDD+ interaction management is a prerequisite for understanding *how* these institutional interactions are managed in practice.

One of the weaknesses of the communities of practice approach, as acknowledged by its inventors (Lave and Wenger 1991), is its lack of attention for the role of power (Fox 2000; Roberts 2006). However, communities of practice, especially those in a political context such as REDD+, cannot be viewed solely as neutral social relations where common learning takes place. The actors involved can have

an active role in shaping the practice—they have agency. Their behaviour is not only shaped by the practices, but these *situated agents* are also able to 'make a difference': to exercise power (see also Arts et al. this volume). Analysing the roles of the actors involved in REDD+ interaction management will allow us to understand *why* the interactions are managed the way they are.

To sum up, the application of this theoretical discussion to our case study results in the actors involved in the international REDD+ institutions being perceived as a *community of practice*. The actors are the *situated agents*, involved in the practice of developing international REDD+ policy, among other things by launching new initiatives and programmes, finding funding to support developing countries in developing REDD+ policies and activities, and taking part in the negotiations about the specific contents of REDD+. In doing so, they are developing the practice of interaction management, together with its specific *logic*, for example, proposing regular joint meetings of the various programmes, or improving information exchange among the programmes. Our research is thus aimed at understanding the development of the—community of—practice of REDD+ interaction management, with its emerging logics of practice, and the role of situated agents in this process.

7.3 The Practice of REDD+ Interaction Management

7.3.1 Introducing REDD+

The central idea of REDD+ is to pay developing countries for conserving and sustainably using forests as a means to mitigate climate change. It is nowadays widely accepted that deforestation and forest degradation contribute significantly to global greenhouse gas emissions in the order of around 20 % of global emissions. Moreover, compared to other mitigation instruments, REDD+ is viewed as a relatively cost-effective way to decrease emissions (Stern 2006).

Reducing emissions from avoided deforestation was proposed at UNFCCC COP11 in 2005 as a forest-based mitigation strategy for a post-2012 climate regime, after the end of the first commitment period of the Kyoto Protocol. Early REDD thinking revolved around the idea that reduced deforestation could be quantified in reduced carbon emissions and incentivised through a trade in forest carbon credits. Policy discussions on REDD+ were further developed at UNFCCC COP13 in 2007 with the adoption of the Bali Action Plan and agreement on REDD+ approaches to stimulate action as part of a post-2012 climate change regime (UNFCCC 2008). The objective of the Bali Action Plan was to reach an agreement on a post-2012 climate change regime during COP15 in Copenhagen.

In addition to the formal negotiations under UNFCCC a series of important 'informal' initiatives has been launched. It was in Bali that Norwegian Prime

Minister Stoltenberg announced the establishment of the Norwegian government's International Climate and Forest Initiative (with annual funding of up to USD 500 million to promote REDD+), Brazil announced its Amazon Fund and the World Bank launched the FCPF. Since then, several other multilateral initiatives have followed—including the UN-REDD Programme, FIP, the Congo Basin Forest Fund (CBFF) and the REDD+ Partnership. All these programmes and initiatives were developed with a view to initiate early action on REDD+ while informing the negotiations under the UNFCCC.

Box 7.1: The Three Global REDD+ Programmes

FCPF, FIP and UN-REDD at a Glance

The World Bank's Forest Carbon Partnership Facility, FCPF, is a global partnership of 37 forested developing countries, fourteen donor countries, and civil society, indigenous peoples, private sector and international organisation observers. The FCPF is working to pilot REDD+ and contains two financial mechanisms: the Readiness Mechanism and the Carbon Fund. FCPF's Readiness Mechanism assists countries in moving from a planning stage to a phase of REDD+ Readiness Preparation. Its Carbon Fund, which became operational in 2011, intends to pilot generation of carbon credits and payment for emission reductions from REDD+ countries.

The main purpose of the World Bank's Forest Investment Program, FIP, is to support developing countries' REDD+ efforts, providing upfront bridge financing for readiness reforms and public and private investments identified through national REDD+ readiness strategy building efforts. The FIP's governing body consists of six developed countries and six developing countries as members, and indigenous peoples', civil society and private sector representatives as active observers. FIP's current funding to REDD+ investment plans is for eight developing countries and totals around USD 600 million.

The United Nations UN-REDD Programme intends to generate the requisite transfer flow of resources to significantly reduce global emissions from deforestation and forest degradation. The immediate goal is to assess whether payments and capacity support can create the incentives for actual, lasting, achievable, reliable and measurable emission reductions, while maintaining and improving the other ecosystem services forests provide.

Although the 2009 COP15 in Copenhagen did not result in any binding global agreement, governments confirmed the need for joint action to reduce greenhouse gas emissions to meet the overarching objective of keeping the increase in global temperature below 2 °C above pre-industrial levels. COP15 provided methodological guidance and the Copenhagen Accord called for immediate establishment of 'a mechanism including REDD+' (UNFCCC 2010). Also in Copenhagen, six

donor countries (Australia, France, Japan, Norway, the United Kingdom, and the United States) collectively pledged approximately USD 3.5 billion in 'fast start' funding for REDD+ until the end of 2012.

Following COP15, progress has been made towards achieving a REDD+ mechanism that will allow the challenges associated with deforestation and forest degradation to be addressed. In March 2010, representatives from 54 major forest basins and donor countries attended an International Conference on Major Forest Basins in Paris. The conference reaffirmed the fast start pledges for REDD+ made in Copenhagen, proposed the creation of an interim REDD+ partnership and initiated a data collection effort on REDD+ activities and financing. Participants further agreed that the work of the REDD+ Partnership should complement the UNFCCC process and not pre-empt any negotiations under the climate change convention.

Building on the Paris conference, the Government of Norway sponsored the Oslo Climate and Forest Conference in May 2010. Among the conference outcomes was the adoption of a voluntary, non-legally binding document that provided a framework for an Interim REDD+ Partnership (in short: REDD+ Partnership). The objective of the partnership is to contribute to the global battle against climate change by serving as an interim platform for the partners (i.e. governments) to scale up REDD+ actions and finance, and to that end to take immediate action, including improving the effectiveness, efficiency, transparency and coordination of REDD+ initiatives and financial instruments, to facilitate among other things knowledge transfer, capacity enhancement, mitigation actions and technology development and transfer (Interim REDD+ Partnership 2010).

Amidst increasing challenges for the UNFCCC to find agreement on a post-2012 climate deal, REDD+ became 'the silver lining' of an otherwise failing UNFCCC process and was eventually anchored as a prominent component of the 2010 Cancun agreements (UNFCCC 2011). In general, a series of initiatives through public and hybrid multilateral and bilateral arrangements put REDD+ on a path for early action, capacity building and learning. These informal processes helped institutionalise the REDD+ policy discourse and institutional development. As they evolve as pilot programmes on REDD+ preparation and implementation, these pilots are generating a wealth of experience from which the international community is learning about REDD+. As such, these programmes serve as platforms at the global, national and sub national level, by bringing together a wide range of partners to discuss the opportunities and challenges surrounding the implementation of REDD+ in the different countries.

7.3.2 REDD+ Interaction Management

In this section, we analyse the development of interaction management practices around the three global REDD+ programmes, FCPF, FIP and UN-REDD. The section is organised around the main issues on which the interaction management

is taking place: developing a common umbrella framework, harmonised REDD+ readiness support, safeguards, and the governing bodies.

Developing a Common Umbrella Framework

From a front stage perspective, the three global REDD+ programmes, their governing bodies, and the actors involved as partners (including donor countries, recipient countries, international organisations and NGOs) seem to be a community of practice, as they are working together to develop global REDD+ policy and the main logic of their current interaction management practice is collaborative.

Over time, the governing bodies of REDD+ programmes have increasingly realised the necessity for interaction management and the harmonisation of the institutional approach in the existing programmes to REDD+, in order to reduce redundancies and foster synergies. As a result, the three global REDD+ programmes have co-evolved into a three-phase approach towards REDD+. This common umbrella framework includes: the development of national strategies of developing countries in order to make them 'ready' for REDD+; the implementation of these strategies; and the final stage of implementation of REDD+ policy in order to reduce carbon emissions. The three global REDD+ programmes in theory have the combined scope and capacity to cover this phased approach. Other multilateral initiatives, such as the Global Environment Facility, the Amazon Fund or the Congo Basin Forest Fund and evolving bilateral programs, can also be linked to the three phases and enhance the available resource base for developing countries to address REDD+.

It is important to note that the three phases of REDD+ may not be strictly sequential, and activities in more than one phase are likely to be undertaken in parallel. Each country will determine its own course of action, for example by entering the phases at different times or completing each phase according to its own schedule. As stated, in principle the FCPF, FIP and UN-REDD Programme can contribute to all three REDD+ phases and, when aligned, would provide a 'total package' for a REDD+ country to support its activities in this realm.

Initial thinking on linking the business processes of the FCPF, FIP and UN-REDD Programme across the three phases of REDD+ is shown in Fig. 7.1, as are the contributions of these three programmes amongst other initiatives. A REDD+ country's national strategy may be formulated with assistance from the UN-REDD Programme and/or FCPF and is reviewed by the UN-REDD Policy Board and/or the FCPF Participants Committee. Endorsement of the investment strategy, which builds on the national strategy or equivalent analysis, can lead to approval of FIP co-financing for a specific investment programme. Following that, the country may propose an Emissions Reductions Programme linked to this investment programme or another investment or policy decision. As the country refines its REDD+ strategy in line with its readiness package, it may decide to revise its investment strategy. Meanwhile, the investment programme can be prepared and a loan agreement supporting the programme signed. In parallel, the

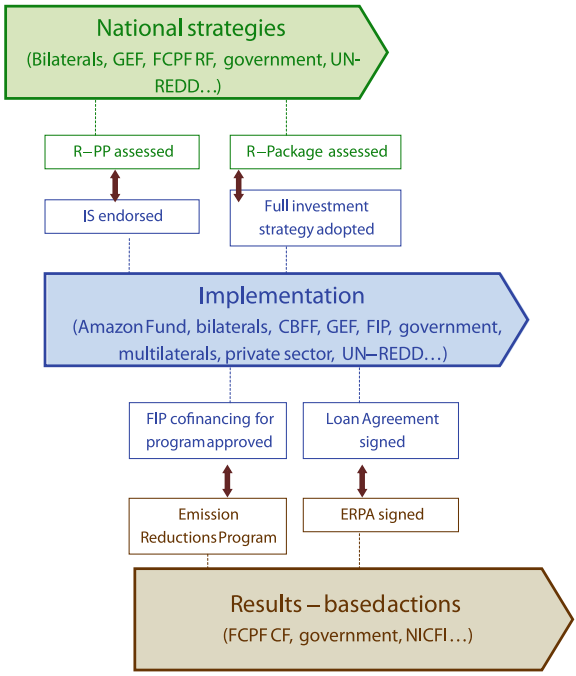

Fig. 7.1 FCPF, FIP and UN-REDD programme contributions and linkages to REDD+ (*Source* FIP 2010: p. 11). *GEF* = Global Environment Facility, *FCPF RF* = Forest Carbon Partnership Facility Readiness Fund, *FCPF CF* = Forest Carbon Partnership Facility Carbon Fund, R-PP = Readiness Preparation Proposal, *NICFI* = Norway's International Climate and Forest Initiative, *ERPA* = Emission Reductions Payment Agreement

Emission Reductions Programme can evolve into an Emission Reductions Payment Agreement under the FCPF Carbon Fund. Under the programmes it is assumed that investment and carbon finance modalities can create positive incentives for countries. Investment finance can make it possible for REDD+ countries to initiate policies and programmes by providing upfront funding. Carbon finance can help REDD+ countries sustain these policies and programmes by supplying performance-based payments over a specified time period. If investment finance is in the form of a loan, carbon finance may help a country repay the loan.

By sharing this common approach, the programmes are managing the overlap between their works. Through the common umbrella framework they are working towards the same goal, which is to realise the implementation of REDD+.

However, when one looks back stage at the institutional dynamics between the three global REDD+ programmes, it becomes clear that although the current logic of practice entails increased collaboration, from the outset the dominant style of engagement has been the practice of fierce institutional competition, with different actors playing prominent roles in these debates. Testimony to these institutional turf wars is the development of the three phases of REDD+: readiness, investment and results-based payment, as discussed above. Although the three phases were eventually adopted in the UNFCCC Cancun agreement in 2010, it was during the design phase of the FIP (which lasted from May 2008 until July 2009, the summer FIP became operational) that these phases were first conceptualised. At that time the international organizations involved disagreed strongly about the possible

relationship between the three programmes. Both the UN agencies and the World Bank initially portrayed these evolving programmes as a zero-sum game in which financial, technical and political support to one programme (for example, the FIP) would lead to less support to the other programmes (for example, UN-REDD). It therefore came as no surprise to the international community that during the second design meeting of the FIP in March 2008 in Washington, DC there was a head-on collision with the UN-REDD programme. In the FIP design meeting, representatives of the respective UN agencies (FAO, UNDP and UNEP) claimed that the recently launched UN-REDD Programme would have a similar scope of activities as the emerging FIP. Hence, so it was argued, there was no inherent need for the FIP to be created. In response to this institutional competitiveness, in particular Norway and Papua New Guinea, as the key stakeholders on behalf of the donors and recipient countries, argued in that meeting for an integrated approach in which the three global REDD+ programmes would operate according to the different phases of REDD+. Based on these direct interventions by the leading donor (i.e. Norway) and leading rainforest nation (i.e. Papua New Guinea) agreement was reached that 'the FIP should complement, be coordinated with, and cooperate closely with other REDD demonstration and implementation and ongoing REDD efforts, such as FCPF and UN-REDD Programme' (FIP 2009). This call for synergies and interaction management eventually resulted in the Cancun agreement on REDD+ 18 months later.

Harmonised REDD+ Readiness Support

Cooperation between FCPF and UN-REDD on readiness, the first phase of REDD+, is still under development, but has yielded significant achievements to date in terms of institutional co-evolution. On this issue, it is also becoming clear that the actors involved in the development of global REDD+ policy are evolving as a community of practice, managing the interactions among the global programmes. Just as in the development of the common umbrella framework, here too the partner countries played a paramount role in enticing the governing bodies to manage their interactions. As a response to specific requests from those developing REDD+ countries that are part of both FCPF and UN-REDD, and because the leading donors are trying to adhere to the principles as stipulated in the Paris declaration on aid effectiveness, these two programmes have managed their interactions by aligning some of their 'readiness' processes and standards in an effort to reduce transaction costs for countries developing national strategies, especially those participating in both initiatives. Although FCPF and UN-REDD used different approaches in the beginning, which lead to significant administrative costs and institutional turmoil and redundancy, more recently a deliberate attempt has been made to use a common template for country submissions (for grant financing) to the FCPF and UN-REDD Programme. The Democratic Republic of Congo, for example, decided to submit its Readiness Preparation Proposal to both the FCPF and UN-REDD Programme using the same approach and format, which

resulted in a more streamlined readiness process. The UN-REDD Programme and FCPF are also striving to adopt a common review process of these requests for grant proposals, which is based on an ad hoc Technical Advisory Panel comprised of independent reviewers with relevant multi-sectoral and cross-country expertise. This common approach for the review process between FCPF (as led by the World Bank) and UN-REDD (as led by the UN-system) provides a significant contribution to institutional synergies. At the request of leading REDD+ nations, discussions are currently underway to determine whether the FIP also could use the same experts for the quality review of its investment strategies.

Safeguards

The issue of safeguards for REDD+, which are meant to ensure that REDD+ is implemented in a socially and environmentally sound manner, is highly contentious and political; as a result, the interaction management on the issue is relatively difficult. The logic of practice in interaction management therefore differs from the increased collaboration logic as discussed above; the logic here is the development of common minimum standards, and thus the interaction management is less extensive. Operationalising these safeguards in a coordinated manner is critical, however, given the issues at stake, such as the rights and livelihoods of local communities and the conservation of biodiversity.

UN-REDD, FIP, and FCPF currently follow environmental and social safeguards in accordance with the requirements of their respective foundational documents. Of the three, the approaches of FIP and FCPF are the most similar. Rather than seeking mutual recognition (i.e. equivalence) of environmental and social standards, the UN agencies and World Bank consider it more feasible to enter into a framework agreement in which the policies and procedures of the implementing organisations are recognised and applied, subject to agreed minimum standards (reciprocity). This decentralised approach is already used by the FIP, since the Multilateral Development Banks (MDBs) who implement the FIP are governed by relatively similar policies and procedures, which include those related to environmental and social standards. However, the approach may be more challenging for the FCPF and UN-REDD, which has a more diverse set of delivery partners, including the UN agencies composing the UN-REDD Programme and the MDBs. At the request of the governing bodies, a specific taskforce has been established in order to advance this agenda. So, while substantial institutional convergence has occurred on this issue, structural organisational differences mark the boundaries of interaction management.

One specific issue in the safeguards debate is stakeholder participation. Many countries are grappling with how to operationalise the inclusion of stakeholders in REDD+ policy and implementation, which raises new issues of control over resource management and also over the respective decision-making processes. In the early stages of FCPF, FIP and UN-REDD, the development of stakeholder engagement unfolded rather organically, without adequate recognition of

institutional duplication, overlap and competition. In this issue, non-state actors played an important role in enabling interaction management. Based on a range of interventions, mostly from non-state actors, the respective governing bodies of the three programmes decided to adopt joint stakeholder guidelines that apply to each of the programmes. Under these guidelines, pilot countries under FCPF, FIP and UN-REDD should establish, or identify an existing, cross-cutting multi-stakeholder national level steering committee to assist in programme planning, implementation, monitoring and evaluation, which should include representatives of provincial, state and local authorities, indigenous peoples and local communities, NGOs, private sector and other members of civil society. In most of the developing countries where all three programmes are active (such as Ghana, Democratic Republic of Congo and Indonesia) this harmonisation of stakeholder participation resulting from interaction management has led to significantly increased engagement of non-state actors in the planning and implementation process of REDD+ at the global, regional, national and sub-national level. However, serious differences remain between these programmes regarding stakeholder engagement, particularly as it pertains to the inclusion of indigenous peoples. Although both the UN system (hosting UN-REDD) and the World Bank system (hosting FCPF and FIP) recognise the adoption of the United Nations Declaration on the Rights of Indigenous Peoples, the Board of the World Bank has not recognised the principle of 'free, prior and informed consent' (FPIC) as a prerequisite for World Bank procedures. Instead, as part of its safeguards policies, the principle of 'free, prior and informed consultation, leading to broad community support' applies as a minimum criterion for stakeholder engagement of indigenous peoples.

Governing Bodies

A more practical, less political issue for interaction management is the streamlining of the decision-making processes of the governing bodies of the global REDD+ programmes. This streamlining could be seen as a prerequisite for the further development of the community of practice. If the three programmes are organised in parallel as separate processes, common learning cannot take place, and the logic of increased collaboration cannot develop further. On this issue, it was mainly the recipient countries that stimulated improved interaction management.

The FCPF Participants Committee, UN-REDD Programme Policy Board and FIP Sub-Committee have different mandates and origins, but these governing bodies share many similar characteristics. Many representatives of REDD+ and contributor countries are members of all three initiatives. In addition, all three actively engage non-profit civil society and indigenous peoples' groups as observer participants or full members. To allow for collaboration between the three programmes, more coordination in scheduling FCPF, FIP and UN-REDD governing body meetings is essential. Over the last few years, it has proved extremely difficult to streamline the meetings of the respective governing bodies,

despite the continued call for this from partners. An illustrative example of how difficult it is to mainstream these processes occurred in March 2010, when the governing body of the FIP met in Manila, the Philippines, while the governing body of the UN-REDD Programme convened in Nairobi, Kenya at exactly the same time. The following week meetings were scheduled of the governing body of the FCPF in Gabon. This resulted in significant criticism, particularly from the recipient countries and it increased the call for closer collaboration. Although donor governments managed to attend these competing governing body meetings (simply due to their larger institutional capacity), the recipient countries were left out and had to spread thin to participate. Because of the severe criticism on the three programmes the respective governing bodies have decided that joint annual meetings of the governing bodies of the three initiatives be convened. These meetings are planned annually in conjunction with the regular meetings on the governing bodies of the FCPF, FIP or UN-REDD. Such gatherings could also provide a venue for the REDD+ Partnership, should the Partnership so request. At present, the relationship between the REDD+ Partnership and the three REDD+ programmes is ambiguous and needs to be clarified to avoid duplication and institutional competition.

7.4 Discussion and Conclusions

Our aim in this chapter was to increase our understanding of the practice of interaction management among multilateral REDD+ institutions. More specifically, we set out to understand how the institutional interactions on REDD+ are being managed, and why they are being managed the way they are. We analysed the development of the practice of REDD+ interaction management, with its community of practice and logics of practice, and the role of situated agents in this process. In terms of theory, the aim of the chapter was to contribute to the further development of practice and regime theories.

Through our research, we have discovered that the actors involved in developing REDD+ policy can be considered a community of practice. Over time, while the actors involved in the different institutions were developing REDD+ policy separately, a practice of interaction management through enhancing collaboration has developed. The need for this practice of interaction management was the fact that all international organisations wished to be involved in the newly emerging policy agenda of REDD+; as a result, multiple parallel international REDD+ initiatives developed. Though the result could have been on-going institutional competition, the partners countries working with the various REDD+ programmes on the ground and NGOs seeking for similar rules in all initiatives, have been paramount in initiating interaction management, and breaking through the routines of institutional competition between UN and World Bank agencies. It is in the interventions by these situated agents that we can find the main explanation for the

current interaction management practices by the three global REDD+ programmes, the FCPF, FIP, and UN-REDD.

Our analysis has also found different logics of practice. As shown in the analysis, the logic of the practice of interaction management has evolved from fierce institutional competition to more collaboration. Also, the REDD+ programmes analysed manage their interactions at two levels: operational and strategic. At the more operational level, the institutions adjust administrative or organisational aspects in order to streamline working methods and facilitate partners that are active in more than one REDD+ programme. The interaction management at the strategic level is especially interesting. At this level, the actors involved in the different institutions decided to develop a new umbrella framework that encompasses all of their various efforts. With this new umbrella, the individual initiatives by the institutions have been enabled to collectively develop into a new approach to REDD+. We propose to call this type of interaction management, which we have not yet seen before, *meta interaction management*. This type of interaction management does not aim to manage a specific type of interaction by, for example, increased collaboration, but instead aims to address fundamental problems in the interaction—in this case, the serious overlap of the work of the institutions involved—through the development of new structures. This meta interaction management is a highly creative process, in which all the actors involved in the different institutions not only have to view the current interactions as problematic, but should also recognise the opportunities provided by the new overarching framework.

The practice of interaction management by the three REDD+ programmes is already having important consequences. For example, the on-going interaction management practices have officially been recognised in the formal intergovernmental negotiation process on REDD+. The international community has called for a more coordinated and harmonised approach to REDD+ financing and technical assistance among existing multilateral REDD+ institutions, especially FCPF, UN-REDD and FIP, as well as emerging bilateral and other multilateral efforts (FIP 2010). Based on the existing practice within these global programmes, the governing bodies also decided to execute REDD+ at the country level in three distinct phases. The UNFCCC decision adopted in Cancun recognised the progress made under these programmes and agreed that REDD+ should be implemented in three 'phases':

> …beginning with the development of national strategies or action plans, policies and measures, and capacity-building; followed by the implementation of national policies and measures and national strategies or action plans that could involve further capacity-building, technology development and transfer and results-based demonstration activities; and evolving into results-based actions that should be fully measured, reported and verified' (UNFCCC 2011).

However, the limits of the interaction management by the programmes have also become visible. The existing rules and practices in the UN and World Bank, especially those on the politically more contentious issues, such as stakeholder participation and social and environmental safeguards, are difficult to change.

Moreover, these existing rules represent a boundary for the interaction management. The actors involved in the REDD+ institutions cannot develop common safeguard policies, since their 'mother' institutions, the UN and World Bank, are bound by their respective legal frameworks. The practice of interaction management is thus also shaped by existing rules and other practices.

Our practice based approach to studying interaction management has proved to be fruitful; it can provide important and new insights into international environmental politics. This type of analysis brings very different types of insights than the interaction management literature has done so far. While the latter mainly looks at front stage institutional performance, the former allows a view 'back stage', to understand how logics of practice are developed and changed by the interventions of the different actors involved. Based on the experiences in this chapter, we believe the practice based approach to interaction management can be further elaborated to pay more attention to the issues of power and interests. In our case study, these concepts would have helped us to further understand why the partners Norway and Papua New Guinea were able to push for more collaboration among the three REDD+ programmes, for example.

For the REDD+ programmes themselves, the chapter has shown that the interaction management has contributed to improving the relations and performance of the three institutions. However, further interaction management, not only among the three initiatives studied here, but also with other initiatives, including the REDD+ partnership, is needed in order to further build a 'real' community of practice and to avoid further redundancies and competition. For REDD+ policy more generally, deeper interaction management with institutions outside of the immediate REDD+ network is also required, to ensure that REDD+ not only aims to contribute to carbon emission reductions, but also supports the improvement of livelihoods of local communities and biodiversity conservation. As such it is promising to learn that the international community has recently made steps towards broadening of the REDD+ agenda through an integrated landscape approach. During the most recent climate change negotiations in Durban in 2011, recognition was given to climate-smart agriculture as a way to develop critical links between food, water, land, forests and energy. Climate-smart agriculture pays attention to landscape and spatial approaches: for example, integrated planning of land, agriculture, forests, fisheries and water to ensure synergies are captured. It remains to be seen whether the international community will be willing and able to apply the lessons learned from REDD+ interaction management to capture these potential synergies.

References

Biermann F et al (2009) The fragmentation of global governance architectures: a framework for analysis. Global Environ Polit 9(4):14–40

Bourdieu P (1977) Outline of a theory of practice. Cambridge University Press, Cambridge

Brown JS, Duguid P (2001) Knowledge and organization: a social-practice perspective. Organ Sci 12(2):198–213

Cashore B et al (2004) Governing through markets: forest certification and the emergence of non-state authority. Yale University Press, New Haven
FIP (2009) Design document for the forest investment program, a targeted program under the SCF trust fund. Climate investment funds. July 7, 2009. http://siteresources.worldbank.org/INTCC/Resources/Final_Design_Document_July_7.pdf
FIP (2010) Climate investment funds—enhancing cooperation and coherence among multilateral REDD+ institutions to support REDD+ activities. FIP/SC5/Inf2. October 2010, Forest Investment Fund
Foucault M (2000) Power. In: Faubion JD (ed). The New Press, New York, 454–458
Fox S (2000) Communities of practice, Foucault and actor-network theory. J Manage Stud 37(6):853–867
Gehring T, Oberthür S (2009) The causal mechanisms of interaction between international institutions. Eur J Int Relat 15(1):125–156
Glasbergen P, Biermann F, Mol APJ (eds) (2007) Partnerships, governance and sustainable development: reflections on theory and practice. Edward Elgar, Cheltenham
Goffman E (1959) The presentation of self in everyday life. Translated edition: De dramaturgie van het dagelijks leven: Schijn and werkelijkheid in sociale interacties. Utrecht: Bijleveld
Haas PM et al (eds) (1995) Institutions for the earth: sources of effective international environmental protection. Global accord: environmental challenges and international responses. The MIT Press, Cambridge
Hoogeveen H, Verkooijen P (2010) Transforming sustainable development diplomacy: lessons learned from global forest governance. Doctoral thesis, Wageningen University, Wageningen
Interim REDD+ Partnership (2010) Adopted May 27, 2010, in Oslo, Norway. http://www.osloc-fc2010.no/hjem/cfm
Jóhannsdóttir A et al (2010) The current framework for international governance of biodiversity? is it doing more harm than good? RECIEL 19(2):139–149
Lave J, Wenger E (1991) Situated learning: legitimate peripheral participation. Cambridge University Press, New York
Leebron DW (2002) Linkages. Am J Int Law 96(1):5–27
Mitchell RB (2003) International environmental agreements: a survey of their features, formation, and effects. Ann Rev Env Resour 28:429–461
Neumann IB (2002) Returning practice to the linguistic turn: the case of diplomacy. Millennium—J Int Stud 31(3):627–651
Oberthür S (2009) Interplay management: enhancing environmental policy integration among international institutions. Int Env Agreements: Polit, Law Econ 9:371–391
Oberthür S, Gehring T (2006) Institutional interaction in global environmental governance: the case of the Cartagena protocol and the world trade organization. Global Environ Polit 6(2):1–31
Oberthür S, Stokke OS (eds) (2011) Managing institutional complexity: regime interplay and global environmental change. The MIT Press, Cambridge
Orlikowski WJ (2002) Knowing in practice: enacting a collective capability in distributed organizing. Organ Sci 13(3):249–273
Østerlund C, Carlile P (2005) Relations in practice: sorting through practice theories on knowledge sharing in complex organizations. Inform Soc 21:91–107
Rayner J et al (eds) (2010) Embracing complexity: meeting the challenges of international forest governance. A global assessment report, prepared by the global forest expert panel on the international forest regime. IUFRO, Vienna
Reckwitz A (2002) Toward a theory of social practices: a development in culturalist theorizing. Eur J Soc Theory 5(2):243–263
Roberts J (2006) Limits to communities of practice. J Manage Stud 43(3):623–639
Schatzki TR (2005) Peripheral vision: the sites of organizations. Organ Stud 26(3):465–484
Schutze U, Orlikowski W (2004) A practice perspective on technology-mediated networks relations: the use of internet-based self-serve technologies. Inform Syst Res 15(1):87–106
Stern N (2006) The Stern review report on the economics of climate change. HM Treasury, London

Stokke OS, Oberthür S (2011) Introduction: institutional interaction in global environmental change. In: Oberthür S, Stokke OS (eds) Managing institutional complexity: regime interplay and global environmental change. The MIT Press, Cambridge

UNFCCC (2008) Report of the conference of the parties on its thirteenth session, held in Bali from 3 to 15 Dec 2007. Addendum. Part two: action taken by the conference of the parties at its thirteenth session. FCCC/CP/2007/6/Add.1*. 14 Mar 2008

UNFCCC (2010). Report of the conference of the parties on its fifteenth session, held in copenhagen from 7 to 19 December 2009. Addendum. part two: action taken bij the conference of the parties at its fifteenth session. Contents. Decisions adopted by the conference of the parties. FCCC/CP/2009/11/Add.1. 2/CP.15. Copenhagen Accord

UNFCCC (2011) Report of the conference of the parties on its sixteenth session, held in cancun from 29 november to 10 december 2010. Addendum. part two: action taken bij the conference of the parties at its sixteenth session. Contents. Decisions adopted by the conference of the parties. FCCC/CP/2010/7/Add.1. 1/CP.16. The cancun agreements: outcome of the work of the ad hoc working group on long-term cooperative action under the Convention

van Asselt H (2007). Dealing with the fragmentation of global climate governance: legal and political approaches in interplay management. Global governance working paper no 30

Visseren-Hamakers IJ, Glasbergen P (2007) Partnerships in forest governance. Global Environ Change 17(3–4):408–419

Visseren-Hamakers IJ, Arts B, Glasbergen P (2011) Interaction management by partnerships: the case of biodiversity and climate change. Global Environ Polit 11(4):89–107

Wagenaar H, Cook SDN (2003) Understanding policy practices: action, dialectic and deliberation in policy analysis. In: Hajer MA, Wagenaar H (eds) Deliberate policy analysis: understanding governance in the network society. Cambridge University Press, Cambridge

Young OR (1996) Institutional interlinkings in international society: polar perspectives. Global Governance 2:1–24

Young OR (2002) The institutional dimensions of environmental change: fit, interplay, and scale. The MIT Press, Cambridge

Chapter 8
How do Forest Markets Work? Exploring a Practice Perspective

Marjanke A. Hoogstra-Klein

> Practice has a logic which is not that of the logician (Bourdieu 1990, p 86).

8.1 Introduction

The growing public concern about deforestation and forest degradation has pressured governments into developing responses to the wide diversity of forestry problems (Stavins 1995). Until recently, the predominant approach to forest protection by governments around the world has been to use 'command-and-control' instruments. The key characteristic of command-and-control regulation is that the regulator specifies what individuals and individual firms can and cannot do, enforced by the threat of penalties for non-compliance (Tollefson 1998). Although these approaches have sometimes been effective, they have also been very costly. At a time when public sectors are facing huge challenges due to budget cuts which limit the possibility of preserving forests (Kroeger and Casey 2007), alternative (cheaper) approaches to protection are clearly attractive.

In recent years, serious attention has been given to 'market governance', i.e., the use of the market mechanism in governance processes and for enhancing forest management and conservation. More reliance on market-based approaches offers two important advantages: (1) they guide the behaviour of private individuals, and (2) they provide mechanisms for sharing the costs of forest management and protection between governmental and non-governmental actors (Landell-Mills 2002). The enthusiasm for market-based approaches has become so great that governments even promote the creation of *new* markets—the development of markets for carbon sequestration being by far the most ambitious to date. Other markets created include those to supply clean water, to protect threatened species, and to avert disruption of forest and watershed functions (Landell-Mills 2002; Wunder 2007).

Several scientists have expressed doubts about this new form of governance, however. Crook and Clapp (1998), for example, warned of the danger of an excessive faith in the ability of markets to efficiently protect forests, 'as they are

B. Arts et al. (eds.), *Forest and Nature Governance*, World Forests 14,
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likely to have contradictory, and largely negative, effects' on forests. Arnold and Perez (2001) also expressed their misgivings about markets as a solution to efficiently conserve forests, pointing out in particular the selective nature of market demand and the uneven distribution of resources within forests. Others have also stated that introducing a more market-oriented way of protecting forests inevitably leads to the transition of many subsistence-based use systems to market-oriented production systems, with negative effects such as loss of biodiversity and loss of livelihoods (Bennet and Robinson 2000; Rico-Gray et al. 1990). Moreover, as market prices seldom reflect the 'true' value of the benefits, markets will fail, leading to overexploitation and the disappearance of valuable benefits (Fa et al. 1995; Hansis 1998; Vasquez and Gentry 1989; Witkowski et al. 1994).

Forest markets are considered either to be an efficient solution to sustainability problems in forestry or to have contradictory, negative effects. This difference in view clearly reflects the lack of knowledge on forest markets. As several authors have already stated, only a few scholars seem to really understand how these markets work and how well (or how badly) they operate (Landell-Mills and Porras 2002; Veeman 2002). The problem already arises with the concept of 'market'. Even though one might expect some agreement on the connotation of the word, the reality is that there is a wide range of different conceptualisations across and within different scientific disciplines, especially in economics and sociology (Depeyre and Dumez 2010; Law and Hassard 1999; Rosenbaum 2000). This being so, how should one go about analysing and evaluating forest markets?

A promising, innovative and multidisciplinary approach to analysing forest markets is practice based approach. Practice based approaches have received growing interest within the social sciences in the past two decades (see e.g., Latour, 1987; Schatzki et al. 2001; Wenger 1998). They have also recently been introduced in the study of markets (see e.g.,Andersson et al. 2008; Araujo 2007; Kjellberg and Helgesson 2007a, b). According to Kjellberg and Helgesson (2006), such an approach offers a richer conceptual tool and therefore a better understanding of the market than has hitherto been the case. This chapter reviews attempts by scientists from different disciplines to define the concept of a market and discusses how these conceptualisations are used in forest market research. A revised conceptualisation of markets is proposed based on practice theory that has the potential to enrich our understanding of how forest markets come about and how they work. This will be illustrated by a short analysis of the certified timber market.

8.2 The Evolution of Markets

This section will provide a brief account of the evolution of the market within the different disciplines. It will bring together many of the traditional as well as newer methods and approaches to illustrate the diversity of the concept.

8.2.1 The Origins: The Market as a Location

The term 'market' was introduced into the English language in the twelfth century (or possibly even earlier) and comes from the Latin word *mercatus*, which means 'trade' or 'place to trade'. The word soon acquired three distinct meanings, all related to the locational aspect: (1) a physical marketplace, (2) the gathering at such a place, and (3) the legal right to hold a meeting at a marketplace. The roots of the term as a location where exchanges of a certain commodity take place (Swedberg 1994) can be traced back to ancient Greek, when marketplaces first materialised at the periphery of settlements (Knorr-Cetina 2006).

It is therefore not surprising that some scientists see the market as either a marketplace or a geographical area (Swedberg 1994). Lipsey (1983, p. 69), for instance, defined a market as 'an area over which buyers and sellers negotiate the exchange of a well-defined commodity'. In different studies on forest markets, such as studies on local markets for non-timber forest products, the physical marketplace is still the focus of analysis. The study by Dold and Cocks (2002), for example, describes indigenous medicinal plants traded in medicinal markets around the Eastern Cape in South Africa.

8.2.2 The Market as an Observable Interface Between Sellers and Buyers

In many cases, however, the area in question is now apparently much larger than the square around the church or the site of a fair (Rosenbaum 2000). One example is the market for forest carbon storage, which is not limited to a geographical area. It is therefore not surprising that in many definitions of market the locational aspect is lost; markets are then only considered to be an interface between sellers and buyers. Jevons (1871, quoted in Hodgson 1988, p. 173), for example, defined the market as 'any body of persons who are in intimate business relations and carry on extensive transactions in any commodity'. However, at the core of this definition remains the market as something that can be observed (i.e., an exchange is taking place). An example of this aspect of the markets can be found in the study by Hart (1978), who described the transition of a group of net-hunting Mbuti (a nomadic society of the Ituri Forest of Zaire[1]) from subsistence to market hunting. The central elements are the material and non-material exchanges, with relationships that differ over time.

[1] The name of the present Democratic Republic of the Congo between 27 October 1971 and 17 May 1997.

8.2.3 The Market as an Abstract Concept of Exchange

With the expanded space of international trade, the long chains of supply and circulation and the multiplicity of intermediaries (Knorr-Cetina 2006), the direct observational exchange of commodities also lost their meaning. Several scientists therefore abandoned this observational definition and instead focused on what the market *does* rather than on what the market *is*: the function of the market (Rosenbaum 2000). Most prominent in this respect is the neoclassical economics perspective. In neoclassical economics, which dominates the literature on markets, the market is an abstract concept describing how goods, resources and services are efficiently allocated. This efficient allocation is driven by the basic forces of demand and supply. Demand refers to how much (in terms of quantity) of a resource is desired by buyers, i.e., the amount of a resource people are willing to buy at a certain price. The relationship between price and quantity demanded is known as the demand relationship. It is considered to be simple: the higher the price, the lower the quantity. Supply represents how much the market can offer. The quantity supplied refers to the amount of a certain good producers are willing to supply for a certain price. This relationship is an upward slope: producers supply more at higher prices as then their profits are higher.

The relationship between demand and supply determines the allocation of resources. When supply and demand are equal (i.e., when the supply function and demand function intersect) the market is said to be at equilibrium. At this point, the allocation of goods is at its most efficient because the amount of goods being supplied is exactly the same as the amount of goods being demanded. Thus, everyone (individuals, firms, or countries) is satisfied with the current economic condition. At the equilibrium price, suppliers sell all the goods they have produced and consumers get all the goods they demand. If the price rises above the equilibrium price, then supply will be greater than demand and therefore there will be too much supply. Producers may then reduce the price and supply to encourage more demand and eliminate the surplus. If the price is below the equilibrium price, demand will be greater than the supply and there will be a shortage. Producers can then raise the price and supply more. The price rise will depress demand and the shortage will disappear. Thus price and quantity fluctuate until there is neither a surplus nor a shortage (i.e. until supply equals demand). Changes in the conditions of demand or supply will shift the demand or supply curves, which will cause changes in the equilibrium price and quantity in the market.

The neoclassical perspective is also prominent in the literature on forest markets. Most forestry economics handbooks (such as the one by (Pearse 1990)) contain an explanation of markets as allocation mechanisms. Such an explanation was recently used in a study by (Trømborg and Solberg 2010) to calculate the consequences of changes in supply and demand on the market for forest biomass.

8.2.4 Markets as Institutional Arrangements

In recent decades, various forest scientists have criticised this abstract view on the market. Mantau (1981), for example, stated that the neoclassical model fails to describe the reality of markets, as it ignores psychological and sociological determinants. After analysing different studies on timber markets, both Borowski (1996) and Lückge (2000) also concluded that the neoclassical model is inadequate to describe markets and their development, as it ignores the social aspects. These critiques of the neoclassical market model in forestry coincided with critiques of the classical market model by scientists from other disciplines (Keister 2002). For example, Granovetter (1985, p. 495) stated that 'the anonymous market of neoclassical models is virtually non-existent in economic life'. White (1981) even wrote that a neoclassical theory of the market does not exist; it is only a pure theory of exchange.

Two important lines of research within economics that distance themselves from at least some of the premises of the neoclassical model of the market are information economics and new institutional economics (Beckert 2008). Both approaches consider markets as institutional arrangements that make exchange possible.

In the neoclassical view on the market, market actors have perfect knowledge.[2] In informational economics, however, the focus is on informational asymmetry between the market actors. A classic paper in this field is Akerlof's (1970) 'The Market for Lemons'. In this article, he used the market for used cars as an example to illustrate how the difference between knowledge of the seller and the potential buyer leads to market failure. In his example, he distinguished between good used cars (which he called 'cherries') and defective used cars (called 'lemons'). The difference is the result of several not-always-traceable variables, such as the owner's driving style, quality and frequency of maintenance and accident history. The potential buyer of a used car knows less about how good or how bad the car for sale is than the seller. He therefore also knows that there is a probability that he will buy a lemon. The price he is willing to pay is therefore less than he would pay if he were certain that he was buying a cherry. This lower price may result in owners of good cars not selling them. In such situations, it is impossible for an efficient market to develop and thus market failure ensues. A solution to this problem is the introduction of safeguarding institutions, such as guarantees on used cars, which reduce the risk to buyers of buying a 'lemon' and increase their willingness to purchase. In this case the market is less efficient than it would be if all parties had the same information, but at least markets can exist.

[2] Although the fundamental theorems of neoclassical economics assume market actors have perfect knowledge, in some cases more sophisticated models of markets are developed, in which actors are not necessarily perfectly informed. Even in these cases the results are dependent on conditions of perfect knowledge: where there is imperfect knowledge, the models assume some departure from optimality.

Several forest scientists draw a parallel between forestry markets and Akerlof's market for 'lemons'. Rametsteiner (2002) and Costa and Ibanez (2007), for example, explain certification as a way to remedy informational asymmetry: as consumers cannot differentiate sustainable forest management from regular forest management, forest certification should be considered as an attribute of reliability for consumers who lack the required knowledge. Nunes and Riyanto (2005) even state that the presence of an informational problem is in fact the cornerstone of any certification and ecolabelling policy instrument.

New institutional economics takes a more radical point of view than information economics. It assumes that factors like incomplete information, limited mental capacity of market actors to process information, and lack of trust lead to uncertainty. This might be the cause of market failure. Institutions enable the stabilisation of market actors' expectations by guarding against possible negative consequences (such as antitrust laws), thus helping to make markets possible (Beckert 2007). The institutions that are developed are the ones that serve the interests of the market actors. Market actors want to reduce this uncertainty before becoming involved in an exchange, and to do so they have to incur costs. These costs are called transaction costs. Actors will tend to organise an exchange so as to minimise transaction costs. The main kinds of transaction costs are:

- search and information costs—the costs of finding out what products are on offer, whether the required product is available on the market, and which of the sellers offers the lowest price, etc.;
- negotiation costs—the costs of coming to an acceptable agreement with the other party to the transaction, drawing up an appropriate contract, etc.;
- enforcement costs—the costs of making sure the other party adheres to the terms of the contract, and of taking appropriate action (often through the legal system) if this turns out not to be the case.

The new institutional economics' approach to forest markets has received considerable attention in the forest literature. Arts and Kerwer (2007), for example, referred in their analysis of timber certification to certification as a regulatory mechanism to reduce search costs. Other examples are Benneker (2008), who explained the performance of community forest enterprises by investigating their market transaction costs, and Galik and Jackson (2009), who found that small private forest holdings do not supply forest carbon offsets because of the high transaction costs.

8.2.5 A Sociology of Markets

Both informational economics and new institutional economics emphasise the importance of institutional regulatory mechanisms for the very existence of markets. In both cases the emergence of institutional regulations is explained in terms of the interests of the participating actors, which means that they retain the

individualist ontology of markets (Beckert 2007). Such an individualistic view is rejected in the sociology of markets, a field that has received considerable attention in recent decades (Fligstein and Dauter 2007). Although there is a great deal of agreement that markets are social structures characterised by extensive social relations between different market actors, different perspectives have emerged at the theoretical level (Dobbin 2004; Fligstein and Dauter 2007). These perspectives are often divided into three theory groups on the basis of the mechanisms that explain the emergence and ongoing dynamics of markets: (1) the networks approach, (2) the institutional approach, and (3) the performativity approach (Fligstein and Dauter 2007).

The networks approach focuses on social relations as a determining factor of market action. Emphasis is placed on how economic activity comes to be coordinated by groups of people instead of being carried out by individuals (Granovetter 1992). In other words, it focuses on the structures of the social relations and the positions the individual market actors hold within these market structures (Granovetter 1985; White 2001). Often, a division is made between horizontal and vertical relations. Analysis of the horizontal (or non-hierarchical) relations often leads to discussions on aspects such as 'trust' and 'solidarity', which promote cooperation among actors cooperation. For the analysis of the vertical (hierarchical) relations the topic of 'power' is central (Granovetter and Swedberg 2001). The networks perspective has received some attention in connection with forest markets. Recently, Murphy and Lawhon (2011), for example, studied the possibility of trusting partnerships in Bolivia's forest products sector. In a study of small-scale private forest owners in Bavaria (Germany), Schlüter and Koch (2009) found that trust among the people within the network was hugely important.

The institutional approach in sociology focuses on the way exchange is determined by institutional settings (e.g. Fligstein 1990). But in contrast to the new institutional economics view on markets, market actors play only a limited role in this approach. They are incorporated as actors trying to change the structures within which they have to function in an attempt to enhance their market position. However, these structures are the result of a historical development (the evolution of a specific market) and are considered far too complex to be directly steered by individual actors (Beckert 2002). An example of a study on forest markets using this approach is McNichol's (2000) study analysing British efforts to set up new markets for NGO-certified sustainable wood products.

The third group focuses on performativity. Performativity is a concept that primarily expresses the idea that phenomena (such as markets) exist only through the processes of creating them; nothing exists without being continually performed. Markets are usually presented as a mysterious force which specific enterprises and individuals have no means of affecting. Seeing markets in a performative manner, however, means that they consist of and are constantly performed by actors (Kortelainen 2008). The performativity perspective has received only limited attention in the literature on forest markets, an exception being the research of Kortelainen (2008). In his research on green markets in the Russian forest sector, he showed that these markets did not come about and develop

through the demand for green products, but were (and still are) performed by a diversified group of actors, including environmental NGOs, publishing companies, certification agencies, market researchers and critical citizens.

8.2.6 And Now, How Further?

The fact that so many different definitions of markets exist can in part be explained by the purpose for which each definition has been introduced; certain situations might require only a narrow definition of a market. On the other hand, a focus on only one dimension may stand in the way of gaining an overall view on the functioning of markets. This is exactly what the different examples teach us: the market is many things at once. It is complex, multifaceted and sometimes even paradoxical. Understanding the functioning of markets therefore asks for an approach which is not limited to a certain theoretical perspective, as in the predominantly disciplinary studies on markets carried out so far (e.g. economics, sociology), but which crosses disciplinary boundaries. Such a promising, innovative and multidisciplinary way to analyse forest markets can be found in exploring markets as *practices*. In response to the strong call for a practice based approach from different social scientists (e.g. Bourdieu 1977; De Certeau 1984; Giddens 1984; Schatzki et al. 2001), in recent years a number of scientists working on markets and marketing have proposed using a practice based approach to explain the functioning of markets too (e.g. Araujo et al. 2008; Kjellberg and Helgesson 2007a, b; Smith 2007a, b).

8.3 Towards a New Approach: Markets as Practices

This section explores the 'markets as practices' approach. To get a clear idea what is meant by such an approach, first the question of what practices are will be dealt with. Subsequently the question how markets can be considered to be specific types of practices will be discussed. Finally, it will be shown how this conceptualisation of market relates to the disciplinary views on markets described above.

8.3.1 What are Practices?

Although the term 'practice' is used frequently, no unifying theory exists. A growing number of researchers from several fields, such as organisation studies, sociology, anthropology, philosophy, and science and technology studies have developed and adopted a range of different practice approaches. What they all have in common is that they place practices at the centre of understanding social

phenomena. Giddens (1984) was one of the social scientists who argued that the social 'is neither the experience of the individual actor, nor the existence of any form of social totality, but social practices ordered across space and time'. In other words, a practice approach stands in opposition to both the individualistic view, in which society is explained as the result of the actions of individual agents (as, for example, is the case in economics), and the structured view, in which society is understood as the result of underlying institutions (as, for example, is the case in sociology).

What then are practices? Practices are based on the idea that in the continual flow of activities it is possible to identify clusters or blocks of activities that can be conceived of as entities (Røpke 2009). According to Schatzki (2002), a practice is an organised constellation of actions—an integral bundle of activities—a set of interconnected doings and sayings. In other words, an organised set of actions is considered to be a practice when it is discernible across time and space: a relatively enduring, relatively recognisable entity (Shove et al. 2007). Some practice scholars consider the focus on 'only doings and sayings' as too limited. Orlikowski (2007, p. 1436), for example, states that there is an 'absence of any considered treatment or theorising of the material artefacts, bodies, arrangements, and infrastructures through which practices are performed'. As Reckwitz (2002, p. 253) argues: 'Carrying out a practice very often means using particular things in a certain way. It might sound trivial to stress that in order to play football we need a ball and goals as indispensable "resources"… but it is not'. Reckwitz (2002, p. 249) therefore defines practices as a routinized type of behavior which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. A practice—a way of cooking, of consuming, of working, of investigating, of taking care of oneself or of others, etc.—forms so to speak a "block" whose existence necessarily depends on the existence and specific interconnectedness of these elements, and which cannot be reduced to one of these elements'.

Practices are thus coordinated entities; but they require performance for their existence. To make the distinction between the entity and the enactment clear, Schatzki (2002) applies two different notions of practice: practice as a coordinated entity (in the following: practice-as-entity) and practice as performance (in the following: practice-as-performance). The first notion is of 'practice as a temporally unfolding and spatially dispersed nexus of doings and sayings. Examples are cooking practices, voting practices, industrial practices, recreational practices, and correctional practices' (Schatzki 1996, p. 89). The second notion, practice-as-performance, refers to the carrying out of practices, the performing of the doings and sayings which 'actualizes and sustains practices in the sense of nexuses' (Schatzki 1996, p. 90). Coordinated entities can therefore only exist when the activities involved are performed by people—more than just a few individuals. As Reckwitz (2002, p. 249) put it: 'a practice represents a pattern which can be filled out by a multitude of single and often unique actions reproducing the practice'. Individuals face practices-as-entities, as these are formed historically as a

collective achievement. Through their own practice-as-performance, individuals reproduce and transform the entities over time. Individuals thus act as 'carriers' of practices (Røpke 2009). In fact, individuals are the carriers of many different practices at the same time; at any time, an individual actor can engage in different practices. Practices are also not singular and unitary, but multiple (Sandberg and Dall'Alba 2009). Practices such as cooking and voting vary considerably between regions, countries and cultural contexts.

8.3.2 Markets as Practices

During the last 10 years, several scientists have been developing thinking about markets as practices. An analysis of the literature on markets and practices suggests that at this moment two different 'streams' can be distinguished. One stream is based on the work of Kjellberg and Helgesson (2006, 2007a, b), Andersson et al. (2008) and Araujo et al. (2008). Inspired by the ideas of Callon (1998) on the sociology of translation, they suggested that markets are performed as actors engage in 'market practices', which is taken to mean all activities that contribute to perform markets. Kjellberg and Helgesson (2006, 2007a, b) developed a conceptual model in which a distinction is made between three types of practices: (1) exchange practices, (2) normalising practices, and (3) representational practices. Exchange practices relate to the concrete activities related to the exchanges of a specific commodity. Representational practices include activities that contribute to depicting markets and/or how they work. Normalising practices are the activities that contribute to establishing guidelines for how a market should be shaped and reshaped or should work, according to a certain actor or group of actors. Kjellberg and Helgesson (2006, 2007a, b) argue that markets can be understood as emergent orders constituted by ongoing exchange, normalising and representational practices, and the interlinked translations between these that involve intermediaries such as rules, tools, measures and measurements.

Kjellberg and Helgesson (2006) have applied this framework in different situations, for example to study the change from full service to self-service in grocery retailing. Their framework has also been used by other scientists. Veal and Mouzas (2008), for example, used the framework to analyse barriers to market formation, and Rohracher (2009) used this model to analyse the reframing of electricity markets as a strategically oriented non-state governance activity of intermediary organisations.

In this approach, all the different elements of the disciplinary definitions of the market can be found. The three practices (exchange, normalising and representational) can be linked to the different disciplinary definitions on almost a one-to-one basis. Take for example the exchange practices. These are the activities that make economic exchange possible and they can be directly linked to the approaches that see the market as 'the exchange of commodities'. Normalising practices are the activities establishing the guidelines on the (re)shaping and/or

operation of markets and can in turn be linked to the 'markets as institutional arrangement' approaches. The representational practices focus more on the processes that shape markets and describe how markets work, which can be linked to the 'sociology of markets' approach. Although these three practices are much more than the 'simple elements' as depicted in the disciplinary definitions and are linked through objects, tools, measures, etc., the different elements are still separated. This means that all the different elements of markets as described in the disciplinary views are combined and linked by elements of the practice approach. However, they are still considered to be separate elements which can be, and have to be, analysed separately. One can question if such an approach really captures what markets are about, i.e. many things at once which may be impossible to separate.

The second stream therefore might offer a more interesting view. In this stream, a practice perspective on markets has been developed by Smith (2007a, b) in which markets are framed as 'evolving social practices'. Smith considers markets themselves as 'unfolding practices' and not—as the aforementioned scholars on markets and practices contend—as consisting of market practices that perform markets. Smith presents markets as social entities in which actors define themselves and their activities by generating shared meaning. Taking a snapshot of a market, one can see that most markets exhibit fairly well-defined notions of their who (the actors involved), what (the commodity that is being exchanged) and how (the way of exchange). These who, what and how factors, however, not only emerge in different ways, but are also not stable givens. 'Participants not only come and go, but their interests and styles change. The same can be said for the items exchanged and the rules governing these exchanges' (Smith 2007a, p. 505).

Smith's practice perspective on markets (2007a, b) goes much further than the practice based approach in which markets are viewed as consisting of; it in fact transcends the discussion of markets as consisting of different elements but sees the market as a social phenomenon to be distinguished from other social phenomena. And this is exactly what a practice perspective is about: a different view and focus on the social than used so far in the social sciences.

8.4 The Certified Timber Market

Given that 'markets as practices' seem to provide an overarching frame for what markets (including forest markets) are and how they come about, a valid question now is how to empirically study them. Although it is not the intention of this chapter to discuss and apply an extensive framework, this section briefly explores whether the key concepts of practices as introduced in Chap. 1—i.e., situated agency, logic of practice, and performativity—could serve as a starting point. One example will be used to illustrate how this might work: the market for certified timber. After discussing this market, some reflections and conclusions will follow.

Certification is a benchmark market instrument for assuring sustainable forest management and legality of timber trade. Global debates on forest certification started already in the 1970s, but for years, countries, institutions and organizations could not agree on a system (Humphreys 2006). Frustrated about this government failure, non-state actors took the lead themselves (Bendell 2000). The discussion was first led by NGOs concerned about the issue of sustainable forest management, and in 1993 resulted in the first certification initiative: the Forest Stewardship Council (FSC). In the wake of FSC, several other forest certification schemes emerged. Most of these later initiatives are now part of the Programme for the Endorsement of Forest Certification (PEFC). Although the certified timber market is relatively new and small, the number of forests certified by either of these two schemes, or by one of the many others, is growing steadily (Guéneau and Tozzi 2008). Today, nearly 350 million ha of forests worldwide are certified, which comes close to 10 % of all forests worldwide (www.fsc.org; www.pefc.com).

Most conventional economic theories assume that markets will emerge when there is a demand for a product. This, however, is *not* the case for certified timber (or for many other products). This market did not come about because of a high demand. Studies have shown that with the exception of a few countries such as the Netherlands, consumer demand for certified timber products is quite low (FAO 2006). Most buyers favour the aesthetic and technical characteristics of timber over environmental arguments (Guéneau and Tozzi 2008). Only the unremitting efforts of a diversified group of actors, including environmental NGOs, certification agencies, forest management owners, timber companies, retailers, scientists and researchers and critical citizens, make the markets for certified timber work. Without these actors actively *performing* the certified timber market, no such market would exist. An interesting example is the sale of certified blackwood timber from Tanzania for making musical instruments in the UK (Salasala 2011; Chap. 6 of this volume). The certification and export of this timber gives forest owners, including communities, an enormous price premium compared to the sale of the conventional timber to the local market: even up to 400 per cent. The demand in the UK, however, is very dependent on NGO campaigns that actively urge musical instrument industries to buy the Tanzanian certified blackwood. Additionally, in Tanzania itself, the implementation of the certification system is very dependent on assistance from NGOs, external donors and sponsors to forest owners and communities. Hence, the demand and supply are actively and continuously created by a set of actors without whom this market could never have existed at all.

That such a certified timber market continues to be performed can be explained by the fact that a relevant group of actors—from industries, to NGOs, to consumers, to retailers—with sufficient critical mass in the timber market is involved and that all these actors strongly agree that timber certification is important. However, the actors who are performing the market do not operate autonomously, because their agency is always situated against an inherited and shared field of practice, in this case the certified timber market (*situated agency*). Such fields, according to Bourdieu (1977, 1990), do exhibit certain logics that have emerged

historically, diffused socially and informed actors to operate in certain ways. A *logic of practice* refers to a limited number of coherent and convenient generative principles that constitute and characterise a practice. In the case of the certified timber market, these generative principles are: (1) sustainable forest management as an overall objective, (2) feasibility of market reform through certification schemes, i.e., through indicators, criteria and verifiers of sustainable timber and through procedures to design and monitor them, (3) independence from governments, but involvement of timber stakeholders, and (4) third-party auditing to independently verify compliance. Of course, the requirements regarding forest management and auditing are *sub*-market specific, i.e., the FSC market has different requirements than the PEFC market, particularly about the specific nature and stringencies of the various indicators, criteria, verifiers and procedures (Rametsteiner and Simula 2003). The above logic of practice drives the certified timber market in specific directions, but is also reflected upon and amended, if deemed necessary, through situated agencies who perform this market and its generative principles.

8.5 Discussion and Conclusion

The practice based approach to markets has not previously been addressed in the forestry literature. This chapter is by no means an attempt to present a complete framework and should be viewed as exploratory. It offers an illustration of how markets may be defined from a practices perspective. What it has shown is that such an approach has the potential to contribute to the study of forest markets in terms of enriching our understanding of how forest markets come about and how they 'work'. The example of certified timber markets specifically showed the relevance of assuming a practice based approach to markets and validates some of the sensitising concepts used in this book. However, it is not a given that a similar approach to the world timber market as a whole, or to specific local forestry markets, would equally confirm the relevance of the approach. Therefore, some further theoretical development of this approach to forest markets is necessary, in order to be able to capture the specificity that characterises these markets and to bring its potential to bear on more 'conventional' forest markets. In order to do so, exploration of literature can take us only so far. In-depth case studies of forest markets are therefore desirable not only in order to better understand market failure and success, but also in order to contribute to the development of a practice based approach in forest and nature governance.

In light of the importance of case studies, 'markets as practices' not only has a theoretical agenda, but also a methodological agenda. As Miettinen et al. (2009) stated, developing a practice based approach means developing not only a theory, but also an empirical approach. So far, however, only the minority of current practice theory has, as Bueger (2011, p. 2) recently stated, 'been practical in the sense of thinking about how to actually conduct practice research'. Bueger (2011) therefore

even advocated using a specific term to signify the importance of methodology: 'praxiography'—the practice of doing practice-theory-driven research. This praxiography is a combination of methodological considerations derived from ethnomethodology, ethnography, activity theory and actor-network theory. In his review of research strategies and research tools in practice research, Bueger (2011) looked at three strategies (investigating site, investigating controversies, and following concepts, objects and technologies) and three different tools (participant observation, the analysis of narratives of practitioners and the analysis of experts). His conclusion is that often the question is not 'either—or', but 'and—and'.

These research strategies resonate with and partly overlap with the methodological principles set out in Chap. 1 in this volume and are promising for researching 'markets as practice'. They prioritise internal logics of specific market practices above general assumptions on how markets should ideally operate (for instance by an abstract law of supply and demand). In addition, they can link markets to places, without equating them with these places; and they can bring to light how different actors, be it forest managers, timber traders, NGOs, or scientists, actively perform the markets that they also describe. Clearly, studying living practices 'here and now' and relating them to their histories and larger social contexts is not easy (Miettinen et al. 2009), but it poses a great challenge for future research on forest and other markets.

References

Akerlof GA (1970) The market for 'lemons': quality uncertainty and the market mechanism. Q J Econ 84:488–500

Andersson P, Aspenberg K, Kjellberg H (2008) The configuration of actors in market practice. Mark Theor 8:67–80

Arnold J-EM, Perez MR (2001) Can non-timber forest products match tropical forest conservation and development objectives? Ecol Econ 39:437–447

Araujo L (2007) Markets, market making and marketing. Mark Theor 7:211–226

Araujo L, Kjellberg H, Spencer R (2008) Market practices and forms: introduction to the special issue. Mark Theor 8:5–14

Arts B, Kerwer D (2007) Beyond legalisation? How global standards work. In: Lehmkuhl D, Brütsch C (eds) Law and legalization in transnational relations. Routledge, London, pp 144–165

Beckert J (2002) Beyond the market: the social foundations of economic efficiency. Princeton University Press, Princeton

Beckert J (2007) The social order of markets. MPIFG discussion paper. Cologne: Max-Planck-Institut für Gesellschaftsforschung

Beckert J (2008) Introduction. Socio-economic review 6:515–516

Bendell J (2000) Working with stakeholder pressure for sustainable development. In: Bendel J (ed.) Terms for endearment: business, NGOs and sustainable development. Greenleaf, Sheffield, pp 14–29

Benneker C (2008) Dealing with the state, the market and NGOs: the impact of institutions on the constitution and performance of community forest enterprises (CFE) in the lowlands of Bolivia. Doctoral thesis. Wageningen University, Wageningen

Bennet EL, Robinson JG (2000) Hunting for sustainability in tropical forests. Columbia University Press, New York
Borowski S (1996) Marketingstrategien von forstbetrieben. Schriften aus dem Institut für Forstökonomie, Band 7, Institut für Forstökonomie der Universität Freiburg, Freiburg
Bourdieu P (1977) Outline of a theory of practice. Cambridge University Press, Cambridge
Bourdieu P (1990) The logic of practice. Cambridge University Press, Cambridge
Bueger C (2011) Praxiography in international relations: methodological implications of the practical turn. Draft paper prepared for presentation at the third conference of the world international studies committee, Porto, Portugal, Aug 2011. Available at: http://www.bueger.info/documents/Praxiography%20in%20International%20Relations.pdf Accessed 8 Nov 2011
Callon M (1998) Introduction: the embeddedness of economic markets in economics. In: Callon M (ed) The laws of the markets. Blackwell, Oxford, pp 1–57 (The sociological review)
Costa S, Ibanez L (2007) Certification of sustainable forest management: differentiation strategies and asymmetric information. Int J Agric Res Governance Ecol 6:393–414
Crook C, Clapp RA (1998) Is market-oriented forest conservation a contradiction in terms? Environ Conserv 25:131–145
De Certeau M (1984) The practice of everyday life. University of California Press, Berkeley
Depeyre C, Dumez H (2010) The role of architectural players on coopetition: the case of the US defense industry. In: Yami S, Castaldo S, Dagnino GB, Le Roy F (eds) Coopetition: winning strategies for the 21st century. Edward Elgar, Cheltenham, pp 124–140
Dobbin F (2004) Introduction: the sociology of the economy. In: Dobbin F (ed) The sociology of the economy. Russell Sage Foundation, New York, pp 1–25
Dold AP, Cocks ML (2002) The trade in medicinal plants in the Eastern Cape Province, South Africa. S Afr J Sci 98:589–597
Fa JE, Juste J, Perez del Val J, Castroviejo J (1995) Impact of market hunting on mammal species in Equatorial Guinea. Conserv Biol 9:1107–1115
FAO (2006) Global forest resources assessment 2005: progress toward sustainable forest management. FAO Forestry Department, FAO Forestry paper 147. FAO, Rome
Fligstein ND (1990) The transformation of the corporate control. Harvard University Press, Harvard
Fligstein ND, Dauter L (2007) The sociology of markets. Ann Rev Sociol 33:105–128
Galik CS, Jackson RB (2009) Risks to forest carbon offset projects in a changing climate. For Ecol For Manag 257:2209–2216
Giddens A (1984) The constitution of society: an outline of the theory of structuration. University of California Press, Berkeley
Granovetter M (1985) Economic action and social structure: the problem of embeddedness. Am J Sociol 91:481–510
Granovetter M (1992) Economic institutions as social constructions: a framework for analysis. Acta Sociologica 35:3–11
Granovetter M, Swedberg R (2001) The sociology of economic life. Westview Press, Boulder
Guéneau S, Tozzi P (2008) Towards the privatization of global forest governance? Int For Rev 10:550–562
Hansis R (1998) A political ecology of picking: Non-timber forest products non-timber forest products in the Pacific Northwest. Hum Ecol 26:67–86
Hart JA (1978) From subsistence to market: a case study of the Mbuti net hunters. Hum Ecol 6(3):325–353
Hodgson GM (1988) Economics and institutions: a manifesto for a modern institutional economics. Polity Press and University of Pennsylvania Press, Cambridge and Philadelphia
Humphreys D (2006) Logjam. Deforestation and the crisis of global governance. Earthscan, London
Keister LA (2002) Financial markets, money, and banking. Ann Rev Sociol 28:39–61
Kjellberg H, Helgesson CF (2006) Multiple versions of markets: multiplicity and performativity in market practice. Ind Mark Manage 35:839–855

Kjellberg H, Helgesson CF (2007a) On the nature of markets and their practices. Mark Theor 7:137–162
Kjellberg H, Helgesson CF (2007b) The mode of exchange and shaping of markets: distributor influence in the Swedish post-war food industry. Ind Mark Manage 36:861–878
Knorr-Cetina K (2006) The Market. Theor Cult Soc 23:551–556
Kortelainen J (2008) Performing the green market—creating space: emergence of the green consumer in the Russian woodlands. Environ Plann A 40:1294–1311
Kroeger T, Casey F (2007) An assessment of market-based approaches to providing ecosystem services on agricultural lands. Ecol Econ 64:321–332
Landell-Mills N (2002) Developing markets for forest environmental services: an opportunity for promoting equity while securing efficiency? Phil Trans R Soc Lond A 360:1817–1825
Landell-Mills N, Porras TI (2002) Silver bullet or fools' gold? A global review of markets for forest environmental services and their impact on the poor. Instruments for sustainable private sector forestry series. International institute for environment and development, London
Latour B (1987) Science in action: how to follow scientists and engineers through society. Harvard University Press, Cambridge
Law J, Hassard J (1999) Actor network theory and after. Blackwell, Oxford (Sociological Review)
Lipsey RG (1983) Positive economics. Weidenfeld and Nicolson, London
Lückge, F.J. (2000). Modelle des Angebotsverhaltens deutscher Forstbetriebe—Stand und Perspektiven der Forschung. Allgemeine Forst- und Jagdzeitschrift 1, pp 15–19
Mantau, U. (1981). Rohstoffmarkt Holz: Strukturen, Entwicklungen und Preise in der Bundesrepublik Deutschland. Hochschulverlag, Freiburg
McNichol J (2000) Contesting governance in the global marketplace: a sociological assessment of British efforts to build new markets for NGO-certified sustainable wood products. Working Paper no 2000–06. University of California, Center for Culture, Organization, and Politics
Miettinen R, Samra-Fredericks D, Yanow D (2009) Re-turn to practice: an introductory essay. Organ Stud 30:1309–1327
Murphy JT, Lawhon M (2011) Market intermediaries and rural people in Bolivia's forest products sector: are trusting partnerships possible? Singap J Trop Geogr 32:203–219
Nunes PALD, Riyanto YE (2005) Information as a regulatory instrument to price biodiversity benefits: certification and ecolabeling policy practices. Biodivers Conserv 14:35–52
Orlikowski WJ (2007) Sociomaterial practices: exploring technology at work. Organ Stud 28:1435–1448
Pearse PH (1990) Introduction to forestry economics. University of British Columbia Press, Vancouver
Rametsteiner E (2002) The role of governments in forest certification—a normative analysis based on new institutional economics theories. For Policy Econ 4:163–173
Rametsteiner E, Simula M (2003) Forest certification—an instrument to promote sustainable forest management? J Environ Manage 67:87–98
Reckwitz A (2002) Toward a theory of social practices. Eur J Soc Theor 5:243–263
Rico-Gray V, Garcia-Franco JG, Chemas A, Puch A, Sima P (1990) Species composition, similarity, and structure of Mayan Homegardens in Tixpeual and Tixcacaltuyub, Yucatan, Mexico. Econ Bot 44:470–487
Rohracher H (2009) Intermediaries and the governance of choice: the case of green electricity labelling. Environ Plann 41:2014–2028
Røpke I (2009) Theories of practice—new inspiration for ecological economic studies on consumption. Ecol Econ 68:2490–2497
Rosenbaum EF (2000) What is a market? On the methodology of a contested concept. Rev Soc Econ LVIII:455–482
Sandberg J, Dall'Alba G (2009) Returning to practice anew: a life-world perspective. Organ Stud 30:1349–1368
Schatzki TR (1996) Social practiceSocial practices: a wittgensteinian approach to human activity and the social. Cambridge University Press, Cambridge

Schatzki TR (2002). The site of the social: a philosophical account of the constitution of social life and change. Pennsylvania State University Press, University Park, PA
Schatzki TR, Knorr-Cetina K, Von Savigny E (2001) The practice turn in contemporary theory. Routledge, New York
Schlüter A, Koch M (2009) Institutional change in the forest sector: trust and mental models. Eur J For Res 3:383–393
Shove E, Watson M, Hand M, Ingram J (2007) The design of everyday life. Berg, Oxford
Smith CW (2007a) Continuities in markets as definitional practices: A response to Aspers, Knorr Cetina, and Prus. Can J Sociol 32:503–510
Smith CW (2007b) Markets as definitional practices. Can J Sociol 32:1–39
Stavins RN (1995) Transaction costs and tradeable permits. J Environ Econ Mange 29:133–148
Swedberg R (1994) Markets as social structures. In: Smelser NJ, Swedberg R (eds) The handbook of economic sociology. Princeton University Press, Princeton, pp 255–282
Tollefson C (1998) The wealth of forests: Markets, regulation, and sustainable forestry. UBC Press, Vancouver
Trømborg E, Solberg B (2010) Forest sector impacts of the increased use of wood in energy production in Norway. For Policy Econ 12:39–47
Vasquez R, Gentry AH (1989) Use and misuse of forest-harvested fruits in the Iquitos area. Conserv Biol 3:350–361
Veal G, Mouzas S (2008) Barriers to market formation. Representing multiplicity in markets—multiple representations of markets. Paper for the 26th IMP conference, University of Budapest, Corvinus. Available at: http://impgroup.org/uploads/papers/7525.pdf. Accessed 8 Nov 2011
Veeman M (2002) Understanding local and regional markets for forest products. In: Campbell BM, Luckert MK (eds) Uncovering the hidden harvest: valuation methods for woodland and forest resources. Earthscan, London, pp 66–102
Wenger E (1998) Communities of practice: learning, meaning, and identity. Cambridge University Press, Cambridge
White HC (1981) Where do markets come from? Am J Sociol 87:517–547
White HC (2001) Markets from networks. Socioeconomic models of production. Princeton University Press, Princeton
Witkowski ETF, Lamont BB, Obbens FJ (1994) Commercial picking of Banksia hookeriana in the wild reduces subsequent shoot, flower and seed production. J Appl Ecol 31:508–520
Wunder S (2007) The efficiency of payments for environmental services in tropical conservation. Conserv Biol 21:48–58

Part IV
Representing Nature?

Chapter 9
Globalising Biodiversity: Scientific Practices of Scaling and Databasing

Susan Boonman-Berson and Esther Turnhout

9.1 Global Biodiversity, Global Science

It has been suggested that biodiversity is the main issue of the 21st century (Wilson 2000; Bowker 2005). Soon after the term was coined, biologists and conservationists started to use it as the main concept to describe the phenomenon they study, and to argue for its protection (Takacs 1996). It has proved very useful because it has been able to connect various concerns and issues, including endangered species, the preservation of wilderness areas and nature conservation in one term (Takacs 1996). Indeed, definitions of biodiversity are generally broad, referring to the totality of life on earth. The formal definition of the Convention on Biological Diversity (CBD) (article 2 of the convention text) serves as an illustration:

> Biological diversity means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems. (http://www.cbd.int/convention/articles.shtml?a=cbd-02, accessed 12-12-2011).

If, as the CBD suggests, biodiversity is a global phenomenon, its degradation is a global issue. Global environmental problems are of relatively recent origin. It is commonly argued that the first picture of the earth taken from space was a crucial element in their invention (e.g. Hajer 1995; Escobar 1996). Apparently, seeing the earth from space created an awareness of the planet's wholeness and fragility and of the importance of taking joint efforts to conserve it. The global nature of the issue also implies that a global scientific effort is needed to address it. The fact that

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it is currently unknown how many kinds of biodiversity exist, or what they are, is generally seen as a problem. It is commonly agreed that global biodiversity needs to be known and quantified before it can be effectively managed and protected. According to the CBD for example, current deficiencies in taxonomic knowledge impact on

> our ability to conserve, use and share the benefits of our biological diversity (http://www.cbd.int/gti/problem.shtml, accessed 12-12-2011).

It is in this sentiment that Wilson (2000, p. 2279) emphasises the importance of completing

> the Linnaean enterprise…[to] describe and classify all of the surviving species of the world.

The generation of global knowledge about global biodiversity faces two major problems. The first is the generation of reliable data. The recording of biodiversity requires not only highly specialised knowledge about species identification but also a huge amount of resources in terms of time and money. Part of this involves the recruitment and training of volunteer recorders. Science alone will never be able to achieve a global census of biodiversity and thus these volunteers are absolutely vital. Ensuring that they remain motivated is an issue that deserves more attention than it currently receives (Bell et al. 2008). Many volunteer recorders are motivated by a love of nature and a concern for its conservation (Ellis and Waterton 2004; Lawrence and Turnhout 2010). Although they are also motivated by contributing to science and want their data to be used in policy, tension may arise when their data are to be used in scientific and policy projects and have to meet strict quality and reliability standards (Lawrence and Turnhout 2010). The second major problem associated with the generation of global knowledge on global biodiversity is the usability of biodiversity data. Many biodiversity data are not globally available, either because they have not been digitised and entered into standardised databases, or because the existing biodiversity databases are incompatible, leading to

> maddening difficulties in knowing what is where and comparing like with like (Bisby 2000, p. 2309).

Consequently, existing biodiversity databases are unable to form a global whole.

The intended users of global knowledge about global biodiversity are rarely clearly identified (Ellis et al. 2010). The implicit assumption is that this knowledge is of use to the global community at large. This assumption reflects Haraway's (1988) 'god trick': being able to see everything from nowhere. The GBIF (Global Biodiversity Information Facility), for example, aims to open up the world's biodiversity data to all (http://www.gbif.org/, accessed 12-12-2011). However, this 'nowhere' is not nowhere, nor is it everywhere. It is in practice highly localised and situated. Just as any other scientific practice, biodiversity science is done by individuals at their computers, in their offices, in conference rooms, in their

laboratories or in the field. In addition, it is centralising. The GBIF aspires to become *the* gateway to biodiversity data—particularly to species data; it aspires to be a global network that connects and integrates the various databases and biodiversity scientists and recorders all over the world. And the GBIF is not the only initiative[1]. Hine (2008, p. 187) refers to a dance of initiatives; a parade of interlinked initiatives and acronyms that have emerged

> in part by the increasing significance of biodiversity on the global political stage.

Although the different initiatives differ in important ways in terms of structure, organisation and objectives, each aims to integrate biodiversity data and make them available at a higher level. In other words: each aims to become a centre of calculation (Latour 1987) or an obligatory passage point (Callon 1986). Thus, the emergence both of biodiversity as a global phenomenon and of its degradation as a global issue, have coincided with the emergence of a global science, which is dedicated to knowing and representing global biodiversity, or, in other words, to the globalisation of biodiversity. The processes, networks, ideas and practices making up this globalisation of biodiversity link up to the theme of forest and nature governance (Arts et al. Chap. 1 this volume). Biodiversity knowledge is collected, processed and presented in a variety of ways geared towards particular goals or intentions set by policy, such as reducing biodiversity loss at the global, regional or local level. Multiple actors (scientists, experts, volunteers) are engaged in generating this biodiversity knowledge and in making it usable for policy or other purposes.

Despite the global character of biodiversity and the scientific initiatives referred to above, biodiversity science can be understood as a situated social practice (Pickering 1992; Haraway 1988; Arts et al. Chap. 1 this volume): the global is created locally. By focusing on biodiversity science as practices, this chapter focuses on the messy realities of these practices and includes the social interactions, dilemmas, difficulties and negotiations which characterise their logic. Moreover, it focuses on the technologies used to globalise biodiversity and reflects on the possible—performative—effects of the globalised understandings of biodiversity that result from these efforts.

Of particular relevance in practices of biodiversity science are databases and scaling. Biodiversity scientists create databases to store biodiversity data and they use scaling techniques in order to transform these data into scaled-up representations of biodiversity. Thus, to understand how biodiversity is globalised, it is important to investigate the databasing and scaling practices in which this is achieved. Consequently, this chapter addresses the following research questions:

How is biodiversity globalised in practices of databasing and scaling? Which dilemmas, negotiations and techniques are involved in these practices? How do these practices influence how biodiversity is globalised and represented?

[1] See Hine (2008) and Bowker (2005) for an overview.

Our analysis is based on empirical material from the EBONE project: the European Biodiversity Observation Network. The project is funded by the European Union 7th Framework Programme, and aims to develop a coherent and cost-effective system of biodiversity assessment. Although it focuses on the European level, admittedly only a small subsection of the global picture, it is part of ongoing attempts to globalise biodiversity, as it aims to analyse and integrate biodiversity data and make them available. Before we introduce the EBONE project and report our findings, in the following two sections we will present relevant theoretical background on databases, scientific practice and scale.

9.2 Databases, Standards and Categories

Databases are an essential part of biodiversity science. To be able to represent biodiversity on a global level it is necessary to have data on global biodiversity and to store it in databases. How these databases are constructed impacts on how biodiversity is known and represented. Databases are often considered to be neutral carriers or storage devices. By analogy with the closets in which you put away clothes or linen, they are generally seen as not influencing the items they contain. However, this assumption does not stand up to closer scrutiny. To continue the storage cabinet analogy: the stuff that goes into it has to fit, and the cabinet has to be organised in such a way that order and retrieval are possible. Then, things get complicated: should it have doors or drawers, how many; what size? Should the drawers have sub-compartments like cutlery drawers and, if so, how many, and how big should they be? These questions can be answered satisfactorily only if it is known what needs to be stored. But a storage cabinet must be able to cope with future needs too, as otherwise a new facility will have to be designed and built every time a new piece of silverware or clothing is purchased. Thus, databases always involve bootstrapping problems: you need to classify the data before designing the databases and you need to know about the database before you can classify the data (Bowker 2000). This combination of meeting existing requirements and anticipating possible new future ones makes the designing of databases very complex.

Databases need to be expandable and interoperable with other databases, and the information stored in them needs to be retrievable and accessible for all sorts of purposes. Although the actual reuse of archived and stored information is rare, this *potential* memory function is enough to drive the continuous elaboration of databases (Bowker 2005). After the database has been created, its contents can be forgotten because the database promises the possibility of retrieval. In that way, forgetting is as much a motivation for the creation of databases as is the preservation of information, albeit a more implicit one, and the pursuit of ignorance goes hand in hand with the pursuit of knowledge (McGoey 2007). A high-modernist, aesthetic ideal is present here, which envisions a global network of completely interoperable and accessible databases containing data on all life on earth. As is also clear in the case of the CBD, complete and accessible information about the

world is seen as a prerequisite for being able to manage and control the world (Scott 1998; Turnhout 2010).

Standards and classification systems are indispensable for databases. Data can be stored in the database only if it meets certain standards and fits into the categories of the classification system. Biodiversity databases involve different kinds of categories. Perhaps the most important one of these is the category of species. Data are classified according to the taxonomic classification of species. In addition, biodiversity databases involve tags and metadata. For example, each individual species record comes with tags that refer to the date of the observation, the habitat type in which the species was observed, the name of the observer, etc. Together, the classification system and the standards form the 'filing system' of the database, which is key to data storage and retrieval. The main problem in connecting databases and making them interoperable is that databases are highly tailored to what they are intended to store. Consequently, it is likely that different databases will use different standards and categories, that is, different filing systems (Bowker 2005). Although it is tempting to look at the categories of a classification system as pre-existing empty containers with fixed boundaries to be filled with data that fits the categories, the reality is markedly different (Jones 2009). Categories and what gets assigned to them are mutually constitutive; they bring each other into being. The making of a category involves defining standards and criteria and, in the process, the items that go into them are named, labelled and given a particular identity that fits with that category. And, in the same way that the development of classification systems requires preconceived ideas about the data that needs to be classified, data production requires the existence of preconceived categories and classification systems: measuring or counting something always involves measuring or counting something *as* something (Stone 1988).

Biodiversity databases, the different taxonomic and other categories and standards they involve, and the data that they store are all human-made. They are created in scientific practices and based on context-specific interactions and interpretations. Bowker and Star (2000) argue that although classifications and standards are devised by humans, they become increasingly normalised, and accepted as appearing to stem from nature itself. This is certainly the case for common standards in everyday life: our gender classification tells us which toilet to use; we sort our laundry before putting it in the washing machine (Bowker and Star 2000). However, under close scrutiny, the normality of these standards can always be disputed. Arguably, classifications of nature have never become fully normalised in the sense of being accepted as true (Turnhout 2009). While the distinctions between—let's say, plants and animals—may appear to be obvious, biologists continuously face problems when trying to demarcate the boundary between these two categories, or between other categories of nature. Still, even if their acceptance is incomplete and temporary, classifications of nature and biodiversity are not without consequences (Bowker and Star 2000; Bowker 2000). Abstract conceptualisations of the world, such as classification systems, are performative: they have the tendency to remake the world in their image. To quote Bowker (2005, p. 659):

> [Databases] are set up so that a particular, skewed view of the world can easily be represented. With these […] in place, it is easier to get funding and support for research that reproduces this view. […] Thus, the world that is explored scientifically becomes more and more closely tied to the world that can be represented by […] one's databases: and this world is ever more readily recognized as the real world.

In a similar vein, West and Brockington (2006, p. 609) use the concept 'virtualism', which is defined as

> the attempt to make the world around us look like and conform to an abstract model of it.

This performativity means that the ways in which biodiversity is known, the ways in which this knowledge is archived, and the ways in which biodiversity comes to be represented based on this knowledge, have real implications for how biodiversity is treated in practice. We act on what we know and on what we have come to understand biodiversity to be. For biodiversity, this means that only what is counted counts (Bowker 2000; Lawrence and Turnhout 2010). Only those species that are known, counted and represented in databases can be actively protected. And, conversely, when uncounted and unknown species that are not represented in databases go extinct, we will never know about it; it will be as if it never happened.

The next section will discuss exactly how biodiversity data stored in databases are transformed into representations of global biodiversity.

9.3 Scaling as Scientific Practice

Social practices are generally complex and messy, and scientific practices of globalising biodiversity and creating databases are no exception. Studies in the sociology of scientific knowledge have convincingly demonstrated the role of values and interests in the production of scientific knowledge and have argued that science and society are not separate entities but continuously coproduce each other (Shapin and Schaffer 1985; Jasanoff 2004). If we are to recognise this, we must reconceptualise science as practice (Pickering 1992). The case of biodiversity databases is no exception to this. As will be demonstrated in more detail later in this chapter, EBONE's project members have to deal with different existing compatible and incompatible biodiversity databases in different countries and regions in Europe. They have to develop standards and criteria that guarantee reliability and harmonisation and that are, at the same time, feasible and pragmatic. To meet their objectives, EBONE's project members have to work with many different actors. This includes large groups of organised and unorganised volunteers who are active in natural history and biodiversity recording. And there may be a tension between the ideals and motives of the volunteers and the scientific ideals that drive the rationalisation of biodiversity in the EBONE project (Lawrence and Turnhout 2010). Thus, in the EBONE project we expect to encounter scientific ideals related to reliability, objectivity and complete interoperability, occurring simultaneously with pragmatic

considerations of feasibility and how to use existing data. It is relevant to document this in detail, because in science, these social and practical aspects tend to disappear from view when the end-product is published and portrayed as being natural, objective and true (Latour and Woolgar 1979).

In this chapter we zoom in on one particular issue involved in biodiversity databases: scale. Although we recognize that many different approaches to scaling exist, scaling in this context refers to the extrapolation of in situ biodiversity observations to global, full coverage representations of biodiversity, and doing so in a statistically and scientifically acceptable way. Scale is a much debated topic in ecology, geography and various other scientific disciplines. Ecologists distinguish between the scales of individual organisms, communities, ecosystems or bioregions. Within policy studies it is common to distinguish between different administrative levels or scales of governance (local, regional, national or global). Complex environmental issues such as climate change or biodiversity loss often simultaneously involve these two—and more—conceptions of scale (Meadowcroft 2002; Cash et al. 2006). Implicit in these arguments is an essentialist conception of scale in which,

> scales are […] taken for granted as almost "natural" units for social existence (Swyngedouw 2000, p. 68).

In contrast, much of the current literature holds that scales are constructed in representational practices of scaling (Jones 1998). Or, as Delaney and Leitner (1997, p. 93) put it:

> geographic scale is […] socially constructed rather than ontologically pre-given, and […] the geographic scales constructed are themselves implicated in the constitution of social, economic and political processes.

Importantly, none of this means that scales are not real. On the contrary, their socially constructed character points to the fact that they are made and thus real. However, their construction in practice, in our case scientific practice, does point to their pragmatic, arbitrary and malleable nature.

Within political geography, considerable attention has been paid to the politics of scale, which points to the politics involved in creating scales and the political implications of created scales. The defining of a scale involves demarcation and boundary work. Necessarily, items belonging to a certain scale are demarcated from those that do not, and, as such, scaling involves exclusion. Apart from exclusion, co-option is also likely to take place, because scales often involve hierarchies (Bulkeley 2005). Rather than local scales co-existing next to global ones, global scales can be seen to co-opt the local ones when the local is considered to be represented by the global. Politics is involved in scale making as

> the continuous reshuffling and reorganizations of spatial scales are an integral part of social strategies and struggles for control and empowerment (Swyngedouw 2000, p. 70).

The outcomes of these processes are important because scales, once produced, have real consequences (Bulkeley 2005). Again quoting Swyngedouw (2000, p. 70):

> In a context of heterogeneous social and ecological regulations, organized at the corporeal, local, regional, national, or international level, mobile people, goods, capital, and hypermobile information flows permeate and transgress these scales in ways that can be deeply exclusive and disempowering for those operating at other scale levels.

Generally, scaling up involves making something bigger, more important and more universally valid. As such, it is not surprising that many scientific practices involve scaling. Often natural science scaling practices involve statistics, maps and other methods or scaling devices,[2] such as computer models. Important issues are whether and how you can scale up (for example, from a single scientific experiment or measurement to statements about large areas) or scale down (for example, from national surveys to site-specific information). The spatiality implicit in the notion of scale invites talking about scaling as a form of travel, but one that involves multiple transformations and translations. Biodiversity observations are transcribed into standardised forms. These forms are sent to institutions, which process and digitise them. These data then move to sites of quality control. This makes the data fit for yet another movement: storage in the database. And from then on, the journey will involve travel throughout the network of interoperable biodiversity databases, as envisioned in the mission of projects like EBONE or the GBIF. The data are now fit for linkage with other data and for performing the various analyses, statistical and other, which are required for their globalisation. The main idea of this data infrastructure is to make biodiversity retrievable and usable for a variety of actors within and outside scientific practices.

In the journey from observation to database, biodiversity data become disassociated from the context of observation; they are validated, standardised and objectified, and stored in databases (Lawrence and Turnhout 2010). As such, the data become ever more abstract and ever more universal. None of this is automatic though. Scaling is a scientific practice in the sense that people actively work and cooperate to collect, integrate, process, analyse and scale up biodiversity data in order to achieve full-coverage representations of biodiversity.

9.4 The EBONE Project

EBONE is a collaborative project funded by the 7th Framework Programme within theme 6, Environment (Topic 4.1.1.2. 'Contribution to a global biodiversity observation system'). The project is designed to respond to the widely recognised problem of limitations in the linkage between existing monitoring systems, databases and monitoring sites. These limitations refer to the different and uncoordinated approaches in measuring and reporting reliable trends and changes in biodiversity across geographical and temporal scales, as can be seen in the online

[2] The authors are indebted to Steve Woolgar who introduced the term 'scaling device' at the 'Scaleography' workshop, Oxford, 8 July, 2009.

database DaEuMon, a result of the EuMon project, in which a detailed picture is given of monitoring biodiversity practices in Europe (Halada et al. 2009). As such, the strength of EBONE is that it builds on available knowledge and existing networks and makes use of different existing monitoring systems[3] in order to end up with efficient indicators and a well-balanced sampling programme (Brus et al. 2011; Halada et al. 2009).

Policy relevance is an important objective for EBONE. The project was set up to achieve a coherent system for data collection that can be used for international comparative assessments. By selecting indicators based on existing policy frameworks, EBONE will be able to provide relevant information for evaluating the implementation of policies such as Natura 2000 (Halada et al. 2009). EBONE works with different types of data. The first source is in situ data about species and habitats.[4] It is EBONE's intention to build as much as possible on existing data and networks and to collaborate with the organisations involved, such as research institutes and biodiversity recording organisations. In this way, EBONE tries to achieve its aims in a cost-effective way. A crucial aspect of EBONE is the integration of these in situ data with earth observation data. Combining these two data sources in a scientifically acceptable way is a major challenge for EBONE, especially since the project will be working with in situ data that is often fragmented, patchy, incompatible, or has been collected in ways that do not meet commonly agreed scientific standards. As such, the material about the EBONE project presented here offers a unique opportunity to look behind the scenes at databasing and scaling in action and at the difficulties, dilemmas and techniques involved.

The material we present is from two main sources. The first is publications and documentation about the project. The second is transcripts from one of the project's meetings. Together they give an inside, situational perspective on the scaling and databasing practices involved in biodiversity science. Note that the unreferenced utterances included in the next section are from participants at the meeting. The main aim of this meeting was to measure progress and discuss the state of the art of the different work packages.[5] It was the kick-off meeting of Work Package 6, which focuses on 'Field validation of the methodological framework'. Many of the discussions focused on Work Package 5 ('Intercalibration of EO data with in situ observation'). These discussions proved very valuable for the insights they provided into practices of databasing and scaling. The meeting was held in Aix-en-Provence, in the south of France from 15–17 April 2009, one year after the start of the project in April 2008. The participants included representatives of the partners

[3] Such as those developed in earlier European Framework projects like ALTERNET, BioHab and EuMon.

[4] Most of the species data come from country-based recording organisations and monitoring schemes. The habitat data come from different habitat monitoring schemes, such as the Countryside Survey (UK), NILS (Sweden), SISPARES (Spain) and SINUS (Austria). The habitat data will be integrated using the habitat categories of the BioHab project.

[5] EBONE has ten work packages. For more information see http:www.ebone.wur.nl/UK.

in the EBONE project, which are 18 European nature research institutes and universities with a long history of collaborating with each other, plus partners from Israel and South Africa. The latter were added so that the EBONE framework could be tested at global level. In general, all the participants had a background in ecology. The presentations and discussions were taped by the first author, who participated in the meeting as an observer. Later, the authors listened to the recordings (a total of 15 h) and selected 13 h for full transcription. The transcripts were analysed for key topics of interest relating to the issues addressed in the research questions pertaining to scientific practice, databases and scaling. In particular, the material was analysed for references to scaling methods and devices, the use of standards, and the practical dilemmas and challenges involved in the creation of databases. The material was organised under five subheadings, which emerged from the initial analysis of the transcripts and represent key topics discussed during the meeting.

9.5 Negotiating and Scaling Biodiversity Data

9.5.1 Bootstrapping and the Use of Existing Data

EBONE was faced with persistent bootstrapping difficulties in creating biodiversity databases and was confronted with the interdependence between the structure and design of the database, the objectives of the project, and the available data. What EBONE can achieve depends on what is there to build on, and vice versa. It is EBONE's explicit intention to link up with existing systems and use existing data:

> [EBONE] will develop a conceptual framework for monitoring, utilizing the existing institutional context of European monitoring, databases, observation points and observing organizations agencies, and NGOs (Halada et al. 2009).

As one of the participants put it:

> We do not want to invent something new but we want to base ourselves on existing data models and existing solutions.

This sentiment was also key to achieving cost effectiveness, because if EBONE were to link up with what biodiversity recording organisations are already doing and provide them with something they could work with, these organisations would absorb EBONE into their routine work:

> If you design something which is not done in a large part of the monitoring schemes already, they [the monitoring organisations] will not be willing to implement [it] and change their habits;

> It is very important that we have a flexible protocol in the end that can be used by a wide range of users.

The participants never questioned the importance of using existing data. It was, however, considered to be a big problem. The first challenge was to find out which data and which monitoring systems were already out there, and how they could be used by EBONE. As the utterances below illustrate, it was considered that this had to be done before EBONE could start work and decide on what it wants to achieve:

> Nobody in their right minds wants to design a […] system without being absolutely sure what the goals are. And yet, we really do not actually have those;

> [we need to] know what we are really monitoring […]. Because only by then the database system itself can be designed. Before that there are only technical thoughts about what this could look like.

9.5.2 Statistics

It was generally realised that although much data were available, using them would be an entirely different matter. According to the participants, much of the available species data fell short of scientific standards:

> monitoring needs to improve. […] [in order] to present an unbiased and realistic picture of the state of Europe's biodiversity (Halada et al. 2009).

One participant even questioned whether the information collected deserved to be called 'data':

> most […] monitoring has no data behind it at all, it's a walk of a person through a site with a tick list.

The existing systems on which the collecting of data on habitats is based also attracted criticism. They were not compatible in terms of their sampling methods, and several of them did not meet the standards of the participants:

> …different countries are doing slightly different things, and it [the shown composite graph] is far from a perfectly random sample. Most of these times [the data] are selective because that is where people have traditionally done this.

As the quotation above demonstrates, the preferred sampling procedure is stratified random sampling. This means that certain non-overlapping strata are identified, within which samples are selected randomly.[6] Based on a comparative assessment of some of these schemes, one of the participants concluded:

> sometimes it is not clear what is meant with random sampling.

[6] Using strata is a way to ensure that all relevant categories are sampled. In the case of biodiversity, meaningful strata are often based on habitat, soil type, biotope or land use classifications.

Clearly, there are different ways of random sampling. Some were criticised because they made it impossible to calculate the sampling error and the probability of selecting the samples:

> the […] samples within the strata are not selected independently. […and] this seriously complicates the estimation of the sampling variance;

> if you want to quantify the uncertainty, then I have problems with [some of the existing schemes].

The question was how to include these imperfect existing data in way that was scientifically acceptable for the participants:

> we have to consider how we are going to incorporate the data, which may be softer and may not be stratified randomly.

It was important that statistics would not get in the way of feasibility:

> I have the feeling that we are trying too much to be statistically correct, while in the end […] each country is going to go with its own method […]. Are we not trying too much?.

Thus, the EBONE project would have to apply statistics pragmatically and make compromises:

> and the […] bigger [the] picture we want to create of biodiversity […], the more we have to make these compromises between perfect design and making the best use of information.

And although there was some strong opposition to this, based on a fear that all scientific validity would be lost, in the end a compromise was reached and it was decided to go for minimal standards and to work with the imperfections of existing data.

9.5.3 Biodiversity Indicators

The transcripts show that the meeting was dominated by discussions of monitoring and sampling procedures and statistics. There was very little mention of biodiversity itself. It entered into the discussions only when indicators and the kind of data that would be included in EBONE were being discussed:

> …these are the priority indicators: […] habitat assessment, abundance and distribution of selected species, fragmentation of natural and semi-natural areas;

> …the total area of habitat types, land cover types […] the temporal trend […] the spatial mean of the total of biodiversity indices, the quality of the habitat type. And so on.

The use of indicators shows that biodiversity is not assessed directly but instead is calculated by means of indicators that serve as proxies. As pointed out above, the data needed for these indicators would have to come from existing monitoring

schemes, especially those for birds, plants and butterflies, because these are the species groups for which most data are available. However, the value of using birds and butterflies as indicators was questioned, because many migrate:

> I have a problem with birds and butterflies. Not that I do not like them but [they are not] good indicators. […] I think we have to be careful not just to go with what people are doing because […] the data that are very convenient. We have to go for good indicators.

This again points to the dilemmas which kept surfacing throughout the meeting because of the difficulty of reconciling the aim of achieving scientific validity with the need to use existing data.

9.5.4 The Network

Most of the monitoring of species and habitats that serves as a basis for EBONE is done by a wide variety of national organisations and it is essential that EBONE establishes a

> sound institutional framework to ensure continuity and long-term collaboration between partners (Halada et al. 2009).

However, this adds greatly to the complexity of the project:

> EBONE […] has an amazingly complex and difficult institutional goal of actually establishing an operational network. That is going to be very, very tricky.

EBONE has to find a way to coordinate all the different existing monitoring efforts:

> the key activity is to determine how existing monitoring data can be coordinated into a standardised framework.

Getting everybody to monitor in the same way is difficult because some of the categories they would have to monitor are ambiguous, as can be seen from the two examples contained in the following utterance:

> The question is how many [wetland] species you need to have before you go from pure grassland with some broadleaved plants to a mixed swamp. […] That is an absolutely critical decision. […] It means that [the habitat] changes from being outside the Annex 1 to the inside of Annex 1.[7] So it is an absolutely crucial change. […] There is another example, also very important. There is a definition in the Annex 1 habitats called 'blanket bog'. A blanket bog is a habitat complex; it is not a simple habitat. It is a complex of grassland and shrubs and wetlands and bog pools. The critical thing is that if you are mapping, […] you can map an area of grassland in that bog and call it grassland. Yet the whole landscape feature of blanket bog covers the whole landscape.

[7] This refers to the EU Habitats Directive. Annex 1 contains a list of habitat types for which EU member states are obliged to take protective measures.

The different possible interpretations have to be aligned. One way to achieve that is to develop a standard protocol. However, this protocol would have to be flexible enough to accommodate the requirements of stakeholders:

> We should design a system [that is] applicable and worldwide acceptable. That means that we not only have to develop the technical systems, we also have to go to the users and […] tell them how they can do it and we have to involve their views.

The protocol would have to be coordinated. For example, any suggested change or addition would have to be approved centrally. A user-friendly handbook was considered to be an effective way to coordinate and harmonize monitoring and a draft of such a handbook was prepared and tested during the meeting. This handbook described

> the methodology appropriate for coordinating information on habitats in order to obtain statistically robust estimates' (Bunce et al. 2005, p. 11).

It contained detailed rules because

> otherwise real changes cannot be separated reliably from background noise (ibid.: 11).

For example, it provided an explanation of how to map a roadside verge:

> If you have a road that is three and a half (3.5) metres wide, with a margin [sic] along the side of one meter […], you will be mapping that. And it will be mapped as an area. […] If there is [a verge] one metre [wide] on either side then you […] map those two areas as lines. […] They may be the same. They may be just grass, in which case you record it as grass. But one [verge] may be grass and the other may be shrubs. […] How do I know? The rule is that if the vegetation is the same on the side of the track as it is in the surrounding area, then you do not map it. […] that is all in the handbook.

However, the handbook was considered very detailed and it was recognised that to really understand and be able to apply it, users would have to be trained:

> getting to know the rules [in the handbook] is also very important. […] There is a lot of work there, […] if you pick up the handbook and […] try to apply it;

> [there should be] one participant [who] will […] organise […] training in his own institution and supervise the work.

Finally, to ensure that the data is reliable and collected in the right way, control was considered necessary. According to Bunce et al. (2008),

> quality control (i.e. supervision of surveyors) and assurance (i.e. independent checks of recording) are all essential to produce robust data. […] So that policy makers and scientists would have confidence in the results.

This control includes checking whether the right data have been collected and the right procedures have been followed. Quality control is crucial because the data influence policy decisions, including those on the status of areas; based on monitoring data, the status of an area might shift from unprotected habitat to protected habitat, or vice versa. Thus, the importance of quality control needs to be explained to recorders, experts and volunteers:

Fig. 9.1 The relation between species, habitats and earth observations data (EBONE 2012)

> I commented to the people [that the number of species][…] needed to be checked. One of the guys got very upset about it. He said 'You are telling we are not doing it right'. I said, 'No, you just have got to make sure that […] you have got it absolutely right'. As long as you check it.

The standard protocol, the handbook, the training sessions and the quality control and verification procedures would enable EBONE to enhance the capabilities of the recorders, standardise and coordinate the monitoring, manage the network, and achieve reliable results.

9.5.5 Scaling Up

As we have seen, the starting point for EBONE is very local and fragmented. It involves clusters of data about different aspects of biodiversity, collected in different sites, with different methods and for different purposes. EBONE was faced with the challenge of upscaling these patchy data, so they could be used at a higher level:

> The problem is how can you go from those sorts of observation […] to a larger area? […] We […] need to build up from sample-based inferences for local areas to […] inferences at a larger scale.

To achieve this, it is necessary to use earth observation data. This was seen as one of EBONE's main innovations:

> EBONE is about developing new methods for integrating data. […] combining in situ [and] observation data effectively.

The integration of species and habitats data with earth observation data was the key to achieving full-coverage scaled-up biodiversity information (Fig. 9.1).

The main scaling device was a statistical procedure; intercalibration through the use of correspondence matrices. By means of these matrices, the two data sets used in EBONE (in situ data on the y-axis and satellite data on the x-axis) are intercalibrated, resulting in the outcomes presented in the cells of the matrix. As one of the meeting participants explained:

> [We have] in situ observations […] and we also have a land cover map which provides full coverage. So what […you can do…] in terms of intercalibration is […] produce correspondence matrices. […] And these correspondence matrices actually help us to identify how good the link is between the two.

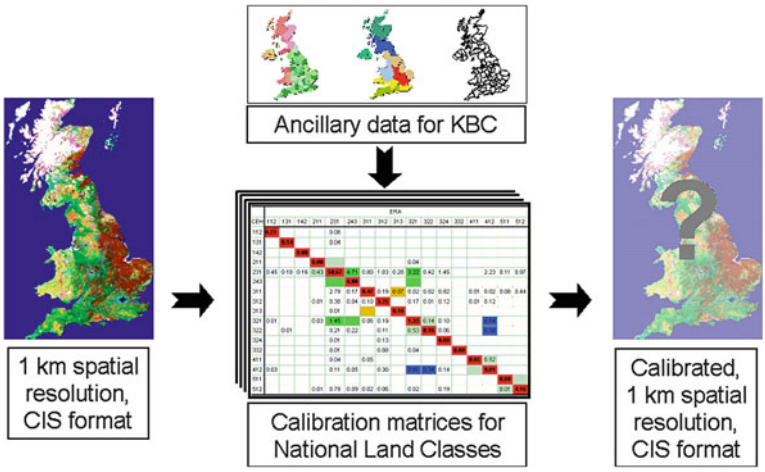

Fig. 9.2 A visualization of the intercalibration procedure (adapted from Hill and Smith 2004; EBONE 2012). The question mark indicates EBONE's results

The correspondence matrices could subsequently be used to correct the in situ data in such a way that they could be connected to the earth observation data, thereby creating a new, integrated, scaled-up, full-cover result (Fig. 9.2).

Importantly, this procedure also increased the robustness of the outcomes. The identified problems associated with the species and habitat data could be ameliorated (at least to some extent) by combining these data with observation data:

> [You can use the] correspondence matrices by overlapping in situ with the land cover map, to then produce a statistically better result;

> [One…] parcel […] will be incorporated in the correspondence matrix […] but actually that parcel extends right the way out into the surrounding squares. So you have a benefit from using the extra surrounding squares. This procedure will increase that sample number […]. So you will actually be greatly reducing the standard error.

As such, the statistical procedure of intercalibration through correspondence matrices proved to be of critical importance in integrating data from different sources, in upscaling them and in improving their overall reliability. EBONE's scaled-up and integrated outcomes will be able to function as globalised representations of biodiversity.

9.6 Practices of Databasing and Scaling

The findings illustrate several of the points raised earlier. First of all, the 'maddening difficulties' (Bisby 2000) involved in databasing were obvious throughout the meeting. The first difficulty involved bootstrapping: the interrelationships

between the databases and what is to be stored in them. EBONE had to be based on existing data and monitoring schemes, so before a start could be made with designing the database, it was important to find out what data were out there and how useable they were. However, to assess their usability, it was important to know more about the database and its requirements. This discussion went back and forth throughout the meeting. A second difficulty had to do with the reliability and compatibility of the existing data. It was clear that the data out there had been collected in different ways, some of which were more reliable and more scientifically sound than others. Although ecological criteria were mentioned, the standards used were mostly statistical and referred to the sampling method used and how that affected the options for statistical and other analyses. A third main difficulty referred to the complex institutional network: the different local organisations and institutions involved in the monitoring work. EBONE's challenge was to coordinate all the different monitoring efforts and try to achieve a certain degree of harmonisation and standardisation. In dealing with these difficulties, there was a general consensus about the need to be pragmatic. A start would have to be made with designing the database even before the existing data had been totally clarified. Statistical procedures were indispensable but should not stand in the way of feasibility and should be employed in a pragmatic way. Harmonisation and standardisation were important, but to keep everybody on board, EBONE's requirements would have to be minimal and fit in with what everybody was already doing. The EBONE project is thus a typical example of a scientific practice in which the actions of the actors resulted from the continuous interactions between scientific ideals and practical considerations.

EBONE's centralising features are striking. EBONE aims to serve as a crucial mediator between the European Commission and its member states by producing information about Europe's biodiversity that is linked to European environmental policies. EBONE also attempts to integrate all biodiversity information in Europe, to achieve one (monitoring) system for everybody to use. To do so, EBONE wishes to coordinate, harmonise and standardise all of the ongoing monitoring. Actually, although those responsible for EBONE realise that this will probably not be feasible in the short term, effort is put into ensuring it does come about in the long term, by putting in place protocols, a field handbook and training. As such, EBONE envisions becoming an obligatory 'passage point' for biodiversity information in Europe (Callon 1986).

Interestingly, during the meeting, no mention was made of how to achieve this centralisation and standardisation while at the same time ensuring the cooperation of the current recording and monitoring organisations and the volunteers who do most of the recording and monitoring. This may pose some real challenges for EBONE in the future (Bell et al. 2008; Lawrence and Turnhout 2010). However, while the terms gateway or obligatory passage point may suggest EBONE has a neutral function, the term 'centre of calculation' (Latour 1987) does more justice to the work that must be put in before EBONE can play that role. What was said during the meeting made clear the importance of statistical procedures to standardise the data and to calculate the variance and sampling errors involved. This was very important for reasons of

authority and credibility. The potential political implications of the data were big: if EBONE identified certain areas as containing rare and important habitats and species, EU member states would be required to take action to protect them. Moreover, sometimes the boundaries between habitats of different conservation status were blurred and unclear. EBONE recognised that statistical validity was essential, to protect the data from being contested and deconstructed (Porter 1995). However, given the nature of the project and its dependence on existing, imperfect, patchy and incompatible data, statistical validity could only be achieved in a pragmatic way. The key solution chosen in the meeting was to integrate the in situ and earth observation data in such a way that it increased the reliability of the end result. Integration with earth observation data was also the main factor in scaling up the in situ data to achieve full coverage representations of Europe's biodiversity. This integration was achieved using correspondence matrices as scaling devices. Again, this required statistics, as the matrices were produced using statistical intercalibration techniques and procedures.

9.7 Globalising Biodiversity

In this chapter we have used empirical material from the EBONE project in order to analyse how biodiversity is globalised in practices of databasing and scaling. Our findings demonstrate not only the importance of databases and scaling but also the dilemmas and negotiations involved, particularly relating to three issues: the bootstrapping issues involved in designing databases; how to achieve statistical validity while using existing, imperfect data; and how to scale up the data. Our findings also point to the important role of statistics in these practices, and the use of correspondence matrices to intercalibrate in situ and earth observation data as scaling devices.

The chapter has highlighted the globalisation of biodiversity as a situated, context- specific scientific practice, not unlike other social practices in the field of nature and environment (see Chap. 1). In particular, it has focused on the role of scaling and databasing in this particular scientific practice. The EBONE project illustrates that the observational data collected largely by volunteers that features in these scaling and databasing practices is the crucial starting material for assessing biodiversity at any level. Pragmatic decisions and concern about credibility seemed to go hand in hand in these practices. The data collected—and the data collectors—enter into a network in which these data are rearranged, corrected, and prepared for scaling up to make them useable for many different actors at different levels (global, local and national). The logic involved in the globalisation of biodiversity and in the EBONE project lies in the creation of these biodiversity databases while using existing data, and the scaling up of the same data in a scientific, statistical and reliable way.

What is striking is how infrequently the term 'biodiversity' was used in the meeting. All the technical talk of data and statistics seemed to have replaced discussing biodiversity itself. The EBONE project addresses biodiversity in an abstract way, relatively detached from the actual species and habitats that make up

biodiversity and from the individuals that collect the data that EBONE relies on. The EBONE project illustrates what was suggested earlier in this chapter: that creating a biodiversity database is as much about collecting knowledge as it is about forgetting (Bowker 2005). The databasing and scaling practices involved in the globalisation of biodiversity have an impact on how biodiversity is represented. EBONE's end results manifest as full-coverage, scaled-up, decontextualised maps of Europe's biodiversity, which enable an objective and detached understanding of the 'stock' and trends of biodiversity. From a scientific perspective this is perfectly understandable. Detachment and decontextualisation are inevitably involved in the globalisation of biodiversity. They are absolutely vital if EBONE's results are to be seen as scientifically valid and if they are to assume a wider usability beyond the direct context in which they were created. The importance of databases and scaled-up data is not explicitly discussed within the EBONE project, but they are assumed to be prerequisites for the globalisation of biodiversity. Likewise, the use of statistics and indicators are understood as crucial means to achieve this. These activities, as well as the classifications and categories that underpin them, have become normalised (Bowker 2000); taken for granted as part of this particular scientific practice. Consequently, scientific practices involved in the production of databases, including the situated negotiations and interactions and the technologies of upscaling, detachment and decontextualisation, remain largely implicit.

The normalisation of databases is key to their performativity; the way in which they constitute biodiversity while representing it (Bowker 2000). Biodiversity databases are linked to political objectives and concerns in the EU member states, and will be used to underpin decision-making in biodiversity governance related to the protection of species and habitats. Depending on the biodiversity of specific habitats, as documented in the database, certain habitats will be protected, while others will not. Reflection on the practices in which these databases are produced is important, to ensure the legitimacy of these decisions. This necessarily includes reflection on the implications of decontextualisation and abstraction. The processes of standardisation, quantification and scaling up involved in the globalisation of biodiversity bring the risk of losing touch with the actual habitats and species that make up biodiversity and also with the people involved in its recording (Lawrence and Turnhout 2010). Although at this point it is too early to tell, this may also be the case for EBONE in the future. To keep the volunteer recorders and the recording organisations on board, it is important that projects such as EBONE recognise the different motivations of those involved and ensure transparency about what happens to the data. Finally, and perhaps most importantly, to achieve mutual trust and exchange, it will be crucial that these projects are perceived as part of the recording community, rather than as external institutions that are interested solely in the data. The challenge is to organise the creation of biodiversity databases and other initiatives to globalise biodiversity in a socially robust way; a way that is open to multiple kinds of data, perspectives, users and participants.

References

Bell S, Marzano M, Cent J, Kobierska H, Podjed D, Vandzinskaite D, Reinert H, Armaitiene A, Grodzińska-Jurczak M, Muršič R (2008) What counts? Volunteers and their organisations in the recording and monitoring of biodiversity. Biodivers Conserv 17:3443–3454

Bisby FA (2000) The quiet revolution: biodiversity informatics and the internet. Science 289:S2309–S2312

Bowker GC (2000) Biodiversity datadiversity. Soc Stud Sci 30:643–683

BowkerBowker GC (2005) Memory practices in the sciences. The MIT Press, Cambridge

Bowker GC, Star SL (2000) Sorting things out, classification and its consequences. The MIT Press, Cambridge

Brus DJ, Knotters M, Metzger MJ, Walvoort DJJ (2011) Towards a European-wide sampling design for statistical monitoring of common habitats. Alterra Report, Wageningen, 2213

Bulkeley H (2005) Reconfiguring environmental governance: towards a politics of scales and networks. Polit Geogr 24:875–902

Bunce R, Metzger M, Jongman R, Brandt J, De Blust G, Elena-Rossello R, Groom G, Halada L, Hofer G, Howard D, Kovar P, Mücher C, Padoa-Schioppa E, Paelinx D, Palo A, Perez-Soba M, Ramos I, Roche P, Skånes H, Wrbka T (2008) A standardized procedure for surveillance and monitoring european habitats and provision of spatial data. Landscape Ecol 23:11–25

Bunce RGH, Groom GB, Jongman RHG, Padoa-Schioppa E (2005) Handbook for surveillance and monitoring of European habitats. Alterra Report, Wageningen, 1219

Callon M (1986) Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay. In: Law Power J (ed) Action and belief: a new sociology of knowledge?. Routledge, London

Cash DW, Adger N, Berker F, Garden P, Lebel L, Olsson P, Pritchard L, Young O (2006) Scale and cross-scale dynamics: governance and information in a multilevel world. Ecol Soc 11(2), viewed on 12 December 2011. http://www.ecologyandsociety.org/vol11/iss2/art18/

Delaney D, Leitner H (1997) The political construction of scale. Polit Geography 16:93–97

EBONE (2012) WP 5 Inter-calibration of EO data with in situ observation. (online communication). Available at http://www.EBONE.wur.nl/UK/Project+Work+Packages/WP5+Inter-calibration/. Accessed 24 May 2012

Ellis R, Waterton C (2004) Environmental citizenship in the making: the participation of volunteer naturalists in UK biological recording and biodiversity policy. Sci Public Policy 31:95–105

Ellis R, Waterton C, Wynne B (2010) Taxonomy, biodiversity and their publics in twenty-first century DNA barcoding. Public Understanding Sci 19:497–512

Escobar A (1996) Construction nature : elements for a post-structuralist political ecology. Futures 28:325–343

Hajer MA (1995) The politics of environmental discourse, ecological modernization and the policy process. Oxford University Press, Oxford

Halada L, Jongman RHG, Gerard F, Whittaker L, Bunce RGH, Bauch B, Schmeller DS (2009) The European biodiversity observation network—EBONE. In: Hrebicek J, Hradec J, Pelikán E, Pilmmann W, Holoubek I, Legat T (eds) Proceedings of the European conference of the Czech presidency of the Council of the EU: towards e-environment. Masaryk University, Prague

Hill RA, Smith GM (2004) CS2000 module 9: Data integration for localised results and support for indicators of countryside character and quality. Final report A5, NERC/Centre for Ecology and Hydrology, Project Report Number C02124

Hine C (2008) Systematics as cyberscience: computers, change, and continuity in science. The MIT Press, Cambridge

Haraway D (1988) Situated knowledges: the science question in feminism and the privilege of partial perspective. Feminist Stud 14:575–599

Jasanoff S (2004) States of knowledge: the co-production of science and social order. Routledge, London

Jones KT (1998) Scale as epistemology. Polit Geogr 17:25–28

Jones R (2009) Categories, borders and boundaries. Prog Hum Geogr 33:174–189
Latour B (1987) Science in action: how to follow engineers and scientists through society. Harvard University Press, Cambridge
Latour B, Woolgar S (1979) Laboratory life, the construction of scientific facts. Princeton University Press, Princeton
Lawrence A, Turnhout E (2010) Personal meaning in the public sphere: the standardisation and rationalisation of biodiversity data in the UK and the Netherlands. J Rural Stud 26:353–360
McGoey L (2007) On the will to ignorance in bureaucracy. Econ Soc 36:212–235
Meadowcroft J (2002) Politics and scale: some implications for environmental governance. Landscape Urban Plann 61:169–179
Pickering A (1992) From science as knowledge to science as practice. In: Pickering A (ed) Science as practice and culture. The University of Chicago Press, Chicago
Porter TM (1995) Trust in numbers: the pursuit of objectivity in science and public life. Princeton University Press, Princeton
Scott J (1998) Seeing like a state: how certain schemes to improve the human condition have failed. Yale University Press, New Haven
Shapin S, Schaffer S (1985) Leviathan and the air-pump: hobbes, boyle and the experimental life. Princeton University Press, Princeton
Stone DA (1988) Policy paradox and political reason. Scott, Foresman and Company, Illinios
Swyngedouw E (2000) Authoritarian governance, power, and the politics of rescaling. Environ Plan D 18:63–76
Takacs D (1996) The idea of biodiversity, philosophies of paradise. The Johns Hopkins University Press, Baltimore
Turnhout E (2009) The effectiveness of boundary objects: the case of ecological indicators. Sci Public Policy 36:403–412
Turnhout E (2010) Heads in the clouds: knowledge democracy as a utopian dream. In: In ‘t Veld R (ed) Knowledge democracy; consequences for science, politics and media. Springer, Berlin
West P, Brockington D (2006) An anthropological perspective on some unexpected consequences of protected areas. Conserv Biol 20:609–616
Wilson EO (2000) A global biodiversity map. Science 289:2279

Chapter 10
Where Management Practices and Experiential Practices Meet: Public Support and Conflict in Ecosystem Management

Arjen Buijs, Birgit Elands and Ramona van Marwijk

10.1 Introduction

Ecosystem management (ESM) refers to actively intervening in nature with an eye to desirable future conditions in natural areas. These future conditions relate not only to the ecosystem itself, but also to recreation. In urban societies such as the Netherlands, ecosystem management inevitably affects the life world of people visiting natural areas or living nearby. Recreation is a major function of nature areas. People visit forest and nature areas frequently. In the twelve months from 1 April 2006 to 31 March 2007, 384 million visits of at least an hour were made to Dutch forest and nature areas (including water and coastal recreation) (Goossen 2008). Forest and nature managers generally welcome recreation, as spending time in nature has positive effects on the visitors' health and wellbeing, generates income and employment and, last but not least, increases public support for nature conservation. To enable visitors to recreate, managers create facilities in natural areas, such as entrance points, trails (for hiking, cycling and horse riding), benches, information panels and visitor information centres. The design and location of recreational infrastructure generally take into account the sensitivity of ecosystems, as well the recreational experiences that are to be enhanced, and the type and amount of recreational use (Cole 1993). Quite often, the assessment of these is largely based on the knowledge and personal observation of local nature managers. And if recreationists behave differently than managers anticipated, entry points or routes are modified accordingly (Van Marwijk 2009). As such, ESM and nature recreation are more closely related than often realised.

The success of ESM no longer depends solely on the ecological response; it also depends on the societal response. In the past, nature managers often ignored public opinion in their nature restoration measures and when planning public access and use through facilities and infrastructure, but nowadays the involvement of the public and the canvassing of public opinion are considered important

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elements of natural resource management (Roth 2006; Stenseke 2009). Consequently, ESM and recreation have become even more closely knit. Ideally, in this process the two behaviours adapt to each other, in an effort to increase the ecological and recreational value of natural areas.

Although many people see nature as an important part of their everyday life, their valuation of nature can vary. Research has shown that how people evaluate ESM depends on individual and group expectations that are based on many factors, including prior experience of the area, specific preferences, age and recreational motives (De Vries et al. 2007; Elands and Lengkeek 2012; Junker and Buchecker 2008). In general, survey results have repeatedly made clear that visitors generally evaluate their visits to nature areas highly (Smeets and Gadet 2008).

However, studies also show that not all ESM is welcomed by people enjoying nature in a recreational way. If their everyday life becomes endangered, people can become active, and articulate the significance of a place to them and the emotions it evokes in them. In urbanised countries, biodiversity protection and timber production measures are sometimes negatively evaluated, as they may limit public access, decrease aesthetic beauty or impact upon cultural history and environmental narratives (Buijs 2009). Ecological restoration is especially likely to meet resistance from local residents, visitors and other stakeholders. Studies have shown that such visitor resistance is often related to aesthetics, i.e. the fear that restoration efforts may result in a visually unattractive area (Buijs et al. 2011; Vining et al. 2000), or to the feelings of bonding and attachment that residents feel with the current landscape and land use (Buijs 2009). Visitors, i.e. recreationists or local community members, often try to combat these negative effects. Sometimes this happens amicably, via suggestions at information meetings. But sometimes local action becomes more hostile and is expressed through explicit protest, angry letters to local media or even the formation of a protest group. To view such protest solely as detrimental to nature conservation is to miss the point. It is also something to be applauded: protest can be seen as an expression of human engagement with nature (Elands and Turnhout 2009).

This chapter explores, by means of a practice based approach, the seemingly contradictory human valuation of nature, i.e. both satisfaction and dissatisfaction with ESM, by investigating people's interactions with nature in real-life situations. Valuation develops in the diversity of recreational activities people undertake in nature and landscapes. As ESM and these activities are materially based in the same place, namely a specific natural area, they interact. That is, in their experiences of the natural environment, including the effects of ESM, people reproduce the meanings of these areas. Experiencing nature through a diversity of interrelated activities can be conceived of as a practice. We propose to call this kind of practices (nature-based) *experiential practices*. We will show that experiential practices are based on the positive meanings attached to nature and that these practices are often routinised. If such established practices are threatened by changes induced by ESM, local communities are especially likely to react to ESM measures, often vociferously, that in turn may strongly influence ESM practices.

10.2 Experiential Practices

The experiential practices we are concerned with here are everyday doings and sayings in and about nature. They are what people do: going for a walk on Sunday, jogging in the early evening, bird watching, or mountain biking. It is evident that by virtue of its direct physical engagement with the natural environment, nature recreation is an embodied practice. The physical engagement provides experiences people are looking for: solitude and quietness, physical endurance, authenticity, or amusement and sociality. In their theory of out-there-ness, which deals with the nature of experiences, Elands and Lengkeek (2012) argue that recreation and tourism can be considered as a form of distancing oneself from everyday reality. Experiential practices in nature comprise such a distancing.

Experiential practices are also about what people say about nature: how people articulate their valuation of nature, in terms of e.g. aesthetic preferences and motivations. But also how they express their views on nature management informally (e.g. at family gatherings) or in public (e.g. during information meetings, in the media and during protest activities). These sayings may have a strong influence on how ESM measures are interpreted by the broader community. When measures are contested, these meanings are especially likely to be strategically framed in order to delegitimise the ESM views of other actors, such as the nature managers (Buijs et al. 2011; Fischer and Marshall 2010).

To further investigate the doings and sayings of people in nature, we will elaborate some of the key characteristics of practices as discussed in Chap. 1, i.e. materiality, knowing, and emotions. We will also describe how these characteristics are essential in the routines people develop in their experiential practices, and the conditions under which the routines might be disrupted.

10.2.1 The Importance of the Material Context

Experiential practices, more than any other practice, are situated not only in a social context, but also in a material context. Although social practices tend to be defined as based on an intersubjective or interactive structure (Schatzki 2005), according to Reckwitz, this is certainly not a criterion for a practice:

> Vielmehr besitzen praktiken regelmäsig neben oder statt einer intersubjectiven eine 'interobjectieve' Structur (um die Terminologie von Latourzu verwenden), d.h. sie sind routinisierte Aktivitäten eines Menschlichen Subjects im Umgang mit Objecten statt mit anderen Subjekten (Reckwitz 2003, p. 292)

In experiential practices, nature does in itself have a meaning. The importance of the material world is particularly emphasised in environmental psychology research. This school of thought explains our understanding and valuation of nature through interpretive schemata or filters that people have in their minds when evaluating an environment. The underlying assumption is that landscape perception and the

experience of beauty relate directly to physical attributes of the natural landscape, without being mediated by narratives or discourses or culture. Much research into people's experiences of nature in the Netherlands has focused on this type of research (e.g. Van den Berg et al. 1998; Van der Wulp 2008). Such research has resulted in a theoretically and empirically based analysis of people's appreciation of natural areas, which uses eight indicators: abundance of vegetation, degree of naturalness, degree of variation, abundance of water, abundance of relief, degree of landscape identity, degree of skyline disturbance, and degree of noise pollution (De Vries et al. 2007). Although this theory ignores socio-cultural aspects in landscape appreciation, research suggests that these indicators are able to successfully predict the average aesthetic valuation of the landscape (Jacobs 2006). In this sense, the embodiment of experiential practices can be approached by studying non-discursive, (unconscious) affective valuation of landscapes (Ulrich 1983). Unfortunately, most studies from environmental psychology are based on ex-situ laboratory studies, taken out of a specific site and direct context and often with students as respondents. However, we will argue in this paper that landscape perception can also be studied in a practice context, such as in experiential practices in an existing landscape.

10.2.2 The Importance of Knowing

Our appreciation is mobilised not only by physical appearances, but also by the cognitive dimension of 'knowing' what the object is about. MacCannell (1989) introduces the concept of 'attraction': the notion that narratives related to objects define whether any object (landscape, building, etc.) becomes articulated as attractive. Experts often argue that only the knowledgeable observer is able to experience beauty and thus to appreciate the positive results of ESM (Gobster et al. 2007). The physical appearances of natural environments are linked to symbols, meanings, and narratives, which are stored in the human mind and form the basis for understanding or even 'reading' a landscape (Schama 1995).

Buijs (2009) has proposed that these narratives, or more precisely the meanings that are attached to landscape and nature through a social process of meaning construction, should be considered to be *social representations*. The theory of social representations focuses on the content and production of common sense, that is, on how people understand the world around them and on the meanings they attach to that world (Moscovici 2000). Social representations of nature are then the symbolic interpretations of nature which are (re)produced in social practices, but individually internalised (Buijs 2009). In this sense, they exist beyond any single practice and tend to show remarkable stability (Moscovici 2000). Because of this, a social representation need not to be negotiated in every social practice and will become consensual knowledge that is taken for granted (e.g. 'nature is beautiful').

The interpretation of nature is (re)produced in social practices. As not everybody will share the same interpretation, there will be a variety of social representations of nature. Social representations function as a resource for people's

opinions and actions, and facilitate communication by presenting a more or less commonly shared set of ideas. This becomes especially relevant in practices where the natural environment has become the issue of socio-political conflicts. When engaged in such practices, people strategically select specific elements from a representation of nature, to discursively pursue valued ends. Thus, in discursive actions, references may be made to cognitions, such as knowledge and beliefs about nature, values about the appropriate human-nature relationship and views upon the right nature management.

10.2.3 The Importance of Emotions

As discussed above, the material context causes immediate emotional—or affective—responses, which inform experiential practices. Emotional responses, however, are informed not only by immediacy, but also by well-established ideas and values relating to experiences of what worked well in the past and what one has learned during education and training. This implies that emotional responses towards ESM reflect longer-lasting affective conditions for nature (Manfredo 2008).

The importance of emotions towards nature is increasingly being discussed. Empirical studies have shown that ESM may negatively affect not only people's landscape preferences, but also their emotional bonding to an area (Buijs 2009). It is therefore useful to also take into consideration how ESM positively or negatively affects people's bonding with natural areas. This bonding is often expressed in terms of 'sense of place' or 'place attachment'—terms that refer to the intense relationships human beings can develop with the places in which they live, work and recreate. According to Tuan (1974), place is a centre of meaning or field of care that emphasizes human emotions and relationships. Whereas sense of place is rather neutral in its approach to people's bonding to places, place attachment refers explicitly to the positive emotional bond that develops between groups or individuals and their environment. Emotional bonds do not evolve independently of the person's or group's self-definition. Consequently, we consider identity to be inherently linked to attachment.

Research suggests that place attachment is positively associated with sense of care or responsibility and that it might lead to pro-environmental behaviour (Hunziker et al. 2007). Consequently, place attachment might be a key concept in nature protection (what you love, you will not destroy) and thus in public support for ESM.

10.2.4 Routines and Their Disturbance

Experiential practices, such as walking, jogging or cycling in nature areas, are often habits and as a result are highly routinised. A familiar experience to many is to snap out of contemplation during a walk and realise that you have walked a large section of the routine pathway without actually consciously experiencing it.

Many people always follow the same route when they go for a short walk near home. It is exactly this routinization which is often appreciated in nature experience and may contribute to its restorative effects. Usually, experiential practices are not consciously or discursively elaborated. This is especially true in well-known environments. The knowledge of the area, the paths that can be taken, the beauty and ugliness of specific sections in the area, or the perfect places to spot birds or deer are acquired during prior practices and stored in the mental maps of the people involved. These mental maps are clear examples of the practical knowing (Wagenaar and Cook 2003) that is developed and enacted in routinised practices. This routinisation of thought had already been discussed before the recent 'practice turn'. For example, Giddens discussed the relationship between practical and discursive consciousness. For him, routinisation is primarily part of practical consciousness, a state of mind, in which 'actors know what they do, and why they do it—their knowledgeability *as* agents—(Giddens 1984, p. 23), without being able to give it direct discursive expression in terms of motivation or objective. He emphasises its vital importance for an individual to cope with the uncertainties and stress of daily life and its role in driving 'a wedge between the potentially explosive content of the unconscious and the reflexive monitoring of action which agents display' (Giddens 1984, p. 23).

Experiential practices in nature are usually positive experiences, but are sometimes also quite confrontational for actors if sudden changes in the environment, e.g. through changed management practices, are experienced as threatening a site's cultural history or scenic beauty. ESM can be perceived as a shock event, which interrupts people's routines, thereby touching upon, as articulated by Giddens, the emotions and uncertainties in our subconscious and possibly causing us to re-orientate prevailing meanings of the environment. And as practices are socially co-produced, individual or group identities or social networks may be re-thought. Individual doings and sayings then become social, and individual behaviour may become collective action, as it is reflected upon in social settings and thus contributes to the (re)production of meaning structures (Wagenaar and Cook 2003).

In this chapter, we discuss people's valuation of ESM as ascertained in two settings: one uncontested and the other contested. The uncontested setting reflects enduring and routinised experiential practices, whereas the contested setting reflects disturbed experiential practices as a reaction to the touched unconsciousness, sequentially transformed in discursive consciousness—the conditions under which the seemingly stable valuation suddenly ends up as a protest action.

10.3 Methods

To investigate different aspects of experiential practices and the relationship with ESM practices, we use insights from three different studies, conducted in two national parks in the Netherlands.

10.3.1 Study Sites

The studies which this chapter draws on were conducted in two adjacent national parks in the north of the Netherlands: Dwingelderveld National Park (3,550 ha) and Drents-Friese Wold National Park (6,100 ha). National parks in the Netherlands serve four objectives: (1) protection and development of nature and landscape, (2) outdoor recreation, (3) education and extension, and (4) research.[1] Both parks are Natura 2000 sites. They share a common ecology, consisting of predominantly wet forests, moorland, drift sand areas, bogs, and some small brooks and meadows. The landscape is a result of the interplay between humans and nature. The moorland and the drift sand areas are the result of the degradation caused by the intensive grazing that was common practice until the beginning of the 19th century. Much of the area was then converted into forest for the production of timber. Most farmers in the area have been bought out by nature conservation agencies, and meadows have been or are being restored to wetlands and meandering brooks.

Recently, ecosystem management has become an important concept for the management of both national parks. The management primarily aims at a 'hands-off' strategy in combination with ecological restoration projects, to allow nature to develop according to natural processes. The ecological restorations occurring since the 1990s include gradual removal of exotic species such as *Larix* (larch), *Pseudotsuga menziesii* (Douglas fir) and *Picea* (spruce), raising groundwater level, restoring brooks, and expanding heather and drift sand areas. These management strategies have seriously impacted upon different vegetation types, i.e. wet forests and bog with surface water, and hence have affected the perceived visual characteristics of the landscape.

The second major function of these national parks is recreation. Both are visited by several million visitors yearly. They are typical Dutch nature areas, with extensive recreational networks for hiking, cycling (on 'normal', racing, or all-terrain bikes), and horse riding. There are informative visitor centres. Just outside the national parks are tourist accommodation and catering facilities.

The parks are sparsely inhabited, with only a few old farms and houses inside their boundaries. The 'residents' we refer to in this chapter are generally inhabitants of the adjacent villages—in total, some 20,000 people.

Most land in the two national parks is owned by nature conservation agencies, primarily *Staatsbosbeheer* (the National Forest Service) and *Natuurmonumenten* (a non-governmental organisation). To discuss the ESM with stakeholders, consultation bodies were set up. These comprised representatives of all land-owning nature conservation agencies and various governmental bodies (e.g. municipalities and water boards), plus (to represent farmers) the *Land- en Tuinbouw Organisatie* (LTO, the Dutch Federation of Agriculture and Horticulture) and (to represent local tourism entrepreneurs) the *Vereniging van Recreatieondernemers Nederland*

[1] http://www.nationaalpark.nl/documents/nationale-parken.xml?lang=nl

(RECRON). After the management plan was implemented in the Drents-Friese Wold, a local protest group called *Stichting de Woudreus* (Woodland Giant Foundation) was set up. In recent years, this protest group has expanded its working area and is now also involved in discussions about the management of the Dwingelderveld.

10.3.2 Case Study 1—Visitor Behaviour in Dwingelderveld National Park

The first case study had a quantitative design. An important aim was to ascertain the spatial behaviour of visitors to Dwingelderveld National Park in relation to the material context and routinization tendencies related to ESM-based zoning and predesigned routes. To do so, three types of data were collected: (1) visitor data such as visitor characteristics, place and time of departure, following of marked trails and places visited, collected by means of a questionnaire, (2) data on spatial behaviour, obtained by equipping visitors with a GPS device, and (3) environmental data on the spatial structure and characteristic features of Dwingelderveld. The population sampled were hikers, as these are the most numerous visitors to Dutch national parks.

The survey was carried out in 2006 in car parks at five of the nine main entrances to the park, from which visitors disperse throughout the park. The sample consisted of 461 hikers (response rate 63 %). On arrival, visitors were asked to carry a GPS device during their visit. On their return to the car park they were asked to complete a questionnaire. As the number of available GPS devices was limited, only 400 hikers carried a GPS during their visit. Due to data losses, only 311 GPS tracks were valid, which was almost 78 %. The convenience sampling strategy in this study produces a form of non-probability sample, where selection of participants was 'based on their proximity to the researcher and the ease with which the researcher and the ease with which the researcher can access the participants' (Jennings 2001, p. 138). As the goal of the study was not to lead to generalizable results but to explore potentially significant patterns of behaviour, it was assumed that a convenience sampling was adequate (Van Marwijk 2009).

In order to analyse the relation between behaviour and the environment, specific environmental features were distinguished. What elements in the physical environment make people choose a certain route or visit a specific spot? Van Marwijk et al. (2007) distinguish four different types of qualities or values, which are important for people when visiting a nature area: use, perception, narrative and appropriation value. Use refers to the material context, perception to aesthetic appreciation, narrative to knowing, and appropriation to attachment and bonding. We use these values, except for appropriation as it is highly subjective, to classify the environmental features of Dwingelderveld National Park: *use* (e.g. accessibility of facilities), *perception* (e.g. presence of water, noise and type of forest) and

narrative (e.g. constructed or natural attractions). All features were collected, measured, and stored in GIS.

It is known that in addition to being influenced by personal preferences for specific environmental features, the movements of recreationists are constrained by the configuration of the paths in an area. In general, the more accessible paths tend to be used by more people (Bafna 2003; Peponis and Wineman 2002). The network configuration variables consisted of *integration* (referring to how easily a particular path segment can be reached), *connectivity* (denoting the number of paths that are directly connected to a specific path) *distance from car park* (given that visitors start from a certain place with a specific time budget in mind) and *path density* (this defines the length of paths per grid cell of 10 × 10 m). An analysis was done to ascertain the correlation between visitor densities on each path segment in Dwingelderveld National Park; this was followed by a stepwise, hierarchical multiple regression analysis.

10.3.3 Case Study 2—Perceived Attractiveness of Nature in Dwingelderveld National Park

The second case study, carried out in 2007, focused on how visitors to Dwingelderveld National Park perceived the attractiveness of nature before and after restoration.

Classic landscape perception research has some major drawbacks, as it is often directed towards hypothetical landscapes, measured off-site by specific groups of people who have no direct relation with those affected by the changes. The study described here focused on experiential practices, i.e. visitors' appreciation of different types of nature as experienced during their hike in Dwingelderveld National Park. Thus, the research took place after a real-life experience. As in some parts of the national park ecological restoration measures have already been implemented, all visitors will experience both traditional and restored nature. Here, 'traditional' refers to fragments of the dry forested and meadow landscapes that have existed here since the 19th century, while 'restored' refers to the wet forest and bog habitats that have been re-created because they were present in this area a long time ago.

After their walk, visitors were asked to evaluate the attractiveness of different nature types in the national park. Eight types of nature were represented. Four were of unrestored 'nature': (a) young coniferous forest, (b) young deciduous forest, (c) old deciduous forest, and (d) old coniferous forest. Four were of restored nature: (e) bog with visible water, (f) bog without visible water, (g) wet forest without visible water, and (h) wet forest with visible water (Fig. 10.1). There were four photos of each nature type. Visitors were given 32 photos of nature types in the park and asked to classify them according to attractiveness, using the following procedure. The photos were first sorted into two piles: 'attractive' and 'unattractive'. Each of these piles was

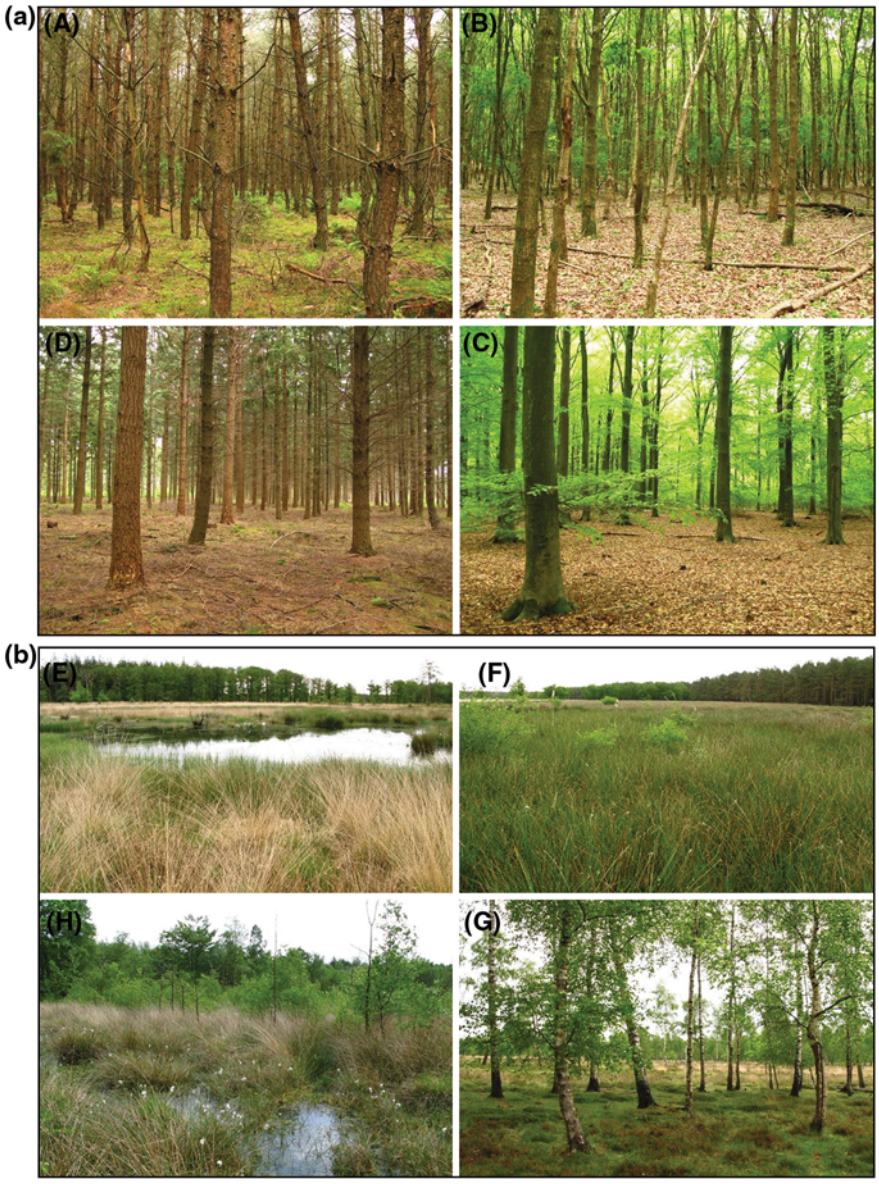

Fig. 10.1 **a** Nature types before restoration (clockwise starting *top left*): (A) young coniferous forest, (B) young deciduous forest, (C) old deciduous forest, and (D) old coniferous forest. **b** Nature types after restoration (clockwise starting *top left*): (E) bog with visible water, (F) bog without visible water, (G) wet forest without visible water, and (H) wet forest with visible water

then subjected to the same procedure. Then the 'attractive' pile was taken and subjected to the same procedure, to give four piles. Finally, the procedure was repeated for each of these four piles. The result was eight piles, which could be ranked from 1 to 8, with pile 1 being most attractive and pile 8 being least attractive.

Before the surveyed visitors were asked to sort the 32 photos according to attractiveness, the researchers told them that the photos had been taken in Dwingelderveld National Park, where they had just been walking, and emphasised that they should not base their judgement on the quality of the photo or the weather conditions and that they should imagine that they could see the depicted scene while walking on a comfortable path. In total, 247 people took part in the research (57 % response rate).

Apart from the material context described above, the survey was also directed towards ascertaining visitors' knowledge and attachment. Visitors were asked whether they had particular ecological knowledge, e.g. through their education, work or hobbies. In addition, the effect of informing people about restoration goals was measured, by giving almost half (46 %) of the participants an information sheet on ecological restoration, which had been developed jointly with foresters working in Dwingelderveld National Park. Attachment was defined as being familiar with the area or living locally. It was assumed that ecological knowledge would increase the perceived attractiveness of restored nature, whereas attachment to the area would have the opposite effect.

10.3.4 Case Study 3—The Emergence of Protest in Drents-Friese Wold National Park

The third case study took place in the Drents-Friese Wold National Park and is an example of a qualitative approach to experiential practices. It focused on how the aspects of knowing (through social representations of nature) and emotions (through place attachment) contributed to a change from passive experiential practices in nature to a practice of fierce political opposition to the National Forest Service. Although the topic is comparable to the second case study—understanding the social responses to changes in nature management in national parks—the study's focus and approach differed significantly. As in the first study, routinization of experiential practices also played a significant role, but with the difference that routinization had been disrupted by the implementation of ESM measures and this 'shock event' was an important trigger of emerging protests in the local community.

In this study we used multiple methods to study the conflict between the largest conservation agency and land owner—the National Forest Service—and the local protest group—the Woodland Giant Foundation. Focus group discussions were organised with local residents and the Woodland Giant Foundation. Four focus groups were recruited from local residents selected randomly in three villages around the national park and usually living in streets adjacent to the park. Almost all participants in these groups therefore knew the area very well and visited it at least once a week, for example by bike or to walk their dog. Three focus group

discussions were organised with Woodland Giant representatives and Woodland Giant sympathisers selected with the help of the foundation's secretary. Interviews were held with the National Forest Service. To further improve our general understanding of the conflict, we conducted eight interviews with representatives of two smaller nature conservation agencies, the chair of the consultation body, and representatives of the municipalities. In total, 49 people participated in the focus groups and the interviews held in 2005 and 2007. Finally, we analysed 127 documents related to the conflict that had been published between 2003 and 2007 (e.g. management plans and local newspaper articles). All methods concentrated on aspects such as gaining insight into opinions on ESM and the dispute, as well as the references made to social representations of nature and attachment to the area (in order to underpin these opinions). For a more extensive description of methods and results, see Buijs et al. (2011).

10.4 Results

10.4.1 Case Study 1: The Material Context Defines Visitor Behaviour

Visitors to Dwingelderveld National Park are being affected by the ESM practices in the park. During their recreational activities, in this case hiking, they (un)consciously encounter the results of these practices as they make use of the dense path network, the marked trails, the benches and other facilities. They enjoy the scenery and the varied nature as well as the cultural, historical and ecological narratives of the landscape.

Two-thirds of the hikers surveyed in Dwingelderveld National Park said they had followed a predefined route (one marked by coloured posts or described in leaflets). The trail network is so dense that hikers can easily shorten or extend their predefined route (off-trail walking is prohibited). One-third of the visitors stated they had not followed a predefined route; instead, they wandered along the trails for some time, or walked to the sheep farm (one of the main attractions in Dwingelderveld National Park) and back (Fig. 10.2).

The question is whether these dominant behaviour patterns can be explained by the environmental context, i.e. the configuration of the dense trail network in Dwingelderveld National Park, and its environmental features. To investigate this, we did a regression analysis of the two dominant behaviour patterns: the complete route (on average 6.4 km) and the wander (on average 5.2 km). The results are depicted in Table 10.1.

The first regression model on the left of Table 10.1 shows that 32.7 % of the variation in wandering behaviour (R^2) is explained. The network configuration variables, especially integration and distance from car park, explain 10.1 % of the variation. The use value variables explain the largest increase in R^2, by means of

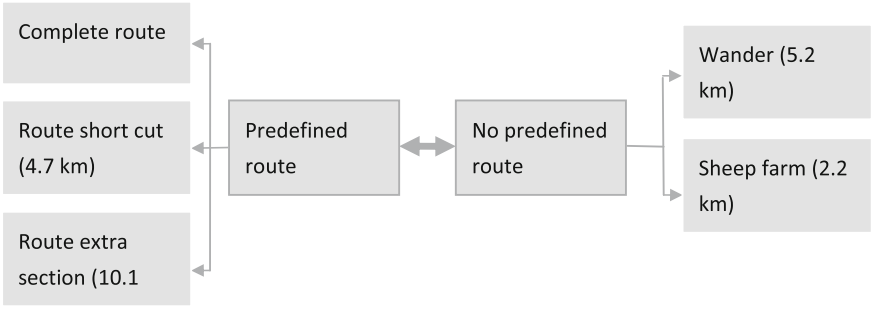

Fig. 10.2 Dominant behaviour patterns in Dwingelderveld National Park (Van Marwijk 2009, p. 130)

post/leaflet route and benches/picnic tables (17.6 %). The experience and narrative values, however, contribute only marginally. Compared to wandering behaviour patterns, the second regression model on the 'complete route', as indicated on the right of Table 10.1, shows a much higher R^2 (62.8 %); hence route patterns are more easier to predict. This is not very surprising though, as this regression model is somewhat artificial: the post and leaflet route variables account for much of the route behaviour patterns, and the other variables are a function of where the predefined routes are situated.

Surprisingly, the 'wander' pattern is still significantly influenced by path segments of both the post and leaflet routes. Possible explanations are: post routes start from car parks, and to get away from a car park, visitors almost automatically follow a post route for a while, before starting to wander. Additionally, path segments that are part of post routes are better equipped and maintained than other paths, and therefore more inviting for wanderers. For example, such path segments have many more benches along them than other paths. This implies that the relationship between benches and complete route patterns is not so much that the path is chosen because of the presence of a bench, as that the bench has been sited on a predefined route.

To conclude, network configuration and use value variables explain most of the hiking behaviour patterns. The importance of specific experience and narrative values is mainly due to their geographical position in the area or position in predefined routes. In other words, the experience value (e.g. the heath, water, forest, openness) and narrative value (e.g. cultural historical and prototypical unique elements such as the sheep farm or fens) act as a pull factor for visiting Dwingelderveld National Park in the first place, but the path network configuration and use value variables (e.g. predefined routes, situation of car park) determine visitors' actual spatial behaviour in the field.

Visitor densities for each car park are shown in Fig. 10.3. The regression models for each car park are less able to predict visitor behaviour than the models for wandering/predefined routes. However, some interesting conclusions can be drawn. Distance from car park, one of the network configuration variables, is important; Fig. 10.3 shows that most visitors stay relatively close to the car park. Post route influences visitor densities strongly at the two main car parks (the red

Table 10.1 Regression model for wandering behaviour and predefined route pattern, relating the environmental context by means of its network configuration and environmental features (use, experience and narrative values) and visitor behaviour (Van Marwijk 2009, p. 140)

	Wander			Route complete		
	Standardised coefficient (β)	R^2	R^2 change	Standardised coefficient (β)	R^2	R^2 change
Network configuration		0.101	0.101		0.045	0.045
Integration	0.207					
Connectivity				0.009		
Distance from car park	−0.195			−0.109		
Path density	0.028			0.067		
Use value		0.277	0.176		0.561	0.517
Post route	0.177			0.669		
Leaflet route	0.175			0.114		
Paved	0.059			0.106		
Bench/picnic table	0.215			0.063		
Cycle path	0.095					
Bridle path				0.049		
Experience value		0.290	0.012		0.583	0.024
Slope	−0.063			−0.071		
Wet forest	−0.054					
Distance to water	−0.043			−0.114		
Coniferous forest				0.060		
Narrative value		0.327	0.038		0.628	0.042
Distance to NSF visitor centre[a]	0.159					
Distance to Holtveen lookout	0.100					
Distance to radio telescope[b]				0.206		
Distance to NM visitor centre[c]				−0.107		

[a] visitor centre owned by the National Forest Service
[b] the oldest radio telescope in the Netherlands and a national monument
[c] visitor centre owned by 'Natuurmonumenten', a nature conservation agency

and light blue routes shown in Fig. 10.3). A possible explanation is that a large proportion of the visitors we interviewed at these car parks were first-time visitors who were unacquainted with the area. Finally, the choice of car park largely determines the type of attractions (narrative value) that are visited.

The results of this case study make clear that the design of a nature area, in terms of the location of car parks and marked trails, largely determines the hiking behaviour of different visitor types in similar ways. Even the wanderers—visitors who do not

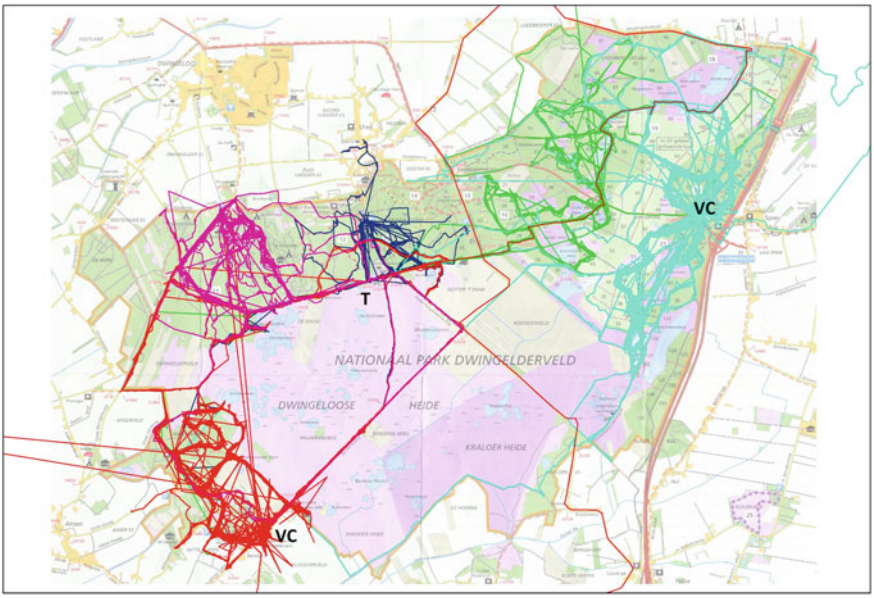

Fig. 10.3 Indication of visitor dispersion of 311 hikers starting from one of five car parks on seven days in spring and summer 2006 in Dwingelderveld National Park (3,550 ha). Each colour indicates routes of hikers from a specific car park. *Thicker lines* imply that more visitors have followed the same paths. *VC* visitor centre, *T* radio telescope. The light green shading indicates forest area, the light pink shading indicates heath land

consciously follow predefined routes—make extensive use of paths that are part of routes. Particular spatial goals, such as the heath, the bogs, and the sheep farm, are visited as long as they are easily reachable from the car park hikers start from. One can conclude that ESM with respect to recreational infrastructure works: people do use the designated routes in a similar way. There is clearly a routinization in the behaviour related to ESM-based zoning and designated routing.

10.4.2 Case Study 2: Hiking Visitors Find Restored Nature Attractive

The main question that this study set out to answer was: do visitors appreciate restored nature more than traditional nature? As described in the methods, hiking visitors had to sort a set of 32 photos taken in Dwingelderveld National Park into 8 piles of 4 photos (pile 1 = least attractive, pile 8 = most attractive). Table 10.2 depicts the results. We can observe that the least attractive nature type is young coniferous forest (1.9), whereas 'bog with visible water' is perceived the most attractive (6.6). To check whether the 4 photos for each nature type were consistently chosen by the respondents, a reliability analysis was carried out. The moderate to

large magnitudes of the Cronbach's alpha coefficients allowed us to continue our analysis (for more information see van Marwijk et al. 2011) (Table 10.2).

Cluster analysis revealed three groups: plain attractiveness, fair attractiveness and good attractiveness (Table 10.2). We can observe that 'good' is rated as 6.4, 'fair' as 4.6 and 'plain' as 2.3. The category 'good' consists solely of restored nature types, whereas 'plain' consists of traditional landscape types, and 'fair' a mixture of both. Hence, we can conclude that the public at large appreciate restored nature more than unrestored nature. Other researchers have also found that restored natural sites are perceived as more attractive (e.g. Arriaza et al. 2004; Kearney et al. 2008; Van den Berg and Koole 2006). The high preference ratings can probably be explained by the openness of restored nature and the presence of visible water. Several authors have explained preference for open landscapes in terms of human evolution, arguing that such landscapes provided opportunities for hunting and gathering (Orions 1980), prospect and refuge (Williams and Cary 2002), or information and understanding (Kaplan and Kaplan 1982), amongst others.

A closer look, however, at the 'fair' cluster makes clear that this cluster is a mixture of traditional and restored nature types. Visitors do not discriminate attractiveness between nature types characterised as 'bog without visible water', 'old deciduous forest', 'old coniferous forest', and 'wet forest without visible water'. This implies that several traditional nature types—old deciduous and old coniferous forests—are valued by visitors to the area as much as restored nature types that lack water. Both old deciduous and old coniferous forest might be appreciated as they signify maturity and eternity (Van Trigt et al. 2003) and enhance the spatial variation of a nature area for outdoor recreationists (Hull and Stewart 1995).

In this study we also wanted to find out whether these perceived attractiveness can be interpreted in terms of personal characteristics and local context. Statistical analysis revealed no significant differences for the variables professionally acquired ecological knowledge, familiarity with the area, first-time visitor, frequency of visits, living locally, or for other socio-demographics such as age, gender, level of education, and occupation. Informing visitors about the ecological aims of the restoration practices had no impact either. We can conclude that aesthetic preferences are in principle generic and not malleable.

On the basis of this study, we can conclude that in general people appreciate restored nature more than traditional nature. However, as mature forest is appreciated as well, we cannot claim that all restored nature types are perceived as more attractive than all traditional nature types. The study did have some limitations. We measured visitors' appreciation of individual types of nature, whereas it is known from research that what is highly appreciated during recreation is the experience of a variety of nature types, i.e. several types in combination (De Vries et al. 2007). Besides, although the people surveyed evaluated existing ESM in Dwingelderveld National Park just after they had been hiking, they did so via photos, not by experiencing the actual implications of ESM on the spot. That issue will be discussed below, in the third and final case study.

Table 10.2 Perceived attractiveness for each nature type (adapted from Van Marwijk et al. 2011, p. 4)

	Code	Nature type	Mean[a]	Sd	Cronbach's alpha
Plain	A (TN)	Young coniferous forest	1.9	1.0	0.70
	B (TN)	Young deciduous forest	2.6	1.0	0.61
Fair	D (TN)	Old coniferous forest	3.6	1.1	0.51
	F (RN)	Bog without visible water	4.5	1.2	0.70
	C (TN)	Old deciduous forest	4.8	1.2	0.62
	G (RN)	Wet forest without visible water	5.6	1.2	0.54
Good	H (RN)	Wet forest with visible water	6.3	1.1	0.63
	E (RN)	Bog with visible water	6.6	0.93	0.56

TN = traditional nature, RN = restored nature

* The means are significantly different as detected by repeated measures ANOVA ($F=523.4$, $df=7/1722$, $p<.001$). Paired t-test statistics comparing each subsequent scale (e.g, A with C, C with B, B with F, and so on) are all significant (p-values below 0.001).

10.4.3 Case Study 3: ESM Threatens Established Practices

In the previous section we focused on the perceived attractiveness of ESM during experiential practices. In this section, we will focus more explicitly on the mutual interdependency of management and experiential practices, doing so on the basis of a study of the implementation of ESM in the Drents-Friese Wold National Park and of the extensive local protests that resulted from this.

As discussed in the methods section, the National Forest Service aimed at creating conditions to let the area develop according to natural processes ('hands-off' strategy). To reach this aim, ecological restoration measures were carried out, such as the expansion of the drift sand area in the park, the removal of invasive tree species, the raising of the water table and nature restoration on agricultural land. When the management plan for the national park was published, little was heard from the local community. During the interviews, several residents mentioned that it was only when the management plan was put into practice that the local community started to realise that this plan would affect their experiential practices. Some of their routine walking routes were closed off or turned into a busy cycle path. In other routes, the scenery was dramatically altered as a result of the felling of trees, including the highly valued (but 'non-native') American oak. Whereas previously, people's practical consciousness was dominant during their routine experiencing of the area, now the discursive consciousness also became apparent, as people started to voice their objections against ESM and organised themselves into the Woodland Giant Foundation to counter these measures. Several factors influenced the protest against the National Forest Service (see Buijs et al. 2011 for a more extensive description). Below we will subsequently discuss the importance of emotions through place attachment and the importance of knowing through social representations of nature.

The meanings local residents attach to Drents-Friese Wold have developed in close relationship with both the material and social environments. Experiential practices, such as walking, biking or bird spotting, have often become routinised, and people follow their personal routes and tend to revisit favourite spots. The area called Berkenheuvel was particularly popular among local residents and was often visited. Consequently, many residents developed a strong attachment to this place. As Berkenheuvel is somewhat off the tourist routes, many locals felt it was as 'their' place. Recently, access to the area has been restricted and the National Forest Service has clear-felled some conifer plots. These measures met with widespread disapproval in the local community. Locals felt attached to the area they had been visiting for so many years, and resented the managing agency felling 'their forest'. Their routine of visiting this appreciated place was broken and people had to either develop new meanings for the place, or develop a new routine for visiting other beautiful and quiet areas.

Other places in the park have had specific meanings attached to them because of their social history. An example is the area near a former refuge for resistance fighters in the World War II. To prevent discovery by the Germans, this refuge was located in a remote and dark part of the forest. The recently introduced more integral forest management techniques have resulted in opening up the area visually, and as a result the shelter is no longer concealed by shrubs and trees. Though the visual attractiveness of the area may have been improved by the implementation of ESM-based measures, it is seen as a threat to the group identity of the community and their historical relationships with highly symbolic places in the forest. ESM practices seem not to have taken into account such symbolic environments but have instead focused exclusively on the ecological elements.

Importantly, both the National Forest Service and the local community agreed on the importance of nature conservation in general. However, they disagreed on the direction of these values for the *type* of nature that should be protected and how this should be done. In theoretical terms: the dominant social representations in the local community (especially of the protest group) diverged significantly from those of the managing agency. The National Forest Service focused on enhancing biodiversity through ESM measures. However, this focus was not at odds with the dominant representation of nature of many local residents, especially with that of the Woodland Giant protest group. Members of that group appreciated the area especially because of its quietness, scenic beauty and diversity of the landscape. According to Woodland Giant Foundation, it was this diversity that needed protection:

> A beautiful landscape is the most important. People do not like those newly established wetlands, which are always wet and filled with weeds. They think this is messy. They prefer nice green, well cared-for rectangular fields.

As already mentioned, both the National Forest Service and Woodland Giant agreed on the importance of nature conservation in general, but the focus of this conservation differed significantly. Members of Woodland Giant stated that the focus should not be on abstract and theoretical concepts such as habitats and

endangered species but instead on the health and wellbeing of trees and animals in the area. As one of them put it:

> For me, trees are kind of sacred. How do they get the idea to cut down trees just because of some vague [ecological] theory?
> Why kill trees that could live on for many years?

In addition to these biocentric values (Buijs 2009), a spokesman for the Woodland Giant Foundation also alluded to more anthropocentric values:

> And who are they managing the area for? Just for those tiny plants—not for us!

Whilst the National Forest Service focused on forest diversification, nature restoration on agricultural land and expansion of the drift sand area, its opponents focused on the current scenic beauty and the importance of protecting all life, including non-native trees.

Besides the importance of diverging social representations of nature and attachments to Drents-Friese Wold, there was another factor that influenced the opposition to the National Forest Service: the failure of the National Forest Service and other managing agencies to invite the public to participate in the decision-making process. This lack of involvement reinforced the local community's unease about not being heard and not having a say in the future of 'their' Drents-Friese Wold. This was a fruitful basis for the protests.

As the Woodland Giant Foundation started to manifest itself in local and national media, the conflict hardened. Although the National Forest Service has owned the forest for a long time, the Woodland Giant Foundation portrayed this agency as an outside threat to the community, i.e. as an outsider that did not respect the local community's informal right to have a say in the development of the area. On the basis of this insider versus-outsider characterisation of the conflict, the Woodland Giant Foundation also explicitly opposed the expert-based ecological knowledge of the National Forest Service and instead opted for the more experiential-based local knowledge of the area (Van Bommel 2008). Referring to other schools of thought in the ecological sciences, the Woodland Giant Foundation also argued that there are different paradigms of how to protect biodiversity. It labelled the National Forest Service's paradigm—which focused on autonomous ecological processes and nature restoration in order to re-establish the abiotic conditions that existed before humans arrived in the area—as 'outdated', and backed this up by referring to critical reflections by a professor at the University of Groningen.

The overt conflict between the National Forest Service and Woodland Giant was extensively covered by the local media. Because of this media experience and strong networking skills of some of its members, the Woodland Giant Foundation was very successful in mobilising media and politicians not only at local level but also nationally. As a result, the National Forest Service could no longer ignore the local critics, so finally they invited the Woodland Giant Foundation for a consultation process. After a year of negotiating, the conflict was settled and a covenant signed. The parties agreed that ESM would continue in most parts of the park. However, the translation of general policy aims into concrete measures would be better related to

local preferences and experiential practices. Furthermore, the National Forest Service agreed to establish a 'coniferous forest reserve' in the park, where no trees would be felled. This ran counter to an initial explicit aim of conservation policy, which was to diversify all the current coniferous forests in the park.

We can conclude that, as expected, the practice of ecosystem management and the practice of recreation did indeed become intertwined in the case study described above. The basis of this relationship is a material one: both practices are based on and targeted at managing and experiencing the same area, the Drents-Friese Wold. To the surprise of the managing agency, however, the practices clashed. First of all, through local protests, the credibility of the National Forest Service was challenged. No longer could the National Forest Service portray itself as the ecological expert, managing the forest in a professional, rational and scientific manner. It needed to engage much more with the local community, so they could maintain or reclaim their moral right to manage the national park. Thus, while at first ESM seemed only to influence experiential practices, this relationship became a mutual dependency. ESM measures impacted upon experiential practices via the feelings of attachment and dominant representations of nature engendered in local people. But the locals reacted to this impact by becoming politically organised. Through organising themselves and translating individual concerns about threatened experiential practices into collective action, the local community started to act and, hence, to perform situated agency (Arts et al., Chap. 1 this volume). Objections were no longer individual and implicit, but were made explicit and turned into political actions. This organisation became so successful that it impacted upon the managing agency National Forest Service, undermining the legitimacy of the ESM measures it was trying to implement and its credibility.

10.5 Discussion

By means of the three different case studies presented above, we believe we have shown the relevance of the practice based approach for understanding the relationship between experiential and ecosystem management practices. The conclusion from the Dwingelderveld National Park case study on visitor behaviour is that the material context, expressed in the trail network, the location of car parks and the supply of predefined routes, largely determines visitor densities on the different paths of the national park. We observe that ESM and experiential practices of visitors reinforce each other, as visitors behave at least partly according to the ideas of ESM, and when implementing the ESM, managers tend to incorporate—often unconsciously—their own interpretation of the experiential practices of visitors. The Dwingelderveld National Park case study on perceived attractiveness of nature also emphasises the relevance of the material world in experiential practices. It shows that people visiting the national park appreciate 'restored' nature more than the 'old' nature that was mainly mono-species forest. This appreciation seems to be unrelated to ecological knowledge and attachment. The results indicate that what is aesthetically considered as

pleasant is stable and general. Based on these studies, it can be argued that it is not only recreational behaviour that is routinised, but that 'appreciation of nature' is too. In this sense, recreation and appreciation of nature predominantly belong to our practical consciousness, in which certain ways of valuating and experiencing nature are stored.

However, the third case study in the Drents-Friese Wold National Park shows that routinization can be broken. If routines are challenged, for example by the implementation of contested ESM measures in highly valued nature sites, this can shock visitors, provoke emotional responses and stir up local protest. A comparison between the three case studies shows that as long as spatial transformations are not large scale, are not carried out at places with special significance, or do not ignore those people who feel deeply attached to the nature area or site concerned, ecosystem managers can base their actions on the findings of more general studies on the preferred scenic values of nature held by the public at large. But in periods of substantial change—and even more so in periods of radical change—such general insights no longer suffice. To prevent conflict, more detailed knowledge and analysis of meanings and processes in the local community are needed, including acknowledging feelings of attachment and specific social representations of nature. The third study is a clear example of how the doings and sayings of the local community are situated in the intermeshing of ESM practices and experiential practices.

As already mentioned, ecological restoration measures may be perceived by the local community as a shock event, as they disturb long-established experiential practices. The ESM measures break open the unconscious and, accordingly, cause feelings of insecurity and uncertainty (Giddens 1984). In our case studies this is articulated in an emotional bonding with the area. At the same time, the discursive consciousness is activated and articulated through social representations of nature. We can conclude that when experiential practices encounter management practices, both knowledge and emotions play crucial roles.

The relevance of a practice lens can probably be best illustrated by the timing of the protests in the Drents-Friese Wold. When the formal management plan was accepted and published in the local media, nothing happened. Only when the formal aims of the plan were translated into concrete measures and these measures were implemented did the local community wake up and start organising itself. It was not the formal acceptance of the changes in ESM that caused the protest to emerge, but the interference of these measures with existing experiential practices of the locals. This shows that 'citizens on standby' (Hajer 2003), as examined in the first two case studies, can become politically active as soon as their beloved area become endangered by concrete policy. However, although the protest against ESM in Drents-Friese Wold was supported by a large group of people, we hypothesise that there was also a group of 'citizens on standby' here, as was the case in Dwingelderveld National Park, who either largely supported, or had no major objections against ESM. The routinization of appreciation of nature still applied to many visitors to Drents-Friese Wold, who did not raise their voices and for whom the existence of this park was to some extent abstract.

As shown above, locals were able to make a difference, and they influenced management practices. For example, the diversification of the coniferous forest was partly halted and instead, as a compromise, a coniferous forest reserve was

established. This agency by the community is clearly *situated* (Arts et al., this volume), as the success of the protests was greatly related to the characteristics of the local community. First of all, many members of the local community had not only developed a strong attachment to the area, but also had extensive (practical) knowledge. They knew the area very well and many of them certainly knew the history of the area in general and of specific places in particular, based on local lore. According to the Woodland Giant Foundation at least, they were more knowledgeable on this than most of the employees of the National Forest Service. In addition, the success of the current group in attracting the attention of national media and national politics was definitely related to its abundant organisational experience and access to important networks. Without this specific social context, the local criticism of the new management practices in Drents-Friese Wold may have remained unorganised and the implementation of the new management regime may have been as smooth as it has been in the Dwingelderveld National Park.

A final remark on methodology. This chapter is based on both quantitative and qualitative methodologies, albeit both situated in a clearly localised context. In our view, both methodologies have proven their value for studying experiential practices. Although the criticism from practice theory on quantitative research is often justified, we need not dismiss quantitative methodology altogether. If quantitative research is situated in a real-life setting and not in a laboratory settings (as is often the case in the traditional approach from environmental psychology), it can give additional insights into qualitative data and thus expand our understanding of social practices. But it not only expands our understanding: it also forces us to define our concepts precisely and consistently and to anticipate expected conclusions by means of assumptions. Moreover, whereas in qualitative research the views of opinion leaders may be given undue weight, the results of quantitative studies give insight into the general public and thus allow (careful) generalisation. As such, according to us, the interpretive perspective taken in a practice based approach does not necessarily lead to the rejection of systematic quantitative research methods (Westerman 2004; see also Gergen 2001).

References

Arriaza M, Cañas-Ortega JF, Cañas-Madueño JA, Ruiz-Aviles P (2004) Assessing the visual quality of rural landscapes. Landscape Urban Plan 69:115–125

Bafna S (2003) Space syntax: a brief introduction to its logic and analytical techniques. Environ Behav 35:17–29

van den Berg AE, Koole SL (2006) New wilderness in the Netherlands: an investigation of visual preferences for nature development landscapes. Landscape Urban Plan 78:362–372

van den Berg AE, Vlek CAJ, Coeterier JF (1998) Group differences in the aesthetic evaluation of nature development plans: a multilevel approach. J Environ Psychol 18:141–157

van Bommel S (2008) Understanding experts and expertise in different governance contexts: the case of nature conservation in the Drentsche Aa area in the Netherlands. Doctoral thesis. Wageningen University, Wageningen

Buijs AE (2009) Public support for river restoration. A mixed-method study into local residents' support for and framing of river management and ecological restoration in the Dutch floodplains. J Environ Manage 90:2680–2689

Buijs AE, Arts BJM, Elands BHM, Lengkeek J (2011) Beyond environmental frames: the social representation and cultural resonance of nature in conflicts over a Dutch woodland. Geoforum 42:329–342

Cole DN (1993) Minimizing conflict between recreation and nature conservation. In: Smith DS, Hellmund PC (eds) Ecology of greenways: design and function of linear conservation areas. University of Minnesota Press, Minneapolis

Elands BHM, Turnhout E (eds) (2009) Burgers, beleid en natuur: tussen draagvlak en betrokkenheid. WOt-studies 9. Wettelijke Onderzoekstaken Natuur & Milieu, Wageningen

Elands, BHM. and Lengkeek J (2012). The tourist experience of out-there-ness: theory and empirical research. *Forest Policy and Economics* 19(1): 31–38 http://dx.doi.org.ezproxy.library.wur.nl/10.1016/j.forpol.2011.11.004

Fischer A, Marshall K (2010) Framing the landscape: discourses of woodland restoration and moorland management in Scotland. Journal of Rural Studies 26:185–193

Gergen KJ (2001) Psychological science in a postmodern context. Am Psychol 56:803–813

Giddens A (1984) The constitution of society. Polity Press, Cambridge

Gobster PH, Nassauer JI, Daniel TC, Fry G (2007) The shared landscape: What does aesthetics have to do with ecology? Landscape Ecol 22:959–972

Goossen CM (2008) Monitoring recreatiegedrag van Nederlanders in landelijke gebieden; 2006/2007. Wettelijke Onderzoekstaken Natuur & Milieu, WOt werkdocument 146, Wageningen

Hajer MA, Wagenaar H (2003) Deliberative policy analysis: understanding governance in the network society. Cambridge University Press, Cambridge

Hull RB, Stewart WP (1995) The landscape encountered and experienced while hiking. Environ Behaviour 27(3):404–426

Hunziker M, Buchecker M, Hartig T (2007) Space and place—two aspects of the human-landscape relationship. In: Kienast F, Wildi FO, Ghosh S (eds) A changing world; challenges for landscape research. Landscape Series, vol 8. Springer, Dordrecht

Jacobs M (2006) The production of mindscapes: a comprehensive theory of landscape experience. Doctoral thesis, Wageningen University, Wageningen

Jennings G (2001) Tourism research. John Wiley & Sons Australia, Ltd, Milton

Junker B, Buchecker M (2008) Aesthetic preferences versus ecological objectives in river restorations. Landscape Urban Plan 85:141–154

Kaplan R, Kaplan S (1982) Cognition and environment: functioning in an uncertain world. Praeger, New York

Kearney AR, Bradley GA, Petrich CH, Kaplan R, Kaplan S, Simpson-Colebank D (2008) Public perception as support for scenic quality regulation in a nationally treasured landscape. Landscape Urban Plan 87:117–128

MacCannell D (1989) The tourist: a new theory of the leisure class. Schocken Books Inc., New York

Manfredo MJ (2008) Who cares about wildlife? Social science concepts for exploring human-wildlife relationships and conservation issues. Springer, New York

van Marwijk RBM (2009) These routes are made for walking: understanding the transactions between nature, recreational behaviour and environmental meanings in Dwingelderveld National Park Dwingelderveld National Park, the Netherlands. Doctoral thesis, Wageningen University, Wageningen

van Marwijk RBM, Elands BHM, Lengkeek J (2007) Experiencing nature: the recognition of the symbolic environment within research and management of visitor flows. For Snow Landscape Res 81:59–76

van Marwijk RBM, Elands BHM, Kampen JK, Terlouw S, Pitt DG, Opdam P (2011) Public perceptions of the attractiveness of restored nature. Restor Ecol. doi:10.1111/j.1526-100X.2011.00813.x

Moscovici S (2000) Social representations. Explorations in social psychology. Polity Press, Cambridge

Orians GH (1980) Habitat selection: general theory and applications to human behavior. In: Lockard J (ed) The evolution of human social behavior. Elsevier, Chicago

Peponis J, Wineman J (2002) The spatial structure of environment and behaviour: space syntax. In: Bechtel RB, Churchman A (eds) Handbook of environmental psychology. Wiley, New York
Reckwitz A (2003) Basic elements of a theory of social practices: a perspective in social theory. Zeitschrift fur Soziologie 32:282–301
Roth M (2006) Validating the use of Internet survey techniques in visual landscape assessment-an empirical study from Germany. Landscape Urban Plan 78:179–192
Schama S (1995) Landscape and memory. HarperCollins, London
Schatzki TR (2005) The sites of organizations. Organ Stud 26:465–484
Smeets H, Gadet J (2008) Het Grote Groenonderzoek 2008. Het bezoek aan en gebruik van parken, recreatiegebieden en groen in de woonomgeving van Amsterdam. Dienst Ruimtelijke Ordening en Dienst Onderzoek en Statistiek, Amsterdam
Stenseke M (2009) Local participation in cultural landscape maintenance: lessons from Sweden. Land Use Policy 26:214–223
van Trigt A, van Koppen CSA, Schanz H (2003) Spirituele waarden van natuur. Een analyse van de ervaring van spiritualiteit in relatie tot bomen en bos. Landschap 20:155–163
Tuan YF (1974) Topophilia: a study of environmental perception, attitudes, and values. Prentice Hall, Englewood Cliffs
Ulrich RS (1983) Aesthetic and affective response to natural environment. In: Altman I, Wohlwill JF (eds) Behavior and the natural environment. Plenum Press, New York
Vining J, Tyler E, Kweon B-S (2000) Public values, opinions, and emotions in restoration controversies. In: Gobster PH, Hull RB (eds) Restoring nature: perspectives from the social sciences and humanities. Island Press, Washington
de Vries S, Roos-Klein Lankhorst JR, Buijs AE (2007) Mapping the attractiveness of the Dutch countryside: a GIS-based landscape appreciation model. For Snow Landscape Res 81:43–58
Wagenaar H, Cook NSD (2003) Understanding policy practices: action, dialectic and deliberation in policy analysis. In: Hajer MA, Wagenaar H (eds) Deliberative policy analysis. Understanding governance in the network society. Cambridge University Press, Cambridge
Westerman MA (2004) Theory and research on practices, theory and research as practices: Hermeneutics and psychological inquiry. J Theor Philos Psychol 24:123–156
Williams KJH, Cary J (2002) Landscape preferences, ecological quality, and biodiversity protection. Environ Behav 34(2):257–274
van der Wulp NY (2008) Belevingswaardenmonitor Nota Ruimte 2006: nulmeting landschap naar gebieden. Wettelijke Onderzoekstaken Natuur & Milieu, Wageningen

Chapter 11
Creating Scientific Narratives: Experiences in Constructing and Interweaving Empirical and Theoretical Plots

Séverine van Bommel and Mariëlle van der Zouwen

11.1 Researchers as 'Scientific' Narrators

"Nobody is born a writer. It is an identity we invent for ourselves and try very hard to live with and within" (Goodall 2000, p. 24). We both became 'writers' when we took a narrative turn in research methodology while working on our dissertations. This was not only because we wanted to show that scientific research accounts can be fun to read but also because we realised that the credibility of our research accounts would depend on the extent to which our claims were presented in a convincing way. When we started thinking about what a practice based approach in forest and nature governance would entail, it became clear that our narrative turn in research methodology led us to an unconventional understanding of practice, practice research and practice theory. The study of practices has a long theoretical history and draws on a wide range of methods, ranging from discourse analysis, through governmentality studies, to hermeneutics (Wagenaar 2011). The form of practice theory that we take up here, draws on insights from interpretive policy analysis. Interpretive policy analysis focuses on the everyday experiences, meanings and the life worlds of people in policy practices. According to Yanow (2000, p. 5):

> [Interpretive methods] are based on the presupposition that we live in a social world characterised by the possibilities of multiple interpretations. In this world there are no 'brute data' whose meaning is beyond dispute. Dispassionate, rigorous science is possible—but not the neutral, objective science stipulated by traditional analytic methods (as represented by the scientific method). As living requires sense making, and sense making entails interpretations, so too does policy analysis.

Interpretative approaches are based on the claim that direct unmediated access to reality is impossible and that people's experiences and views are always influenced by the historical, cultural contexts in which people find themselves. It is not possible to develop a science that is 'objective', because the social scientist does not and cannot stand outside of that which she or he is studying, free of its

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values and meaning and free of the values and meanings of the researcher (Yanow 2006). Accordingly, social science is not a 'mirror' of the social world but constitutes human interpretations of that social world. The interpretive perspective emphasises the relational character of knowing, and therefore it states that actors (including researchers) co-create the meanings that they give to social life in interaction (Hatch and Yanow 2008). Yanow (2009, p. 278) argues that:

> …out of the enhanced sensitivity to the intersubjective character of meaning co-constructed between researcher and researched, a heightened awareness has developed of the ways in which not just fieldwork, but deskwork and textwork – the working out of ideas in, while, and through writing – also construct the social realities articulated in a research report.

For a practice based approach, such an interpretive perspective implies that practices are incapable of speaking for themselves and thus they cannot be directly represented. Practices always need to be brought to the fore by researchers; they need to be made visible and they need to be articulated. Practices can never be understood in an unmediated way and therefore practice is far more than 'just what people do' (Schatzki et al. 2001). To articulate practice requires discursive work and material activity from the researcher: another practice (Nicolini 2009). The narrative aspect of practice research lies in the fact that it is a 'speech act' that retrospectively verbalises something (namely practices) that did not exist previously (Brown 2006) and has been written from the unique perspective of its author. Practice researchers construct a narrative and in constructing this narrative they create a certain reality (Geertz 1988). With this narrative turn in research methodology it is becoming increasingly common to consider researchers as scientific narrators and to consider the construction of narratives as a scientific method. Increasingly scholars call for the role of scientific narratives in 'world-making' to be explored (Gabriel 2004; Czarniawska 2004; Yanow 2009).

Conventional social science has long recognised some of the issues involved in the relation between researchers and their research accounts. However, these issues are conventionally presented as biases that must be minimised. Any biases that remain should be made transparent and should be reflected on. This issue of biases often remains rather superfluous and empty, both in the methodology handbooks and in practice. This is hardly surprising. Our interpretive perspective makes it clear that it is impossible to separate values from facts, as implied by the notion of biases (Yanow 2006). However, this does not mean that the researchers cannot be held accountable for the scientific narratives they create. Rhodes and Brown (2005, pp. 470, 480), for instance, ask us 'to reflexively recognise the role of the writer in crafting organizational realities' because 'an ethical writing is one where it is accepted that what is written was made as a decision by the writer rather than through the decidable application of particular methods and techniques for the true'.

Although the narrative turn in research methodology is gaining significant scholarly attention, little is known about what researchers actually do when constructing meaningful narratives, how they do it and how they can be held accountable for what they are doing. As the practice of constructing meaningful narratives rests on tacit knowledge (after Yanow 2005) and as tacit knowledge can best be made explicit by

studying practices (Nicolini et al. 2003) we aim to shed light on how researchers create scientific narratives and try to be accountable for them by reflecting on our experiences about our own practice of researchers as narrators. Such reflection will bring to the fore what are otherwise the 'common' sense, taken-for-granted, tacitly known 'rules' for doing research in a practice based manner at this time and place. This will bring insight not only into the practice of researchers as scientific narrators but also into our understanding of practice, practice research and practice theory. But before we do that we will first discuss how the construction of scientific narratives and researchers' accountability for them can be approached conceptually.

11.2 Constructing Scientific Narratives and Being Accountable for Them

In literature, there is increasing recognition of the narrative character of science. Since the 1980s, a growing number of authors have discussed the process of translating data into research texts (e.g. Czarniawska 1997, 2004; O'Connor 2000; Rhodes 2001; Van Maanen 1988). Czarniawska (2004), for example, demonstrates that many scientific theories present themselves as meaningful narratives (also called stories), with characters, plots, turning points and so forth. The following specific issues have been discussed over the years: the responsibility of the researcher-author; the role of the author in the text; authority and truth claims; reflexivity and pragmatism; representation of self and others; power relations; and control of meaning (e.g. Alvesson and Karreman 2000; Boje 2001; Czarniawska 1997; Humphreys and Brown 2002; O'Connor 2000; Rhodes 2001; Van Maanen 1988).

In light of this growing interest in the narrative character of science, Gabriel (2004) warns us of the danger of becoming too comfortable with the concept of narrative. Meaningful narratives are not innocent. Meaningful narratives do not and cannot tell themselves and thus these narratives have to be narrated, in writing or orally. One way or another, they require all sorts of choices about where to begin and end the narrative, what to emphasise and so on. This can lead to understanding, but at the same time meaningful narratives are also selective and thus conceal. Texts come from somewhere and tell particular stories about particular relations, created for particular purposes. So, by creating a certain meaning and not another type of meaning, meaningful narratives also have political consequences—possibly unintentionally.

This is particularly relevant for scientific narratives, because they are made more 'real' than other narratives. The narratives of researchers do not offer simple descriptions, but in their telling 'perform' certain realities (Pickering 1995; Callon 1998, 2007; Law 2008; Law and Urry 2004; Mol 1999). Research influences not only how the world is known, but also how it can be acted upon. Therefore, research is not only about knowing and describing certain realities, but it is also about creating these realities by describing them (Callon 1998; Mol 1999). Along with a host of other actors (e.g. other scientists, firms, political agencies), researchers are continuously contributing to the construction and maintenance of certain realities through their

practice of scientific narration. The very act of articulating reality in a meaningful narrative has important implications, as it validates or legitimates one view of the world rather than others. The performativity of narratives means that instead of asking 'is it a correct representation?' we need to ask questions like 'what difference do we want to make?' (Haraway 1991a, b). With that come important questions of the researcher's responsibility and accountability *vis-à-vis* the narrative's audiences (both the actors studied and the readers of the narrative). This raises the question of not only of how scientific narratives are created but also how scientists can be held accountable for their narratives and what these imply (the difference that they make). In this research we will first give an account of how we have created our scientific narratives. Second we will analyse how we tried to be accountable for these narratives and their implications.

Our first part of the analysis—how we created our scientific narratives—was inspired by the work of Bent Flyvbjerg. Some of his ideas are presented in his books (1998, 2002) but we gleaned most from the PhD course 'narrative turn in research methodology' in Aalborg that we both followed (Van der Zouwen in 2000 and Van Bommel in 2006). According to Flyvbjerg, a good scientific narrative has (1) a beginning that sets the scene; (2) a middle which articulates a tension, a puzzle or a conflict for which the resolution is not obvious and (3) an ending that paints the picture of a new scene which is uplifting or disturbing, but in any case inspiring.

Flyvbjerg states that such a scientific narrative is driven by two plots: the empirical plot of actors and actions, and the theoretical plot of various concepts and theories. The empirical plot tells the story of people's intentions and action, and situates them in time and space. It often starts by engaging serious public issues by identifying 'tension points' (points of decision where relations of power are particularly tense) in those issues. Researchers can for example give meaning to these tension points in the past, tell us whether the present is satisfactory and/or allow us to envision possible futures. This meaning is provided by the theoretical plot which is a story about the concepts and theory that the researcher has chosen to focus on and which represents the conceptual significance in relation to the chosen problem/theme. This theoretical plot also has a beginning, a middle and an end. According to Flyvbjerg, in the beginning the researcher starts by discussing the concepts and theories at a high theoretical level by going back to the original authors. The tension in this theoretical plot is then built up by identifying a gap in literature, for example in the form of a puzzle in which practice does not match theory. In the remainder of the narrative the researcher then tries to resolve this tension. Finally the narrative ends by discussing the findings and their implications in the light of the original literature. According to Flyvbjerg, in a good scientific narrative the empirical plot and the theoretical plot are dynamically interwoven in order to support each other (see Fig. 11.1).

Our second part of the analysis—how we tried to be accountable for our narratives and their implications—was inspired by the concept of 'narrative contract' (Czarniawska 2004; Gabriel 2004). Czarniawska, Gabriel and others have argued that researchers have a narrative contract with their audiences in which they undertake to deliver a narrative that possesses certain qualities in return for acceptance and, possibly, respect of their audience. To persuade the audience to suspend critical judgment

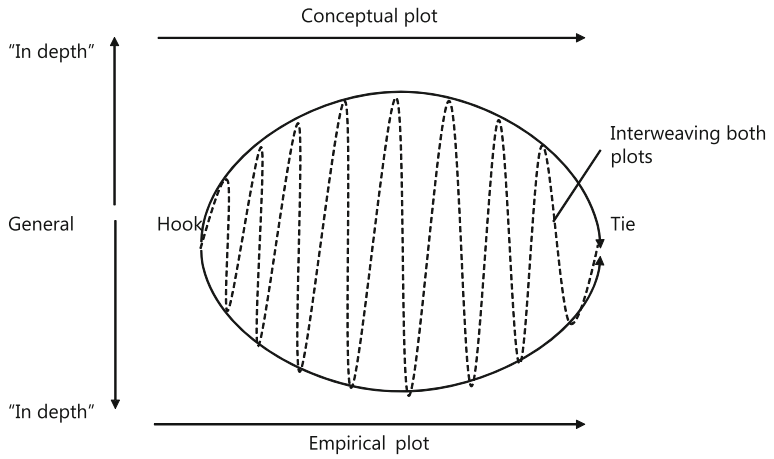

Fig. 11.1 How a scientific narrative is created, according to Flyvbjerg's narrative turn in research methodology

a researcher must pull off a narrative which is at once meaningful and truthful. Scientific narrators must walk a tricky tightrope across two potentially undermining questions: 'So what?' and 'Did it really happen?' According to Gabriel (2010) the 'So what?' question indicates that the plot is failing to carry meaning, while the 'Did it really happen?' question indicates that the plot fails to convince the audience of the truthfulness of the narrative. He also argues that treading the tightrope between these two questions which threaten the narrative contract is a feature that sets the academic researcher apart from storytellers of other narratives, such chronicles, reports, myths, and films who have different narrative contracts with their audiences.

11.3 Reflection Upon Our Own Practice as Scientific Narrators

Flybjergs' ideas on the narrative turn in research methodology and Czarniawska and Gabriel's ideas on the 'narrative contract' allowed us to reflect upon our own practice as scientific narrators. This reflection can be seen as an autoethnography. An autoethnography is research in which the author-researcher is the topic of the research. This term has been in use for more than twenty years and was originally coined by Hayano (1979) to refer to anthropological studies by individuals of their own culture (Ellis 2004; Ellis and Bochner 2000). Autoethnographies 'are highly personalised accounts that draw upon the experience of the author-researcher for the purposes of extending sociological understanding' (Sparkes 2000, p. 21).

The exact definition of the term 'autoethnography' is elusive and there are many other genres that fall under its umbrella. Ellis and Bochner (2000, pp. 739–740) have listed almost a page of terms that have been attached to

autoethnographical research and argue that it seems appropriate now to include those studies that have been referred to by other similarly situated terms, such as personal narratives, lived experience, critical autobiography, evocative narratives, reflexive ethnography, ethnographic autobiography, autobiographical ethnography, personal sociology, and auto anthropology. What can be learned from this is that the use of autoethnography varies widely: from the highly introspective, through more familiar approaches connected to qualitative research, to somewhat experimental literary methods (experimental, at least, in terms of thinking of writing as research).

What all approaches share, though, is an inspiring and compelling argument for the methodological possibilities that exist when it is the researcher who is the subject of study (Wall 2006). Ellis (1991) has suggested that a social scientist who has lived through an experience and has unanswered questions about it can use introspection as a data source and, following accepted practices of field research, study himself or herself. As will shortly become clear, autoethnography enabled us to explore our own tacit knowledge about practice research and allowed our personal experiences to become valid data. We achieved this through reflection upon our personal experiences of writing dissertations on governance in nature policy. The first dissertation (Van Bommel 2008) dealt with experts and expertise in the Drentsche Aa in the Netherlands. The second dissertation (Van der Zouwen 2006) dealt with dynamics between traditions and trends in nature policy in the Veluwe in the Netherlands, the Yorkshire Dales in the UK and Doñana in Spain. In addition to reflecting on our own experiences, we also compared our experiences to the experiences of others doing practice research; we did so on the basis of information collected during unstructured and informal discussions with colleagues in our departments.

11.4 The Narrative of the Drentsche Aa

11.4.1 Setting the Scene

I (Van Bommel) originally started working on the Drentsche Aa case in a European research project that I was involved in, and found it interesting because it provided me with a puzzle to solve. The Drentsche Aa comprises a network of small streams that originate on deposits of glacial and aeolian sands in the Province of Drenthe, in the north of the Netherlands. Together these brooks constitute one of the last relatively unspoilt river systems on the North German Plain. The area is considered unique in terms of biodiversity, landscape and natural beauty. Its main ecological conservation values lie in its well preserved brook system and in the many rare plant species (including many orchids) that grow there. In addition, the area is unique in terms of landscape and cultural history, as it is one of the few areas in the Netherlands that has escaped large-scale agricultural

modernisation and land consolidation. Agriculture was seen as a threat to the area's conservation values because of the excess nutrients it produces, which enter the brook system. Because of the unique characteristics of the area, a multi-actor negotiation platform was set up in the area in the late 1990s to ensure its protection through concerted action. The governance situation in the Drentsche Aa was not at all what I had expected it to be from reading the literature. The multi-actor negotiations on the platform that were intended to enhance the sustainable management of water resources seemed only to reinforce resistance by driving the stakeholders further away from each other. Efforts to learn together and to design concerted action stagnated in fruitless negotiation instead of solving the problem that confronted the actors. On the basis of scientific literature, I had expected the multi-actor platform to solve its problems through the co-production of knowledge. This created a disparity between what I had expected to find on basis of the literature and what I actually encountered in the field. My curiosity was triggered. What was going on here? How could I understand this situation?

I discussed this with my colleagues and together we concluded that the relationship between the multi-actor negotiations and the co-production of knowledge was probably less straightforward and clear-cut than often assumed in the literature. We decided to start a research project to reconstruct the shifts in governance and to investigate the role of experts and expertise in different governance contexts. I went into the field and returned with 74 transcribed interviews, 75 policy documents and 170 newspaper articles. Somehow I had to make sense of these documents and translate these into a meaningful narrative about governance and expertise.

11.4.2 Eventualisation of the Case

After returning from the field and overcoming my initial feeling of being overwhelmed by the sheer amount of data, I decided to start by arranging my findings chronologically, for a first rough structuring. This decision resulted in the passage of time becoming integral to my empirical narrative. I used a long table, on which I started a time line—staring in 1955 when the protection of the Drentsche Aa started and ending in 2008—to sort out all my newspaper clippings, policy documents and other written material. As I soon ran out of space on the table, I decided to order my findings in approximately five ten-year periods on five separate tables. I reordered the material for each time period on the table until I had separate piles of paper, beginning with a pile for the earliest event and ending a pile for the most recent event in those ten years. I ordered my interviews in a similar manner. I literally cut up the interview transcripts and I put each snippet of information in its appropriate pile along the timeline. The table soon started to look like a fairly disorganised desk full of piles of paper.

11.4.3 Creating a Case Journal or Case Record

After having sorted out all my material in this manner, I started transforming the piles of paper on the table into a text document. In this document I also created a timeline by means of section headings that had dates and years in them. In each section I documented as much of the information as I could. Soon the dates and the years were complemented with the names of the events that occurred, such as 'the formulation of the Gedachtenplan' or 'farmers' response: the Deiningen report'. Of course I could not just copy entire policy documents into my text document, so I selected only the bits of information that I thought were relevant to the topics I was studying. I recorded what happened on such a day, in such a place, who was involved, what they did, why, etc.

11.4.4 Selecting Key Events

By the time I had processed the pile of documents at the end of the table, I had written a text document of over 200 pages. This document represented just the first 10 years of my case. I realised that this document was too long to be discussed with my supervisors and that it needed to be shortened. I decided to print out the whole document and re-read it. While reading it, I marked the events that surprised me and triggered a theoretical concept in my mind. When this happened, I would write down the concept in the margin. For example, when the farmers published their 'Deiningen' report in response to the 'Gedachtenplan' report of the State Forest Service I was struck by the following passage:

> The severe indignation and concern that was expressed after the publication of the report is largely due to the 'about us, without us, against us' politics. (Drents Landbouwgenootschap 1967, p. 34, my translation from the Dutch)

In the margin I wrote 'top down governance', because it seemed to me that the farmers had been excluded from the process. As such, this seemed more like a hierarchical governance context to me than a multi-actor one.

In my document I ended up with all kinds of concepts such as 'institutional dynamics', 'leadership', 'coincidence' but also 'governance', 'expertise' and 'boundary work'. I realised that each concept would potentially provide me with a different storyline in relation to governance and expertise. Together with my supervisors I decided to select the concepts of 'governance', 'expertise' and 'boundary work' and decided that these would form the building blocks of my narrative. The events that were tied to these concepts became my 'key events'. My temporary periodisation of ten years then needed to be re-ordered into three new periods that were logical in light of the conceptual focus in the case study. The first event dealt with the formulation of the 'Gedachtenplan' (the first policy plan for nature conservation) and the farmers' response to this (1960–1975). The second

dealt with a scientific controversy between the State Forest Service and university scientists (1970–2005). The third dealt with a multi-stakeholder platform for the management of the Drentsche Aa area (1990–2008). Although the events did not yet form a coherent story, I did discuss my choices with my colleagues and supervisors during informal conversations and official meetings. My fragmented narrative did not yet conform to a meaningful narrative, with a beginning, middle, end and plot, but these conversations did help me to try out explanations and interpretations and estimate how well these would be received by my audience.

11.4.5 The Hermeneutic Spiral

I still had a long way to go. Although I was creating an empirical plot, I realised that for an scientific narrative this is not enough. An scientific narrative must have a theoretical plot in addition to an empirical plot. So, to give it meaning, I had to conceptualise my empirical plot in the form of an unfolding plot about concepts and theory. Although I had selected my key events by linking them to the concepts of 'governance', 'expertise' and 'boundary work', these concepts remained separate, unlinked categories. I had not yet found a way of connecting my concepts in an interesting theoretical plot which would increase my understanding of the fruitless negotiations of the multi-actor platform in the Drentsche Aa area. To do so, I reread the scientific literature to find out about the ongoing debates and theoretical developments and how I could link up to them.

In order to understand the ongoing theoretical debates, I identified who the major and minor authors in governance theory and science studies were, what their positions were, and why and how they agreed or disagreed. These discussions helped me to position myself and define my stance and gain insight into which theoretical debates were relevant. On the basis of this, I read a few foundational books and a few highly cited articles or chapters, as well as recent work commenting on those sources, authors and ideas. While doing this, I started to notice themes and issues in these discussions that I thought I needed to link up to. Again I checked with my colleagues and supervisors to see if this made sense to them. Sometimes it did and sometimes it did not, but the interactions helped me to find out what they were looking for in a good theoretical plot.

With this sharpened focus, I needed to go back to my empirical plot, which now needed to be refocused. I had to rewrite the events and add details in order for them to make sense. In other words, I had to fill 'holes' in my empirical plot with new material. I often had to go back to the original documents or interviews. I needed to emphasise different aspects of the events, remove some and add others. After refocusing the empirical plot, I went back to the literature again, to further focus the theoretical plot and define my concepts. This then made me go back to my empirical plot again to harmonise my use of concepts, etc.

While circling my way up in this hermeneutic spiral, my plot became increasingly focused with each turn, both empirically and conceptually. As such,

my theoretical plot was created as much by the empirical plot (i.e. it was intangible at first and could only be put into words later) as it created the empirical plot itself. I started out with an interest in experts and expertise in different governance contexts, but the specific theory and concepts only emerged in the course of my research. On the basis of provisional contextual knowledge, I started my interpretation and engaged in inquiry, this informed my interpretation, and so on. I continued moving in an iterative fashion from analysis to research question to conceptual framework to analysis, and so on. The construction of my case was a continuous process, not a stage; it was an ongoing process, not a one-off event. During my study, both the analytical question as well as the theoretical framework were re-conceptualised several times. This means that my conceptualisation and operationalisation occurred simultaneously with preliminary data analysis. Because of the iterative character of my research, my ideas and evidence became mutually interdependent. In that sense, my case and its narrative are not a pre-established units or categories that were selected: they were constructed by comparing data with theory.

11.4.6 Constructing the Narrative

After I had spent some time in the hermeneutic spiral, my supervisors decided to pull me out. I had the events that formed the empirical building blocks of my empirical plot. I also had the concepts and theories that formed the conceptual building blocks of my theoretical plot. My supervisors told me that I had now enough focus to tell my story.

Following Flyvbjerg, my so-called 'empirical plot' was constructed with a beginning that sets the scene, a middle that discusses a tension/conflict for which a resolution is not obvious, and an end that I hoped would be inspiring. In the beginning, I tried to hook the readers to the empirical plot by setting the scene in terms of actors, place and time ('On an autumn day in 1962 a group of high level officials was gathered for a field trip to the Drentsche Aa area'). Then I built up the tension ('From the very outset, the stakes were high…' 'Something never tried before…'). At the end, the narrative was tied up with a clear ending ('From this point onwards…'). As the narrative unfolded, it moved from providing general information to providing in-depth information and then back to general information again. I also needed to add context to my events in order to situate them. I sometimes needed to introduce information as context at an earlier moment in my narrative, in order to come back to it at a later moment in time. The fairy tale of Little Red Riding Hood offers an example that illustrates this. The tale relates how Little Red Riding Hood went into the forest to take a basket of cookies to her grandmother (the main event) while woodcutters could be heard chopping wood in the distance (the context). This information about the woodcutters is needed later on in the narrative, when the woodcutters rescue Little Red Riding Hood from the wolf at grandmother's house. If they had not been introduced at the beginning of

the narrative, their appearance later would have been much less plausible. That is also how I dealt with context in my own narrative. I introduced context in earlier events in order to make sense of later events.

Just like the empirical plot, the construction of the theoretical plot also has a strong narrative element. Therefore, the theoretical plot also has a hook and tie. I constructed the conceptual hook by going back to the foundational works. For example, when I introduced the concept of boundary work I did so by going back to Gieryn (1983):

> In 1983, Thomas Gieryn introduced the concept of boundary work to describe the discursive practices by which scientists 'distinguish their work and its products from non-scientific intellectual activities … for purposes of constructing a social boundary that distinguishes some intellectual activities as 'non-science'. (Van Bommel 2008, p. 35).

After introducing the concepts, I identified the gap in literature:

> In the literature, the shift in governance is argued to relate to the shift in the nature and role of experts and expertise… In this line of thinking, a hierarchical governance context would relate to what we characterise as speaking truth to power. A multi-actor governance context would then relate to what we characterise as co-production of knowledge. … In this research, we wonder to what extent this one-to-one relationship between governance and the nature and role of experts and expertise holds in practice (Van Bommel 2008, pp. 40, 41).

A conceptual tie was constructed by returning to the original literature at the end of the narrative and discussing its implications in the light of the conceptual findings.

> We can conclude that the explicit multi-actor governance ambition did not result in a clear transition from an old hierarchical governance context with a speaking-truth-to-power role for experts and expertise, to a new multi-actor governance context in which multiple actors are engaged in co-production-of-knowledge processes. The shift in governance and in the role and nature of experts and expertise both resulted in hybrids. The specific hybrids that we encountered in this research are the outcome of a power difference, leading to inclusion of some and exclusion of others from the formal perspective of the dominant coalition, and therefore leading to speaking truth to power with expertise-as-ammunition influences instead of co-production of knowledge (Van Bommel 2008, pp. 149–150).

This story became the theoretical plot which added meaning to the empirical plot.

Finally the empirical plot and the theoretical plot were woven together, so that the narrative keeps switching from the empirical plot to the theoretical plot ('Let us now turn to the conceptualisation of this story in terms of…') and back to the empirical plot ('The story of the Drentsche Aa area continues with…'). This interweaving resulted in an scientific narrative consisting of an interpretation not only of my research data, but also of the scientific literature and the connections between these two. In my scientific narrative I was very aware of the fact that the narrative had been created in interaction between me, my supervisors and the characters in my narrative. Therefore, I decided not to use the personal pronoun 'I'

in my dissertation, but instead to use 'we'. That is how I developed the scientific narrative of my dissertation.

11.5 Making One Narrative Out of the Narratives of the Yorkshire Dales, Doñana and the Veluwe

11.5.1 Setting the Scene

My holidays (Van der Zouwen) have taken me to many of Europe's nature reserves. What I generally love about these areas is that they really show a country's or region's perspective on what nature actually is. The origins of these perspectives often go way back in time. And that is why contemporary nature reserves have a long tradition in nature policy activities. In recent decades, many trends have emerged in the field of nature policy. Many of them can be described by what policy makers and scientists call 'governance' and 'multi-level governance'. Some tangible examples of manifestations of (multi-level) governance in policy practices are: an increasing number of EU regulations which have to be implemented in member states, the decentralisation of national government tasks to regional and local levels and the socialisation of nature policy that includes new, non-governmental actors and new perspectives on nature (such as citizens' perspectives). Such examples correspond with assumptions in governance theory about, for example, more involvement of governmental and non-governmental actors, the increasing power and influence of non-governmental actors, and new discourses that challenge the dominant discourse. However, I did not immediately see any evidence of an actual uptake of these multi-level governance manifestations in ideas, rules and actors in local practices 'on the ground'. Nor did I frequently encounter the governance assumptions in local practices. My practical research experience with nature policy was based on my visits to and experience with protected areas in Europe. That is why I expected a rather complicated relationship between change towards multi-actor, multi-level governance practices on the one hand and stability of path-dependent and deeply institutionalised practices on the other. What triggered this expectation was a possible tension between the assumptions of policy makers and governance theorists on the one hand and the character of nature policy arrangements on the ground. Many nature areas across Europe have had protected status for decades. Consequently, substantive and organisational patterns of cooperation between actors in and around these areas will probably have become deeply institutionalised. At the same time, in the governance literature it was claimed that a shift was occurring towards multi-actor, multi-level governance arrangements. I wondered how new and old, or innovative and traditional elements or trends and traditions were related in the areas' nature policy: does one supersede the other? Do they co-exist? Does one not affect the other at all? I suspected that instead of clear-cut governance

arrangements I would encounter sophisticated governance hybrids with both stable and dynamic dimensions over time.

11.5.2 Selection of Cases

A fascination for the relation between trends and traditions is one thing. But very early in the research process, a pressing question became which case to choose. As I was also wondering about similarities or differences between various countries, it was clear from the outset that I would select more than one case study area. Finally, I decided to select three case study areas in three different countries: the Yorkshire Dales in the UK, Doñana in Spain and the Veluwe in the Netherlands. The selection of cases was a two-step process. First, I selected three countries which—at first sight—differed greatly in the national nature policy context in which the cases had to be situated, in terms of (1) the distribution of formal responsibilities among various tiers of government; (2) the extent of institutionalisation of nature policy into regulations (3) the existing coalitions in nature policy; (4) the dominant discourses on nature.

The Yorkshire Dales is a national park in the North of England, designated in 1954. It encompasses about twenty dales. The largest part consists of heather moorland and grassland. Another characteristic is the patterns of dry stone walls, field barns and high pastures. Most of the land is owned privately, mainly by farmers. They use the high fells for grazing their sheep. The valley floor meadows supply hay, while the pastures are grazed by dairy and beef cattle. From a nature conservation point of view, the limestone pavements, upland heath, limestone grasslands and hay meadows are of particular interest, accommodating many wild plants (such as hart's tongue fern). In the upland areas in the east of the park, heathlands are to be found. These are dominated by heather and provide breeding grounds for hen harriers, merlin and golden plover. The limestone grasslands are sheep pastures in large hillside enclosures. The poorly fertile soil hosts lime-loving plant species (such as thyme) and an important number of breeding lapwings. Finally, the hay meadows are a characteristic product of many decades of traditional farming which has resulted in herb- and flower- rich meadows in the valley bottoms throughout the Dales, particularly in the north. Almost half of the park is designated as a nature site under national, EU and global legislation and regulations. Most of these sites are owned by farmers, while a small part is owned by the National Trust.

Doñana is situated in the Southern Spanish Autonomous Region of Andalucía, southwest of the Andalucian capital Seville. The inner part of Doñana consists of a national park, which was designated in 1969. A surrounding nature park was created in 1989. The national and nature parks extend over three provinces (Sevilla, Huelva and Cádiz) and nine municipalities. Doñana has three main rivers (Guadalquivir, Guadiamar, Madre de las Marismas). The national park harbours three ecosystems: marshes, dunes and coastal plains. The marshes are an important

wintering and stop-over area for migratory birds. The higher parts of Doñana are tree-covered, while heather grows at lower altitudes. The coastal plains are especially important for boar, deer, lynx and other animals. In the nature park that borders the national park, a varied landscape unfolds, with pine trees, eucalyptus and some cork oaks as well as grasslands and marshes. In the marshes there is some wet rice cultivation and saltwater aquaculture. The coastal landscape is characterised by mobile dunes, while further inland the vegetation mainly consists of pine trees and eucalyptus.

The Veluwe is situated in the heart of the Netherlands, in the province of Gelderland. It currently encompasses some 100,000 ha. In the 19th century it was an area of extensive heathlands, drift sand and some small agricultural enclaves. Around 1850 there were hardly any forests here. The need for timber for mine props, the drive to convert wasteland into agricultural land and the wish to curtail the drift sands gave rise to the large-scale afforestation of the Veluwe. The various landowners preferred to plant pine trees, because these grew rapidly and could cope with the highly acidified, nutrient-depleted heathland soils. In the late 19th and early 20th century, newly established nature conservation organisations, the state forestry service, the nobility, municipalities and wealthy individuals acquired land on the Veluwe. Since then, the area has been characterised by a patchwork of different owners, including the royal family (Queen Wilhelmina and Prince Hendrik purchased over 6,500 ha, to add to the domain land around the palace at Het Loo), the Ministry of Defence and farmers.

11.5.3 Eventualisation of the Case

Early in the PhD project I developed a conceptual framework which enabled me to analyse change and stabilisation in nature areas. The framework built on the policy arrangement approach of Van Tatenhove et al. (2000) and paid attention to change and stabilisation with regard to four issues: (1) who is involved and in which coalitions? (2) which resources and power mechanisms are at work? (3) which rules guide actors' activities? and (4) which discourses are dominant? So my conceptualisation and operationalisation occurred before preliminary data analysis. Although these issues were rather broadly formulated, they helped provide me with some avenues to follow in my research.

To obtain an initial impression of what nature policy in the areas encompassed, it was natural for me to start by identifying those persons and organisations who made, changed and influenced nature policy: the actors. I consulted press releases, newspaper articles, policy documents and books on the history of nature conservation in the three countries and areas. For weeks I did nothing but draw rectangles and ovals in an A4 notebook and linked them in a chronological sequence. These figures depicted instances in time in which parties involved in nature policy deliberately took action with regard to a certain topic, or new legislation came into force, or there was a natural disaster (such as a storm or forest fire), etc. I did so in

order to give some structure to all the information I obtained from the various sources. This resulted in a rough overview of the actors involved in nature policy for the area in question and, if possible, of the coalitions between them. Automatically, this effort led me to a description of major substantive and organisational developments and the role of actors therein. During this process I also planned the first interviews with nature policy professionals in each of the areas, and while establishing a good working contact with them, I also took the opportunity to check whether my preliminary ordering of the information made sense from their perspective.

11.5.4 Creating a Case Journal or Case Record

Soon, a picture emerged of instances in time at which very much changed or very little changed. The instances with many changes I called 'turning points'. They helped me in constructing the empirical plot. During my first visit to each nature area I tried to pinpoint and identify such turning points through interviews with persons involved in nature policy in the past or present, and through a more thorough search in clippings and policy documents and also simply through conversations with people living in or near the area whom I encountered by chance (e.g. on the street or a walking trail, in a restaurant, or in a bar). Although not explicitly verbalised I always kept the conceptual framework in my mind when looking for turning points. This is to say that I kept on asking myself: what exactly was it that changed? Did new actors become involved? Did others disappear? Did new coalitions emerge? Did the distribution of power and resources change? Or did new rules or discourses enter the areas' nature policy?

11.5.5 Selecting Key Themes

After the first visits, I kept on drawing the rectangles and ovals around key passages in my notes, to indicate turning points regarding actors and coalitions, power and resources, rules of the game or discourses. By doing so, I attempted to interweave the empirical and the theoretical plots. A first, very preliminary, draft case report that came about was the Yorkshire Dales report. As it evolved, I found it increasingly difficult to write my narrative consistently in terms of the four dimensions. In fact, I felt that writing in such a way was rather artificial and boring. I went for a short walk on the university campus and I remember thinking to myself: 'let's face it, it all boils down to three themes'. And these were: (1) what is nature? (2) who decides? and (3) what is the relation between nature and other interests? It is hard to describe in detail how these themes occurred to me. It was just a matter of reading successive drafts of the narrative and time and time again recognising that three main storylines were emerging. Although the first drafts of

the case reports on Doñana and the Veluwe were far from ready at that time, they also contained traces of the same main themes. From then on I built the analysis of the cases around these three themes. So although neither the analytical question nor the theoretical framework changed much during my research, I did struggle to assign the empirical data to the predefined conceptual categories. Thus, when confronted with the empirical material, I had to create new categories (the three themes) to construct the narrative.

11.5.6 The Hermeneutic Spiral

From that moment onwards I was working with three storylines in each case. Using the material already collected, I could introduce details in the case reports. But in order to enrich the stories, I revisited the areas and conducted additional interviews, some with the same persons and some with new persons. I also had the opportunity to access the archives of national park offices in the Yorkshire Dales and Doñana. Staff from the national parks provided me with a desk. For two weeks in the Yorkshire Dales and several days in Doñana I had almost unlimited access to their archives and to people who were in the office. Additionally, several NGOs allowed me to search their archives and were willing to be on standby to answer any questions. I also spent time at the offices of the Friends of the Yorkshire Dales in England and Ecologístas en Acción in Spain. Furthermore, some people who were or had been involved in nature policy in the areas gave me temporary access to their personal archives of internal correspondence and personal notes. For the Veluwe case, for instance, I was given the opportunity to search in the personal archive of a civil servant from the regional authority of the province of Gelderland who had been working on the area since the 1970s.

As well as using the archives, I also attended several meetings of governing committees in the areas. Then I constructed the stories for each of the themes. Here I will use theme 1 ‘what is nature policy?’ to illustrate how I went about this. A study of the literature, and interviews during the first visits to the areas and conversations with local people had given me an idea of the discourses that were dominant in the late 1980s. Knowing which discourses prevailed was one thing, understanding why and how these discourses have grown into dominant ones was quite another. I therefore went back in time to uncover how these discourses became institutionalised over time.

The history of nature policy in the UK, Spain and the Netherlands was quite well documented in books, scientific publications and popular articles. And additional interviews with people who had been working in the nature policy sector, as well as my reading of policy documents and the text of nature conservation acts greatly helped me make sense of the historical background. Generally, I searched for how nature was defined and how these definitions had been debated. I did the same for the period since 1980. In the final stories for each of the three themes I purposefully introduced conceptual language. When I wrote about the

changing or stable content of nature policy, I used the term 'discourse'. For new parties entering an existing collaboration, I used descriptions such as: 'a new actor entered the coalition', etc. This is to say that I used the concepts of actors and coalitions, power and resources, rules and discourses as much as possible. These concepts are the four dimensions of the central concept in my study: a policy arrangement.

11.5.7 Constructing the Narrative

So, even as early as the thematic stories, the empirical and theoretical plots started to be interwoven using the four dimensions of the policy arrangement concept. I took two additional steps to interweave these two plots. Firstly, I ended each section within the thematic stories with a conclusion about the developments within the theme and marked this by using the word 'Thus'. This was followed by a summary of what had happened within the thematic story, expressed in conceptual language and using the policy arrangement's dimensions. Consider, for example, the following excerpt in which the words referring to the dimensions are presented in italics:

> Thus, […] we first saw that an international *coalition* of scientists and nature conservationists successfully acquired parts of Doñana in the 1960s. They cherished Doñana because of its high natural values and its significance as an important haven for (migratory) birds. Their actions were driven by the wish of preventing Doñana being damaged by agricultural and tourist developments. Interestingly, right from the start Doñana's nature policy was an international issue. This characteristic, as we will see later on, remains until the present day. In 1969, by designating Doñana a national park, the Spanish government acknowledged Doñana as a nature area with a rich flora and fauna and important for migratory birds. From the beginning, two *actors* played an important role in Doñana's nature policy. First of all the Estación Biológica de Doñana: it carried out scientific research, managed its own Reserva Biológica and its director was conservador of the national park. Second, there is the state's nature conservation institute ICONA, which had the responsibility for national parks. Those two organisations have always had a difficult relationship. They competed over *power* in the national park in the first years after its creation. This competition seems to have been lost by the Estación Biológica when the position of conservador was transferred to ICONA in the early 1970s. The role of the Estación Biológica was limited to that of coordinator of scientific research in the national park. Although the *power* of the Estación Biológica decreased, it has always used its acquired scientific knowledge as a *resource* in commenting on ICONA's strategy concerning Doñana's protection. From a *discursive* perspective, nature policy developed relatively late. In the 1980s a *discourse* on territorial water management emerged for the first time, which encompassed the hydrological regeneration of the Doñana marshes within the boundaries of the national park. It was not until the end of the 1990s that new *discourses* appeared. The creation of the nature park by the Junta de Andalucía apparently was not a driving force for *discursive* innovation. However, the mining spill of April 1998 set substantive developments in motion. Both the regional Consejería de Medio Ambiente and the national Ministerio de Medio Ambiente (and its OAPN) developed their own strategies. In so doing, both actors emphasised a more comprehensive approach towards the content of nature policy. Whereas the Ministerio de Medio Ambiente advocated a river

> system *discourse*, the Consejería de Medio Ambiente promoted an ecosystem *discourse* (Van der Zouwen 2006, p. 116).

The second step I took to interweave the theoretical and empirical plots was to wrap up the developments in the three themes at the end of each case analysis, by identifying which arrangements had emerged over time in the case area. Consider the following excerpt, which again comes from the Doñana case. Both the conceptual terms arrangement and its four dimensions are in italics.

> Looking back on the whole story, there was one *arrangement* concerning nature policy in the late 1980s. I call this arrangement a *governmental protection arrangement* [emphasis in the original, MvdZ]. The boundaries of the *arrangement* match the territorial boundaries of the national park. Characteristic of the arrangement are the formal *rules* concerning participation and distribution of responsibilities laid down in for instance the 1978 Ley de Doñana and ICONA's dominance. Although there is formally the Patronato, the park's participant body, it is hard to call this a *coalition* on nature policy. The Patronato as a whole does not share *discourses*, *resources* or *rules* to a great extent. Only in case of the last could one argue that the Patronato at least shares a set of formal *rules*, namely those which prescribe who has access to the *coalition* and who has not. The formal responsibility of ICONA and the expertise which it had developed in the field of park management are important *resources*, which made this organisation the dominant *actor* in the *arrangement*. Besides ICONA, the Estación Biológica de Doñana was also able to be influential in certain instances in this *arrangement*. It could do so on the basis of its scientific expertise concerning the national park's natural values. Extensive research and monitoring enabled the Estación to put pressure on ICONA to develop a strategy on the regeneration of Doñana's hydrological system. *Discursively*, ICONA advocated two specific *discourses* which concerned the territory of the national park. These are the *discourses* on territorial water management and on species protection. In both *discourses*, the protection of the national park was central. The *discourse* on territorial water management was increasingly challenged at the end of the 1980s, when a coalition of WWF and the IUCN openly questioned the legitimacy of the *discourse* by claiming that it was not based on solid scientific data. Additionally the Spanish NGO SEO/Birdlife had been pushing ICONA to seriously address the protection of several important bird species in the national park, by mobilising the EU Birds Directive and making complaints to the European Commission over Spain's non-compliance with this Directive. Both actions did not, however, directly result in change (Van der Zouwen 2006, p. 135).

This part of the analysis was in fact an exercise in rewriting the three thematic stories into a narrative at the level of the whole policy arrangement. Previously, for the thematic stories and the summaries introduced by 'Thus', I used the arrangement's dimensions solely to flag the instances which dealt with actors and coalitions, power and resources, rules and discourses. Now, I went to the conceptual level of the whole arrangement and characterised the developments from that perspective. That is how I developed the scientific narrative of my dissertation.

11.6 Comparing Our Experiences as Scientific Narrators

By comparing our practices as scientific narrators we can get insight into how we created our narratives and tried to be accountable for them. Our dissertations are methodologically distinct, and were prepared and written at different universities, in different scientific communities, yet they display similar characteristics with regard to our practice as scientific narrators.

First of all, our scientific accounts were both created by dynamically interweaving an empirical plot and a theoretical plot. In both cases this inevitably involved the interpretation, translation and transformation of empirical situations into constructed narratives that took different forms and shapes. Each of us started her research on the premise of a possible mismatch between practice and theory. We then both constructed the empirical plot by presenting the concrete details of our study in chronological order, as if they were the product of a unique and naturally unfolding sequence of events. We focused on time, place, actors, actions, consequences and context to structure events into an empirical plot. In other words, we simply constructed an empirical plot of what happened first, second and third. In this plot, we stayed close to reality and we described real-life practices in their specific context. For each event, we wanted to tell 'how this happened' in addition to 'why this happened'. In the analysis we stayed close to our original data and context, but our subsequent interpretation is more than a simple description. By linking up to discussions in literature, our analysis organised specific details into a coherent picture or set of interlocking concepts. This required putting our empirical data into conceptual categories which had to be modified and operationalised for that purpose. Putting data in conceptual boxes involved changing the data as well as the boxes. This analysis became the theoretical plot of our stories, which consisted of a conceptual translation of peoples' interpretations and practices. Last but not least, moving between the empirical plot and the theoretical plot enabled us to develop a meaningful scientific narrative. This scientific narrative can be characterised as a co-construction of empirics and theory. We as researchers played an important role in the articulation of both.

Second of all, our practices as scientific narrators display similar characteristics with regard to the narrative contract between researchers and the audience. We both undertook to deliver a narrative that possessed 'meaning' and 'truthfulness'. The 'meaning' of our narratives was delivered by means of an empirical and conceptual plot. To avoid the 'so what?' question, we both focused on serious public issues and tried to identify the 'critical events' (Van Bommel) or 'turning points' (Van der Zouwen) in these. In these events we tried to discover a conceptual meaning which would allow us to reflect on these empirical events and envision possible futures. At the same time, our conceptual plots also addressed a theoretical puzzle that we tried to solve in our dissertations. By interweaving our empirical plot and our conceptual plot we tried to deliver a certain criticality which would provide our narratives with both a practical and an academic meaning.

The 'truthfulness' of our narratives was delivered by trying to resonate with the culture of our audience—both our academic readers and the people that we had studied—and the standards for 'truthfulness' that we thought they would adhere to. With regard to our academic readers we had to link up to the scientific context and culture in which truthfulness is defined. As we both operated in slightly different scientific cultures, we also had to operate under slightly different definitions of truthfulness. In her research Van Bommel rejected traditional criteria for judging the quality of research, such as validity, reliability and objectivity. She decided to build trustworthiness in the scientific context of interpretative analysis within which her PhD study was conducted. As such she used Lincoln and Guba's criteria of credibility, transferability, dependability and conformability to argue for the trustworthiness of her research. Van der Zouwen dealt with the issue of establishing the truthfulness of her research by arguing for its (external and internal) validity and its reliability. She also used triangulation of methods and sources to enable more accurate interpretations. So we relied on different criteria to establish truthfulness of our research accounts with our academic audience. However, we both felt that we were committed to recount 'real-life' practices that had happened or at least we believed to have happened to establish truthfulness with the actors that we had studied. To avoid the 'did this really happen?' question, we were committed to reporting the practices, experiences and views that our informants had lived through (or we think they did). Without this truthfulness, our scientific narratives would have become fiction and would have lost their utility for our audience.

This is how our narratives were created and how we attempted to be accountable for them. We will now discuss the implications this has for our understanding of practice based research.

11.7 The Practice Based Approach and Researchers as Narrators

We started this chapter by stating that as scientific narrators we have an unconventional view on the practice based approach in forest and nature governance and what this practice based approach entails. We discussed that a practice based approach has narrative aspects because it is a 'speech act' that retrospectively verbalises something (namely practices) that did not exist previously and has been written from the (unique) perspective of its author. Our chapter adds that the relationship between researchers and their scientific narratives is one in which researchers actively co-construct certain realities in interaction with their audience by interweaving empirical and theoretical plots. It also shows that researchers can be held accountable for the realities they create in their scientific narratives by means of the narrative contract that they have with their audiences in which they undertake to deliver meaning and truthfulness. For the practice based approach this means that practices, practice research and practice theory too are constructions in scientific narratives. Accordingly, the narrative turn in research methodology has

consequences for the way we can conceptualise practices, practice based research and practice theory. Firstly, for us as scientific narrators, a practice is: (1) a phenomenon which we study and consider ourselves a part of (because we articulate it in a speech act) and (2) which we would like to understand by interweaving empirics and theory. Secondly, following Gabriel (2004) and Czarniawska (2004), we conceptualise research accounts that take a practice based approach as scientific narratives that have characters, plots (both empirical and conceptual), and so forth. Thirdly, this means that for us, practice theory is the distillation of scientific writing: it is the name that we give to the theoretical plot of the scientific stories—'theory is the plot of a thesis' (Czarniawska 2004, p. 125).

Having said this, we realise that the way in which we constructed a scientific narrative in our dissertations in not the only one. In our dissertations our scientific narratives were organised around the tension between what we were observing in practice and what we had expected to find. We then both proceeded to organise our narratives around the empirical plot in which we presented our events in a chronological order. We realise that the scientific narratives in practice based research can just as well be organised around the theoretical plot by taking concepts, or theory, or both as the underlying ordering principle and using empirical material to illustrate a theoretical argument. We do not want to argue that our way of constructing an scientific narrative is the only 'correct' one. We do hope that by articulating some of the 'common' sense, taken-for-granted, tacitly known 'rules' of doing practice based research we have provided input for the ongoing dialogue and discussion in relation to what it entails to do practice based research. We hope that our readers will evaluate what we say against their own experience, will argue with us when what we say does not fit with their views, and, best of all, will join in open debate by contributing experiences, reflections and interpretations that differ from ours and can lead to further discussion. We believe that this can give insight into how decisions about methods involve choices, thereby giving insight into the relationship between methodologies and the research practices of practice researchers. Perhaps in this way we can come to a broader appreciation of our similarities and differences, creating more novel or nuanced positions from which to view ourselves and our practice based narratives.

References

Alvesson M, Karreman D (2000) Taking the linguistic turn in organizational research. J Appl Behav Sci 36(2):136–159

Boje DM (2001) Narrative methods for organizational and communication research. Sage, London

Brown AD (2006) A narrative approach to collective identities. J Manage Stud 43(4):731–754

Callon M (1998) The laws of the markets. Blackwell and the Sociological Review, Oxford

Callon M (2007) An essay on the growing contribution of economic markets to the proliferation of the social. Theor Culture Soc 24(7–8):139–163

Czarniawska B (1997) Narrating the organization, dramas of institutional identity. The University of Chicago Press, Chicago
Czarniawska B (2004) Narratives in social science research. In: Introducing qualitative methods. SagePublications, London
Ellis C (1991) Sociological introspection and emotional experience. Symbolic Interact 14:23–50
Ellis C (2004) The ethnographic I. AltaMira Press, Walnut Creek
Ellis C, Bochner AP (2000) Autoethnography, personal narrative, reflexivity. In: Denzin NK, Lincoln YS (eds) Handbook of qualitative research, 2nd edn. Sage, Thousand Oaks, pp 733–768
Flyvbjerg B (1998) Rationality and power: democracy in practice. University of Chicago Press, Chicago
Flyvbjerg B (2002) Making social science matter: why social inquiry fails and how it can succeed again. Cambridge University Press, Cambridge
Gabriel Y (2004) Narratives, stories and texts. In: Grant D, Hardy C, Oswick C, Putnam LL (eds) The Sage handbook of organizational discourse. Sage, London, pp 61–79
Gabriel Y, Connell C (2010) Co-creating stories. Collaborative experiments in storytelling. Manage Learn 41(5):507–523
Geertz C (1988) Works and lives: the anthropologist as author. Stanford University Press, Stanford
Gieryn T (1983) Boundary-work and the demarcation of science from nonscience: strains and interests in the professional ideologies of scientists. Am Sociol Rev 48(6):781–795
Goodall HL (2000) Writing the new ethnographyethnography. AltaMira Press and Rowman and Littlefield, Lanham
Haraway DJ (1991a) A cyborg manifesto: science, technology and socialist feminism in the late Twentieth Century. In: Haraway D (ed) Simians, cyborgs and women: the reinvention of nature. Free Association Books, London
Haraway DJ (1991b) Situated knowledges: the science question in feminism and the privilege of partial perspective. In: Haraway D (ed) Simians, cyborgs and women: the reinvention of nature. Free Association Books, London
Hatch MJ, Yanow D (2008) Methodology by metaphor: ways of seeing in painting and research. Organ Stud 29(3):23–44
Hayano DM (1979) Auto-ethnography. Hum Organ 38:99–104
Humphreys M, Brown AD (2002) Narratives of organizational identity and identification: a case study of hegemony and resistance. Organ Stud 23(3):421–448
Law J (2008) On STS and Sociology. The Sociological Review, 56(4): 623–649
Law J (2004) After method: mess in social science research. Routledge, London
Law J, Urry J (2004) Enacting the social. Economy Soc 33:390–410
Mol A (1999) Ontological politics: a word and some questions. In: Law J, Hassard J (eds) Actor network theory and after. The Sociological Review. Blackwell; Keele, Oxford
Nicolini D (2009) Articulating practice through the interview to the double. Manage Learn 40(2):195–212
Nicolini D, Gherardi S, Yanow D (2003) Knowing in organizations: a practice-based approach. M. E. Sharpe, Armonk
O'Connor ES (2000) Plotting the organization: the embedded narrative as a construct for studying change. J Appl Behav Sci 36(2):174–192
Pickering A (1995) The mangle of practice. Time, agency, and science. University of Chicago Press, Chicago
Rhodes C (2001) Writing organization. (Re)presentation and control in narratives at work. John Benjamins Publishing Company, Amsterdam/Philadelphia
Rhodes C, Brown AD (2005) Writing responsibly: narrative fiction and organization studies. Organization 12(4):467–491
Schatzki TR, Knorr-Cetina K, von Savigny E (2001) The practice turn in contemporary theory. Routledge, London
Sparkes AC (2000) Autoethnography and narratives of self: reflections on criteria in action. Sociology Sport J 17:21–43

van Bommel S (2008) Understanding experts and expertise in different governance contexts. The case of nature conservation nature conservation in the Drentsche Aa area in the Netherlands. Doctoral thesis. Wageningen Universiteit, Wageningen

van der Zouwen M (2006) Nature policy between trends and traditionstraditions. Dynamics in nature policynature policy arrangements in the Yorkshire Dales, Doñana and the Veluwe. Doctoral thesis. Eburon, EburonDelft

Van Tatenhove J, Arts B, Leroy P (2000) Political modernisation and the environment; the renewal ofenvironmental policy arrangements. Kluwer Academic Publishers, Dordrecht

Van Maanen J (1988) Tales of the field. On writing ethnography. The University of Chicago Press, Chicago

Wagenaar H (2011) Meaning in action. Interpretation and dialogue in policy analysis. M.E. Sharpe, Armonk

Wall S (2006) An autoethnography on learning about autoethnography. Int J Qualitative Methods 5(2):1–12

Yanow D (2009) Dear author, dear reader: the third hermeneutic in writing and reviewing ethnography. In: Schatz E (ed) Political ethnography: what immersion brings to the study of power. University of Chicago Press, Chicago

Yanow D, Schwartz-Shea P (2006) Interpretation and method. Empirical research methods and the interpretive turn. M.E. Sharpe, Armonk/London

Yanow D (2005) In the house of 'science', there are many rooms. In: Monroe KR (ed) Perestroika! theraucous rebellion in political science. Yale University Press, New Haven: 200–217

Yanow D (2000). Conducting interpretive policy analysis. SagePublications, NewburyPark

Part V
Conclusion

Chapter 12
The Promise of Practice: The Value of the Practice Based Approach for Forest and Nature Governance Studies

Jelle Behagel, Bas Arts, Séverine van Bommel, Jessica de Koning and Esther Turnhout

12.1 Introduction

This book set out to describe forest and nature governance practices. In the first chapter, we described the need for a practice based approach to forest and nature governance. We explained why we believe there is a need to study forest and nature governance as practices and in what scholarly traditions we place ourselves. We described the conceptual framework and theoretical premises that have accompanied the chapters of this book and some methodological principles that have guided its authors. Throughout, forest and nature governance has remained a central theme, which the authors have approached from what we consider to be a practice based perspective. Such a perspective is new to forest and nature governance, and even though there is a burgeoning literature on governance practices in general, also new in this form to governance studies. We therefore wish to reflect on some insights that the chapters of this book have given us. In this chapter, we begin by drawing a number of conclusions from preceding chapters about what forest and nature governance practices actually are: what they look like and how we can typify them. Next, we revisit the three sensitising concepts that have guided the analysis of the authors and discuss how they have contributed to a fleshing out of the practice based approach. Subsequently, we delineate some aspects of the practice based approach to forest and nature governance as it manifests itself in the chapters of this book. We end this chapter with a discussion on the value of a practice based approach for studying forest and nature governance and governance in general. We do so by comparing the practice based approach to other approaches that are also critical of mainstream accounts of governance and by discussing the implications that a practice based approach will have for the role of the researcher in the broader societal field.

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12.2 Forest and Nature Practices

All the social practices described in the book in some way or another relate to governance plans, initiatives, efforts, mechanisms, successes, failures, or otherwise in the fields of forest and nature. The case studies presented all include attempts—whether by state or non-state actors—to steer the collective behaviour of others, reorder society, or change the role of government. Such attempts are made by diverse actors: for example, scientists constructing biodiversity databases, UN and World Bank representatives improving their cooperation on REDD+, and government officials implementing community forest management. These attempts are also addressed at a diversity of actors, for instance: villagers in Bolivia, Congo, India and Tanzania (the aim being to improve their forest management), visitors to Dutch nature areas (the aim being to encourage them to keep to predefined routes), or participants in decision-making (the aim being to increase the effectiveness and legitimacy of water policy).

Contrary to what one might expect given conventional thinking on steering, the cases presented in this book show that practices of forest and nature governance hardly ever linearly follow objectives, procedures or plans initially set by policy makers—be they governments, NGOs or local leaders—or hardly ever produce exactly the outcomes these policy makers prefer or expect. Practices have their own logic that cannot easily be modified by (external) governance initiatives; situated agencies might respond differently than anticipated and unexpected events or even crises might intervene. A practice based approach therefore puts into perspective and relaxes premises and optimism about the governance of society. This is not to say that steering and intervening are no longer needed or necessary; there is nothing wrong with trying to improve or change situations which are considered ineffective, undemocratic, unjust, unsustainable, or inequitable. But instrumental and functionalist approaches towards social change should be avoided, because these wrongly assume their insights and findings are universally applicable, and fail to recognise the situated-ness of agencies, the specific logics of social practices, and the contingency of outcomes. In other words, any attempt to steer social practices should take into consideration unexpected or even contrary results that cannot be avoided by 'improving design', instituting 'good governance', or setting the 'right' standards. In the last section of this chapter we will further elaborate on the relationship between the practice based approach and the possibility of steering.

The various empirical case studies in this book show that the practice based approach offers a different perspective on forest and nature governance from most studies in this field. In the section on 'rethinking institutions', the 'rules of the game' are not so much put central stage, but instead are considered as being part and parcel of broader social practices. They are just one element of social life, found, for example, in contracts, laws, regulations, conventions, and organisations, but in many cases neither relevant for nor followed in practice. Also, they are less effective as a mode for social change than is generally assumed in instrumental and

functionalist accounts of institutions (introducing the 'right' institution for the problem at hand). Agencies, too, are conceptualised differently in the various empirical chapters than in mainstream institutional theory, not as rule-followers or as players of the game, but as 'situated bricoleurs' who adapt or bend rules to their practical experiences, knowledge and logics, or even reject them when socially-embedded identities, norms and beliefs are perceived to be threatened. For example, in Papua New Guinea, an NGO-led ecotourism project was embraced by local communities not for conservation and development reasons, as the NGO involved initially thought, but to fight land claims by various clans, which in the end thwarted the project's achievement of its objectives (De Koning and Benneker, this volume). One case study describes how, in India, some women strategically rejected invited spaces for their participation in local forest committees in order to maintain their female identity in the community and to empower themselves in behind the scenes *vis-à-vis* the men, in forest-related livelihood issues (Nandigama, this volume). What initially looked like a violation of women's rights and a failure of gender objectives in participatory forest management was also the women's empowerment in informal spaces. In the case study from the Netherlands, the institutional design of public participation in water governance did not fit the practices of the participants very well (Behagel and Van der Arend, this volume); they had neither the time nor the resources to be part of all formal initiatives and many of them preferred to use their informal and already established networks for influencing decision making on water quality goals.

Part 3 of the book is on the 'global–local nexus'. Instead of considering global governance and local practices as distinct, distanced and vertically ordered fields, the practice based approach conceptualised these realms as horizontally linked and as bringing each other into being. Such a perspective differs substantially from classical views on international politics, such as neo-realism ('states as rational actors'), regime theory ('rules and sanctions that steer state behaviour'), or multi-level governance ('hierarchy of tiers of administration'). For example, ideas, norms, and rules on participatory and sustainable forest management stemming from global forest discourses and regimes are socially and historically related to practices on the ground, e.g. through international organisations, NGOs, donors, and scientists, as case studies from Tanzania show (Arts and Babili, this volume). This 'effect' is not to be misunderstood as the working of direct causal mechanisms from the global to the local, but instead should be seen as loosely connected networks in which ideas, norms, and rules travel and co-shape practices as they do so. Similar processes are currently taking place in the making of REDD+ (Visseren-Hamakers and Verkooijen, this volume). While the initiative originated from a small group of rainforest nations, NGOs, and scientists in 2005, and the international community formally accorded the idea in 2009, international organisations—from the UN to the World Bank—are currently piloting REDD + on the ground in a number of forest-rich countries, in cooperation with governments, local communities, NGOs, and indigenous peoples. A similar narrative of 'glocal' networks can be given about the certified timber market (Hoogstra-Klein, this volume). From a small initiative taken by NGOs and business in the early 1990s,

timber certification has grown into a global movement that currently comprises about 10 % of the world's forests and about 25 % of the global timber trade. The case also shows that markets are not abstract allocation mechanisms that respond to consumer demands, but practices that need to be continuously performed by parties along the international production chain. Initially, there was hardly any demand for certified timber, but demand has been actively fostered by NGOs and companies, and recently by governments too.

Part 4 of the book is on the 'representation of nature'. The way nature is represented or constructed in both governance and science has repercussions for how these practices impact on others. For example, current technical discussions on creating international biodiversity databases, such as those in EBONE (Europe) or IPBES (UN), perform instrumental views of and distant relationships with nature that deny the mutual constitution and interconnectedness of the social and the natural world (Boonman-Berson and Turnhout, this volume). As a consequence, biodiversity is reduced to a limited set of data and indicators that is detached from 'real' nature and is difficult for people to relate to. In a similar vein, ecological worldviews of rangers shape management practices in protected areas (Buijs et al., this volume), but these management practices are not necessarily welcomed by visitors and local residents. In such situations, conflicts can easily emerge, as various cases in the Netherlands show: for example, about cutting forests to create heathlands, or cutting exotic but highly valued tree species so as to replace them with native ones. Finally, scholars who analyse forest and nature governance construct certain representations of nature in their narratives as well (Van Bommel and Van der Zouwen, this volume).

These narrative accounts are not neutral: on the contrary, they are also performative as they produce certain realities that others take up and act upon. Therefore, one should reflect upon one's representations of nature in scientific studies and be accountable to the reader. In short, part 4 of the book points out the construction and performativity of representations of forest and nature in both governance and scientific practices—constructions which impact on how we see and act upon the world.

12.3 Revisiting the Three Sensitising Concepts

The approach we use in this book emphasises 'practice' as focus of research. As practice is elusive, in Chap. 1 of this book we proposed three sensitising concepts to guide our research: logic of practice, situated agency, and performativity. These concepts draw on but depart from the established concepts that largely define the field of forest and nature governance today. These are institutions, actors, and knowledge. Rather than describing the world according to more or less static categorisations by using these established concepts, the authors in this book have used the sensitising concepts in order to give dynamic accounts of what institutions, actors, and knowledge actually do.

By using the concept of logic of practice, a number of chapters in this book critically engage with overly functionalist and instrumental policymaking. Specifically, institutions, whether they are global, national, or local, have been critically assessed for the authority they were actually awarded in practice. This authority was high in the cases of participatory forest management in Tanzania (Arts and Babili, this volume) and REDD+ in the international climate change community (Visseren-Hamakers and Verkooijen, this volume), was contested in the case of the dealings with participatory institutions in the EU Water Framework Directive in the Netherlands (Behagel and Van der Arend, this volume), and was low in the case of local forestry practices the Congo (De Koning and Benneker, this volume). Moreover, the chapters in question show how the measure of success in terms of the instrumental purpose of the institutions is highly dependent on the practices in which they are introduced and situated. Some institutions were very actively introduced, yet their effect was limited due to their inability to link up with existing logics of practice (Behagel and Van der Arend, this volume). Other institutions that were also actively introduced *did* have effects, because they were well connected to global–local networks that offered space for re-negotiating ideas, norms, and rules, and also provided financial support and market access to feed new forest projects into local practices (Arts and Babili, this volume). Yet other institutions never took off because they took no account of the logic of practice, or were creatively used to confirm and strengthen already existing practices (De Koning and Benneker, this volume). As the concept of logic of practice decentres institutions towards practice, the authors have been able to show how the instrumental norms and goals of formal institutions interacted with the socially-embedded norms and values of practice. As a result, the chapters could analyse the working of institutions in broader terms than just instrumental success or failure, and could elucidate what institutions actually do (and do not do) in practice.

The concept of situated agency has been used in the chapters of this book to show that actors' behaviours neither simply follow the formal roles they are assigned in governance models nor are merely steered by an invisible hand or by incentives created by institutions. Instead, actors' actions are to a large extent shaped by the practices in which they are situated and the routines and principles that they adopt accordingly. Moreover, practice has been shown not only to structure interaction, but to serve as a basis for agency as well. Buijs, Elands and Van Marwijk (this volume), for instance, consider the success of ecosystem management to depend on the characteristics of a community, on personal experiences, and on the access of actors to networks. Nandigama (this volume) shows how actors adapted to changes in local situations by making choices that are relevant to their everyday lives. To her, actors are situated insofar as they are challenged to act upon a situation. De Koning and Benneker (this volume) describe actors as bricoleurs that actively draw upon the established field of practice to creatively deal with introduced institutions and tailor them to their local practices. Visseren-Hamakers and Verkooijen (this volume) show how actors who are situated in a community of practice jointly manage their interactions towards collaboration, thereby replacing the dynamics of previous institutional competition. As such, practices provide a basis for agency and structure the field in which this

agency takes place. These authors can therefore explain stability and change by attributing agency equally to actors as to the practices in which they are situated, and taking into account events, traditions, and interactions. With the concept of situated agency, practice is not seen as influencing agents or as limiting 'rational choice', but as intrinsic to agency *itself*. Consequently, the chapters go beyond the structure–agency dichotomy, decentring agency from actors towards practice and locating the root of action in the entwinement of actors and practice.

The concept of performativity is sensitive to how theories, policies, rules, ideals, and abstract models of the world impact on practice. It brings to light how they are created to describe the world but also at the same time actively constitute the world in their own image. Consequently, the understanding of what valid descriptions of social phenomena are, what the rules are that drive people's behaviour and decisions, and by what models forest and nature is governed shifts from an outsider perspective to a perspective that understands knowledge as situated in practice. Boonman-Berson and Turnhout (this volume) describe how, through practices of archiving and representation, abstract conceptualisations of biodiversity have implications for how biodiversity is treated in practice. Hoogstra-Klein (this volume) understands performativity foremost to express that phenomena such as forest markets exist only through the ongoing processes of creating them. In other words, she understands practices (including market practices) to be coordinated entities that require their performance by a group of actors in order to exist. Arts and Babili (this volume), turning to policy evaluation, understand success and failure to be actively performed. Using the examples of participatory forest management and forest certification, they show how discourses or policies can become self-fulfilling prophecies because they actively or unconsciously discipline agencies to perform the doings and sayings that these discourses and policies prescribe. Arts and Babili therefore contend that policy effects are not so much discovered, but are rather the result of a joint performance by those that design policies, those to whom these policies are addressed, and those that evaluate these policies. Finally, Van Bommel and Van der Zouwen (this volume) understand their own research practices to be performative. As researcher-narrators, they perform certain realities rather than 'distilling the truth' from practice or offering simple descriptions. Being situated in practice, they believe the primary objective of researchers should not be to speak 'truth to power' (although a good narrative is naturally well-argued), but to make a difference. Understanding knowledge, models, and discourses to be performative guided these authors away from comparing normative ideals with empirical reality, testing theory in practice, or searching for value-free knowledge on which policies can be based. Although the abandonment of the (illusory) certainty of universal, objective knowledge and structured models may be felt as a loss by researchers and policy-makers alike, the shift towards practice in the analysis of performativity also offers substantial gains: from standing on the side-lines they move to readily engage with forest and nature practices, to provide a much-desired fresh perspective on success and failure, and to show that by representing the world we are already changing it.

12.4 Establishing a Practice Based Approach

In this section, we delineate some aspects by which a practice based approach to forest and nature governance manifests itself in the work of the contributors to this book. We do so in order to bring out two things: what constitutes a practice based approach and distinguishes it from other research approaches, and the diversity within practice based research. A research approach that is not discernible as such is not only difficult to employ, but will also not be recognisable as a viable alternative to more established research approaches. Alternatively, a too rigidly defined approach will likely lack applicability to a wider range of research problems and it will be difficult for it to contribute to an established field of research, such as forest and nature governance. Below, we reflect on the practice based approach as fleshed out in the individual chapters of this book.

All the chapters in this book take practice as the unit of analysis. In addition to this, all chapters start with a 'real-life' puzzle or surprise, and formulate the research questions that follow from this puzzle. As such, all chapters use the concept of practice to move beyond mainstream theories used in forest and nature governance. Among the chapters, we can distinguish three perspectives. First of all, the chapters by De Koning and Benneker, Behagel and Van der Arend, Visseren-Hamakers and Verkooijen, and Arts and Babili (all this volume) move away from institutionalism in policy sciences. The chapters by De Koning and Benneker and Behagel and Van der Arend both reject the assumptions of institutionalism from the start and seek insight into how people renegotiate the formal and informal institutions that they are faced with in everyday life. Both chapters deliberately highlight the room for manoeuvre that people have in which they can negotiate and change the rules and norms that are supposed to guide human behaviour in formal and informal settings. The chapters by Visseren-Hamakers and Verkooijen and by Arts and Babili both respond to institutional regime theory, but in different ways. Visseren-Hamakers and Verkooijen use the concept of community of practice in order to explain how institutional interactions are managed towards cooperation. Arts and Babili describe how actors are part of 'flat' networks and criticise the way in which actors are depicted in mainstream regime theory and in multi-level governance literature as hierarchically ordered. These two chapters turn to a practice based approach to understand what is happening and argue that mainstream institutional accounts insufficiently describe and explain how people interpret, improvise upon, and perform a field of practice.

Secondly, the chapters by Van Bommel and Van der Zouwen and by Boonman-Berson and Turnhout (both this volume) use the concept of practice to move away from objectivist forms of representation in social and natural science. They reject the notion of the objective representation of reality from the start and instead adopt the notion of performativity. Van Bommel and Van der Zouwen are puzzled by the question of how researchers can be accountable for the realities that they create through their stories. To address this puzzle, they reflect on their own practice as researchers-narrators. Boonman-Berson and Turnhout are interested in the dilemmas, negotiations, and

techniques by means of which biodiversity is globalised in practices of databasing and scaling. These chapters turn to the practice based approach to understand how representations impact on and are part of practice.

Thirdly, the chapters by Nandigama, Buijs et al., and Hoogstra-Klein (all this volume) use the concept of practice to move away from rationalism in forest policy sciences. Nandigama argues that the behaviour of actors is foremost determined by their situatedness, everyday activities, and gendered and cultural roles. She shows how these social phenomena provide a basis for women to innovatively engage with both formal and informal institutional mechanisms. Buijs et al. describe how experiential practices of nature recreation are usually highly routinized, but show that sudden changes in the natural environment can cause actors to become conscious agents who re-orient their prevailing views on nature. Hoogstra-Klein goes beyond rationalist views on forest economics. She starts from the premise that a neoclassical view on markets does not sufficiently explain what a forest market is and how something becomes a market. The chapter then provides a new conceptualisation of markets as practices. So, all these authors argue in their own way that mainstream rationalist approaches do not sufficiently explain the behaviour of actors and the social processes encountered in practice.

However, the chapters differ with regard to how radically they distance themselves from these mainstream positions in the forest and nature governance debate and thus how they position themselves in a practice based approach. For example, the chapters by Visseren-Hamakers and Verkooijen and of Arts and Babili draw on institutional analysis and the chapter by Buijs, Elands and Van Marwijk draws on environmental psychology. These chapters actively engage in a discussion with some of the dominant approaches in their field and offer an alternative reading of forest and nature governance from a practice based approach. They do so by identifying puzzles that can be found in mainstream accounts of forest and nature governance in their field or subfield of study and by subsequently applying a practice based approach to these puzzles. In so doing, they critically scrutinise the modes of explanation of mainstream approaches and show how practice based accounts can offer new insights and more context-specific explanations. Other chapters derive their research focus more from critical theories, for example by adopting critical institutionalist (e.g. De Koning and Benneker, this volume), performative (e.g. Boonman-Berson and Turnhout, this volume), or actor–network (e.g. Nandigama, this volume) perspectives. These chapters focus more on issues of hegemony and contingency. Consequently, they place more emphasis on issues of power, legitimacy, and accountability, and offer dynamic and historical accounts of the social construction of norms, rules, and beliefs in society. In addition, these chapters consider science *itself* as a social practice (complex, messy, practical) in which researchers are part of the practice they study and actively bring reality into being in interaction with their research participants and their readers ('co-production of knowledge'). The call for reflection on the trustworthiness and accountability of research by Van Bommel and Van der Zouwen follows from this recognition of science as practice.

So, depending on the research problem identified by the authors of the chapters in this book, some chapters stay closer to the original mainstream positions than others. We realise that this diversity may pose a risk. There is a danger that the practice based approach will be perceived as a container concept that has a vague meaning and does not present a strong alternative research approach. However, we are able to identify a number of characteristics that make the practice based approach in this book a unified approach that can be clearly distinguished from other research approaches in forest and nature governance studies. One of these characteristics is that the issues of forest and nature governance that are addressed in the various chapters are all presented as puzzles that require *situated* research and cannot be solved by means of universalistic accounts. Another characteristic is that all chapters *move away* from mainstream approaches by calling attention to the concept of practice and making it a focus of research. Finally, all chapters draw on one or more of the three *sensitising* concepts that together make up the analytical core of our practice based approach. We believe that a unified practice based approach does not imply that we should remove all theoretical and methodological differences between individual researchers. We also believe that if a practice based approach is to contribute to the further scientific development of the field, it is crucial that it is able to accommodate, or at least speak to or resonate with the research practices of the broad range of researchers who currently play a role in forest and nature governance. Therefore the variety of manifestations (both theoretically and methodologically) of the practice based approach that we observe in this book is perhaps both unavoidable and important in order to maintain a dialogue within the field of forest and nature governance.

12.5 The Potential of the Practice Based Approach for Governance Studies

In this book we have introduced the practice based approach as a viable alternative to established research approaches in forest and nature governance. But a practice based approach is not the only approach to be critical of mainstream accounts of governance. Accordingly, we are interested in what added value a practice based approach can offer compared to other approaches. We discuss one such alternative approach here, which we call interpretive governance analysis. There are two reasons for making a comparison with this approach. First, it shares some insights with the practice based approach: for instance on 'situated agency' and the importance of observing meaning 'in action'. Second, it understands governance both as a normative model of how to steer society and as an empirical description of reality. As Rhodes (2008, p. 1246) explains: 'in much present-day use, governance refers to: a new process of governing; or a changed condition of ordered rule; or the new method by which society is governed'. That is to say that the concept of governance interchangeably refers to: the changed role of the state (e.g. from command-and-control to steering at a distance), the changed

composition of society as a whole (e.g. the greater role of markets and the proliferation of non-governmental organisations in governance processes), and the new normative ideals of how societies *should* be governed (e.g. good governance, participatory decision-making, deliberative democracy, etc.). As such, the concept of governance is both normative and empirical: it normatively describes what governance *should be* and describes how steering in society *actually takes place*. We believe a practice based approach can add some distinct insights on the last point and expand on the first, as we will discuss below.

In the field of interpretative governance analysis, some of the problems in the normative-empirical duality of much of the current scholarly work on governance have been recognised. Bevir (2004), for instance, traces the empirical strain of governance back to what is described as 'the shift from government to governance' (Arts et al. 2009), and the normative strain as sometimes conveying a vision of more democratic politics based on a criticism of techniques and practices of modern states. He believes that interpretative approaches to governance can cope with this duality by 'a focus on meanings, sympathy for bottom-up studies and a an emphasis on contingency' (Bevir 2004, p. 607). Colebatch (2009) locates the main value of governance studies in its analytical focus. He employs the concept of governance to direct the focus of research towards the multiple actors, multiple rules, and multiple sites by which and where governance take place, and argues for an analysis in terms of authoritative choice, structured interaction, and social construction. Rhodes (2008) proposes a decentred study of governance. Such a study understands institutions to be historically created and sustained by the actions of individuals, and places agency and the beliefs and ideas of actors at the heart of governance. It 'represents a shift of topos from institutions to meanings in action' (Rhodes 2008, p. 1259). These authors understand institutions to be constructed and sustained in the interactions of actors and challenge their rationality—both of governmental actors as individuals—in favour of the construction of meaning and the interaction of actors. Consequently, they locate change primarily in actors who exert agency within a web of beliefs whilst building on traditions and facing dilemmas.

The chapters in this book have also shown a shift from the analysis of institutions towards action. But whereas most interpretative governance studies conceive of action primarily as sayings and doings, the practice based approach employed in this book expands this understanding of action towards 'an ensemble of doings, sayings and things in a specific field of activity'. It understands change not only as arising from situated agency, although this is a fundamental part of our approach, but also as following the principles of a logic of practice and as a result of the performativity of norms, ideals, and abstract models of the world. This is made possible by taking practice as a primary unit of analysis that precedes interaction, structures, or agencies. Accordingly, the chapters have located the roots of change and continuity in a specific practice itself. As such, the chapters have been able to address questions on how institutions can change existing practices or fail to do so, what the roles and dynamics are of actor networks and where agency should be located, and what the constructed nature of knowledge and values means for the ordering of society. By using the sensitising concepts of logic of practice, situated agency, and performativity, the

empirical-normative duality that characterises the field of governance studies is also re-situated in the unit of practice. That is to say that analysis starts from the entwinement of norms and action, and does not attempt to 'unravel' these strands. Norms, ideals, and abstract models are described as performed in empirical reality. Moreover, to exist or remain in existence, these norms—whether they are mediated by new institutions, scientific models, or global policy ideas—require processes of active performance of a group of actors. Finally, the chapters have shown how such norms need to 'speak to' an existing logic of practice if they are to be successfully performed.

Following from the above, we believe a practice based approach can take an additional step beyond interpretative approaches to governance that direct their analytical focus primarily to meanings and actors. A practice based approach preserves the concept of governance as an important analytical category to direct the focus of research on the multiple actors, rules, norms, and sites where steering takes place, as do interpretive governance studies. This focus has helped shape the puzzles that the authors of this book found in the practices of governance they described. However, to explain processes of stability and change, or accounts of success and failure, in each chapter a theory of practice has taken primacy over the interpretation of 'meaning in action' as a model of understanding. Moreover, the sensitising concepts help to avoid the danger of reproducing the categories of mainstream approaches: not only the category of the rational actor, but also the categories of functionalist institutions and objective knowledge. Together, these concepts make it possible to critically assess the attempts by actors from government, markets, or civil society to steer by introducing new institutions and using knowledge and expertise. As such, we believe a practice based approach also holds promise for the study of governance beyond the field of forest and nature.

12.6 From Studies to Practice

Each chapter in this book has offered a critical account of a specific practice (such as participatory forest management) in forest and nature governance or of a specific field of practice (such as forest markets). This book has shown the continuous interplay between structural, abstract or designed interventions, management practices, and institutional models of decision-making on the one hand and ad hoc, pragmatic, and local, situated considerations, responses, and dynamics on the other. The question therefore arises if and how the practice based approach we have presented in this book warrants critical reflection on the possibility of steering social practices in the field of forest management and nature conservation and on the task of researchers to provide policy makers with recommendations to that end. We believe that a practice based approach in forest and nature governance can address both issues. It can do so in two ways: first, by creating critical accounts of specific practices, and second, by offering alternative perspectives that make people see things differently.

The chapters in this book have focussed on public issues in forest and nature governance, have critically analysed policy and intervention practices, and have challenged conventional ideas of steering that entail designed institutions, incentive structures, and formalised processes. What is explicitly challenged is the idea of and belief in the linearity of any governance process: an ideal-typical, mechanical construction consisting of policy, implementation, and outcomes (Long and van der Ploeg 1989). In this book we have demonstrated that governance is performed in flat networks, within established fields of practice, while being adapted or changed by situated agencies. Consequently, we have shown that institutional interventions and policy innovations are neither necessary for nor by definition lead to an improvement of existing practices in terms of democracy, livelihoods, sustainability, or otherwise. Rather, steering evolves and emerges in practice as it is performed by a diversity of actors who act upon the situation 'at hand'. That is to say that steering is not so much externally imposed on a practice, as it is always part of that practice. As a result, no intervention, plan, model, or rule can sovereignly solve power imbalances, unsustainable practices, or inefficient management practices. But this does not mean that they do not act in practice: they do work, they affect change, and they produce intended or unintended consequences based on local dynamics and existing practices. Thus, the critical accounts that practice based research produces offer a fresh perspective on the possibility of steering and on what it means to steer societal processes, thereby tempering overly optimistic, instrumental, sometimes politically naive, beliefs about what plans, interventions, models, and rules can do. That is not to say that instances of good governance or best practices are not to be found. Rather, it is to say that 'successes' can and should be explained in terms of how attempts at steering recognise and provide space for situated agency, how they take existing logics of practice into account, and how they are sensitive to the performativity of knowledge. Therefore, the consequence of a practice based approach is that models of 'good governance' or exemplars of 'best practices' cannot be universally applied in a linear fashion but will only gain meaning in the governance practices they seek to improve and in which they are mobilised.

Critical accounts can do more than that however, as they also warrant critical reflection on the idea of policy evaluation. A narrative, even a scientific narrative, can be related in different ways and will consequently have different kinds of impacts. As such, critical accounts of forest and nature governance practices can generate narratives that open up new directions for and possibilities of steering. These narratives can be created during research and interviewing, or while discussing results with policy makers, practitioners, or users of forest and nature. Moreover, academic narratives can be translated from academia to governance practices: for instance, as students graduate from university and take on a job in the field, or through different forms of media. As such, the critical narratives produced by practice based research can become performative in their own right and act upon the practice that they aim to describe. As much as neoliberal accounts of economy can create self-interested consumers (Callon 1998), practice based accounts that stress values such as diversity or creativity have the capacity to

create democratic and engaged citizens. Thus, although practice based research does not necessarily produce concrete ready-to-use policy options or recommendations, it does have the potential to achieve transformation and innovation in practice by rethinking taken-for-granted assumptions, by offering new and fresh perspectives, and by widening the scope of debates and alternatives.

To conclude, the practice based approach that has guided the analyses of the authors in this book has shown its potential, as outlined by Wiersum, Arts and Van Laar (this volume), to offer a perspective on forest and nature governance that can convincingly overcome some of the issues that plague accounts of governance that are based on conventional understandings of institutions, actors, and knowledge. As we decentre these concepts towards practice, we can overcome dichotomies of outside versus inside, global versus local, structure versus agency, and abstract reality versus concrete reality. What is consequently lost is a faith in institutions, a belief in the autonomy of actors, and a promise of universal truth. As a result, we should abandon the fantasy of universally applicable models and the desire to find 'best practices'. In exchange, we gain a better understanding of the effects that rules, knowledge, or interventions may have; we see stability and change to arise from practice itself; and we acknowledge that the world is what we make of it.

References

Arts BJM, Lagendijk A, van Houtum H (eds) (2009) The disoriented state; shifts in governmentality, territoriality and governance. Springer, Dordrecht, (Environment and Policy, 49)

Bevir M (2004) Governance and interpretation: what are the implications of postfoundationalism? Public Adm 82(3):605–625

Callon M (ed) (1998) The laws of the markets. Blackwell, Oxford

Colebatch HK (2009) Governance as a conceptual development in the analysis of policy. Crit Policy Stud 3(1):58–67

Long N, Van der Ploeg JD (1989) Demythologizing planned interventions: an actor perspective. Sociologia Ruralis 29(3/4):226–249

Rhodes RAW (2008) Understanding governance: ten years on. Organ Stud 28:1243–1264

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Jelle Behagel is a postdoc/lecturer in the Forest and Nature Conservation Policy Group at Wageningen University. He has an MPhil and is close to completion of his PhD, which is on democratic governance and seeks to answers questions on legitimacy, accountability and power. As part of his PhD research

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Jelle has studied the implementation of the Water Framework Directive in the Netherlands and has shown how this has been deeply affected by political dynamics. He has written on political discourse, practices of public participation and the politics of expertise. He currently teaches planning and political theory and is developing a research proposal on the politics of environmental governance.

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Arjen Buijs combines a position as assistant professor in the Forest and Nature Conservation Policy Group at Wageningen University with a position as senior researcher at Alterra, Green World Research. He focuses on the human–nature relationship. He investigates the relationship between individuals and their natural environment as a transactional relationship: the meaning of our natural environment is developed in nature-related social practices in which individuals and social groups interact with their social and natural environments. Several of his studies have focussed on the social representations of nature, conflicts over nature management practices, the co-creation of such practices, public

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