



Seeking Surprise

Rethinking monitoring
for collective learning
in rural
resource management

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INTRODUCTION

1

Commonsense says that monitoring systems should be able to provide feedback that can help correct ineffective actions. But practice shows that when dealing with complex rural development issues that involve collaborative action by a changing configuration of stakeholders, monitoring practice often falls short of its potential. This chapter sets out the core problem that this thesis seeks to examine – how to understand and design monitoring processes that foster learning in concerted action that seeks more equitable and sustainable forms of development.

The chapter is divided into five sections. First, I introduce the central concern of the thesis via a metaphor that emerged during fieldwork in Brazil (see Chapters 2, 5, 6 and 8). The second section outlines several concepts, notably institutional transformation, ‘messy partnerships’ and collective learning, around which the quest for improved monitoring in the thesis focuses. Subsequently, I outline the growing relevance of the topic. Section four presents the core questions and structure of the thesis. I close this chapter with a brief look at the conclusions (see Chapter 9).

1.1 The ‘Tiririca’ of Constructing Collective Learning from Monitoring

‘Tiririca’ (*Cyperus rotundus* or purple nutsedge) is a weed that grows profusely in the fields of smallholders in Minas Gerais, Brazil. Farmers have various ways of combating the weed, one of which is a stopgap measure of cutting it back. However, once cut, the weed sprouts back even more ferociously than before, teasing the farmer with yet more shoots. The more it is tackled in this way, the more problematic it becomes until a structural solution is found.

The existence of ‘tiririca’ – and the power of its metaphor for describing the construction of collective learning – came to my attention in 1996. I had been working with small-scale farmers, trade unionists and NGO staff in two sites in Brazil who seek to create a societal alternative based on agroecological principles in which small-scale farmers are able to realise their aspirations and satisfy their needs. Their collaboration involves work on technical challenges, social relations and public debates in relation to agriculture, natural resource management, municipal governance, and policy formulation. For this context, we were developing a participatory monitoring system that could guide strate-

gic thinking and enhance results. To round off the first design workshop in the municipality of Araponga (Minas Gerais), we were evaluating progress and had invited reflections from participants. After some general murmurings of 'interesting' and 'difficult', Pedro Raimundo dos Santos, a local smallholder, stood up and remarked wryly: *'É pior que tiririca! Quando resolvimos uma coisa, outras aparecem.'* 'It's worse than 'tiririca'. Every time we resolve one issue, several more appear' (CTA-ZM and IIED 1996). The first steps in developing the monitoring system together had raised more questions for us all than answers.

This metaphor persisted and became a good description of the process in subsequent years that initially seemed to be straightforward and well-thought out. Yet our process was marked by unexpected twists and questions at each step, forcing us to identify what underlying issues we had overlooked. Let me give two examples.

At the onset of work in Araponga, we all assumed that after years of partnership between the NGO and farmers' unions, there would be clarity of objectives and vision. Surprisingly, when the partners were asked to articulate the objectives to be monitored, it became clear that there was no articulated coherent joint strategy driving the partnership. Instead, participants listed 28 loose activities, more or less clustered under six themes. Of these, only a handful was being implemented actively, and of those being implemented, everyone had different expectations. Apparently eight years of collaboration was insufficient to develop a common understanding, so we spent the first six months of our monitoring process clarifying expectations and agreeing on key objectives to monitor (see Chapters 5 and 6). We had not expected that visioning would be needed as the first step of monitoring. Furthermore, each partner realised the need to delineate its own domain of action more clearly, which had implications for how we understood the limits of participation and collectiveness in joint monitoring (see Chapters 6 and 8). Perhaps the assumed benefits and need for collective decisions by all stakeholders that underpins participatory monitoring needed to be questioned?

A second example relates to the chosen indicators. Following the intense participatory design process, an interim assessment of who was using the monitoring data that had been agreed as essential was disappointing. Was participation in indicator development and overall design not enough to ensure active use of the information? Apparently not. This led us to appreciate the importance of understanding how information is used to inform decisions in different decision-making spaces and the role of informal sharing (see Chapters 6 and 8). Perhaps monitoring that was driven not by information but by decision-making spaces would look quite different? Clearly, a

critical examination was needed of the expectations and process of participatory monitoring to strengthen sustainable resource management.

Amongst these groups in Brazil, 'tirikica' has now come to symbolise the complexity of developing a learning process based on monitoring concerted action for sustainable municipal development. It is also an image that has produced nods of recognition for those in other organisations and other parts of the world facing similar challenges. These challenges are well known to those seeking pro-poor social change in collaboration with an ever-changing kaleidoscope of partners. Such efforts requires deliberate processes of collective learning which can be furthered through monitoring. But, as I will argue, it is not as straightforward as suggested in the available literature.

Collective learning is commonly considered to result from 'participatory monitoring and evaluation' (PM&E). However PM&E is based on simplistic assumptions as I will discuss in Chapters 5 and 6. Our work in Brazil was no exception. Such assumptions included: the ease of identifying indicators to monitor and of translating the data through collective analysis into useful information, the existence of communication lines amongst the actors that allow timely exchange of relevant insights, the uptake by end-users of these insights, compatibility of information needs amongst the partners, and their commitment to sustain joint monitoring efforts.

Undertaking participatory monitoring that supports rural resource management continues to be over-simplified by many proponents (*cf.* Abbot and Guijt 1998; Estrella *et al.* 2000; Probst 2002). As I will argue in the thesis, this is due to erroneous methodological assumptions. Such assumptions must be made explicit and then examined (repeatedly) as part of developing a monitoring process that can generate insights to improve action.

This brings me to the title of this thesis – seeking surprise. The thesis has been a 'surprising' journey of reconsidering my own assumptions about how monitoring works and coming to new understanding. 'Surprise', in my case an extended period of discomfort about the unfolding of events that did not match my expectations, lay the foundation of my questions and ideas. I came to enjoy uncomfortable sensations of surprise as they were, I knew, the opening of potentially interesting insights. My own cognitive dissonance (see Chapter 7) has been, for now, partly resolved. In this book, I also argue that we need to consciously seek surprise and embrace it as a window of opportunity to reconsider our beliefs and assumptions to align better with the world around us. Thus 'seeking surprise' becomes an important monitoring principle (see Chapters 3, 6, 7 and 8).

1.2 Institutional Transformation, Messy Partnerships, Collective Learning and Monitoring

1.2.1 About Boundary Objects and Fuzzwords

In this section, I discuss terminology that is central in this thesis. These terms – institutional transformation, messy partnerships, collective learning, and monitoring – present problems as they are all so-called ‘boundary objects’ (Brand and Jax 2007). A boundary object is ‘a term that facilitates communication across disciplinary borders by creating shared vocabulary although the understanding of the parties would differ regarding the precise meaning of the term in question (Star and Griesemer 1989)’ (ibid:22-23). It is their vagueness and malleability that gives ‘boundary objects’ their bridging function between different disciplines and between science and policy or practice. Commonly used boundary objects include resilience (ibid) and sustainability. However, Brand and Jax argue that such concepts can provide obstacles to science due to their lack of clarity and also hinder implementation as they can ‘hide conflicts and power relations when different persons agree on the need for sustainability when in fact meaning different things by it’ (ibid:23). Expectations diverge or the concepts are difficult to operationalise. The problems of fuzzy definitional boundaries of boundary objects are compounded when several are used interactively.

Despite the limitation of the terminology I have chosen, they serve my purpose as they deviate from some of the ‘buzzwords and fuzzwords’ (Cornwall 2007) that are so prolific in the development discourse. By discussing these terms as a set of interrelated ideas, I make use of the idea of a ‘chain of equivalence’ – the more words in the chain, the more the meaning of any of those words comes to depend on the other words in the chain. Cornwall explains:

‘Used in a chain of equivalence with good governance, accountability, results-based management, reform, and security, for example, words like democracy and empowerment come to mean something altogether different from their use in conjunction with citizenship, participation, solidarity, rights, and social justice. In either chain, other words that might be added – such as freedom – would come to mean quite different things’ (2007:482).

Hence the terms I have chosen to articulate the challenge of this thesis constitute a chain of equivalence – sustainability, social justice, institutional transformation, equitability, messy partnerships, collective learning and monitoring. I specify how I use several of these terms in more detail below.

1.2.2 Seeing the Problem and Type of Change Needed

The type of rural resource management concern that lies at the heart of this thesis relates to the unabated levels of poverty and environmental degradation and their mutual reinforcement. The empirical work from Brazil discussed in this thesis revolves around addressing such concerns and is driven by a vision of transforming the institutions and practices that hinder sustainability and equitability (see FIGURE 1-1). I will refer to this type of development effort as 'institutional transformation'.

By institutions, I mean the formal and informal 'rules', regular patterns of behaviour and various forms of organisation across the state, business and civil society (Woodhill forthcoming). This includes the languages, beliefs and values and theories about how 'social and natural life works' (ibid). Some institutions are formalized, such as laws, while others, such as social customs, are informal. I discuss institutional transformation in more detail below.

The problems that shape the vision of those seeking to reduce their impact (see FIGURE 1-1) are complex and constitute 'wicked problems' (Rittel and Webber 1973). These are the opposite of 'tame' problems to which a linear, analytical, problem-solving process can be applied. Described in relation to social policy planning at the time, these problems are recognised in more recent times as a good descriptor of the challenge of sustainable resource management (Woodhill and Röling 1998; Guerin 2007). Such problems constitute webs or clusters of interrelated problems with high levels of uncertainty and diverse competing values and stakes. They cannot be resolved by individual actors, as solutions for one group may generate problems for another.

A wicked problem can be recognised by looking for divergence:

'If requirements are volatile, constraints keep changing, stakeholders can't agree and the target is constantly moving, in all likelihood, you are dealing with a wicked problem. If considerable time and effort has been spent, but there isn't much to show for it, there is probably a wicked problem lurking somewhere. ... The most fundamental rule for handling wicked problems is that they must not be treated like tame problems.'
(Poppendieck 2002)

Wicked problem situations are often central in institutional transformation, what others call 'developmental social change' (Reeler 2007) or simply 'social change' (Guijt 2007a). Institutional transformation as a development strategy involves deliberate interventions seeking systemic reforms of institutions to favour the poor and the environment. Such development means supporting poor people in their battle with institutionalised injustice-triggered poverty.

Institutional transformation requires facilitating changes in vulnerable constituencies and among those who decide on resource allocation. Development efforts need to challenge power inequities and dominant discriminatory norms in favour of the marginalised, which requires structural change of society, its institutions and norms. Therefore, it is not about planting forests or building latrines so much as how the forests are planted and latrines are built,

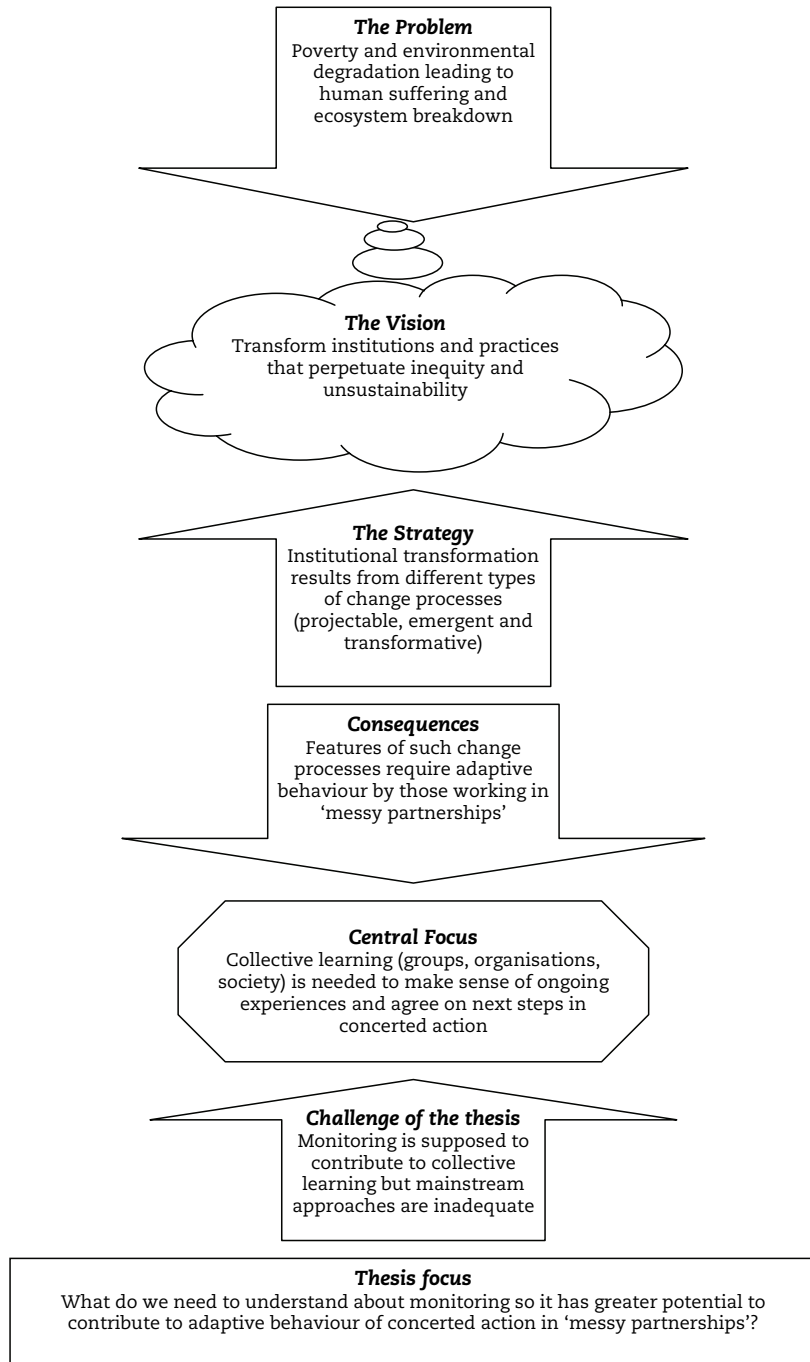


FIGURE 1-1 The relevance of monitoring for poverty and environmental degradation (see text for details).

the power and equity issues that lie underneath the lack of access to forest products or latrines. The process of generating collective insights and action becomes critical, not just the result.

Institutional transformation can occur through two interacting routes. FIGURE 1-2 illustrates how institutions create the (dis)incentives for individuals and groups to behave in specific ways. Such behaviour can either ‘either reinforce or undermine and change an institution’ (Woodhill forthcoming). Yet individuals and organisations also have their own goals and objectives, also shaped by institutions. Hence institutional transformation can occur where individuals/groups have divergent goals and intentions from the institutional norm – and are guided by these goals and intentions in undertaking activities that aim to shift the norm. Institutional transformation can also occur where institutions, such as legislation that favours bank loans for small-scale farmers, oblige those actors who maintain discriminatory intentions vis-à-vis this group to consider changing them.

Institutional transformation can be understood as a mix of three types of change processes: emergent, transformative and projectable change (Reeler 2007). Emergent change, which Reeler argues is the most prevalent and enduring type, describes the daily ‘unfolding of life, adaptive and uneven processes of unconscious and conscious learning from experience and the change that results from that’ (ibid:10). Transformative change emerges in situations of crisis or entrenched thinking. Different from emergent change, which involves a learning process, ‘transformative change is more about unlearning, of freeing the social being from those relationships and identities, inner and outer, which underpin the crisis and hold back resolution and

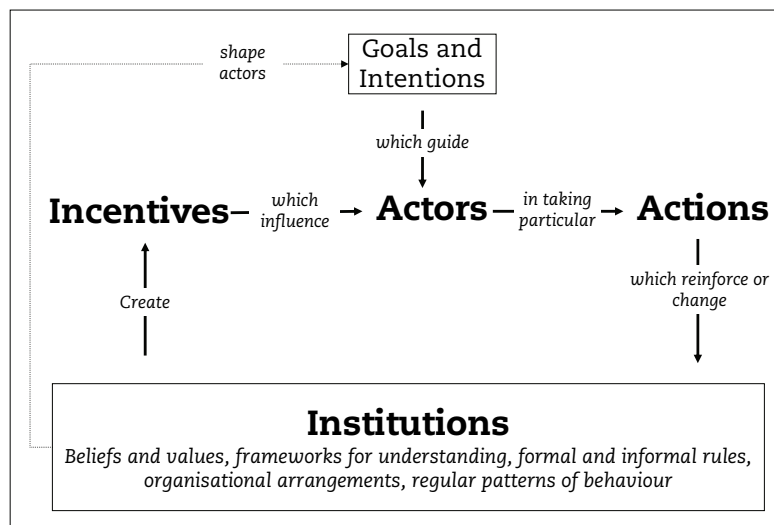


FIGURE 1-2 Institutional transformation (Woodhill forthcoming)

further healthy development' (ibid:12). Finally, Reeler turns to 'projectable' change processes that are most effective under relatively stable conditions and relationships and for addressing more tangible needs. This is the type of change that has characterised the planning, monitoring and evaluation practices within the development sector to date.

Reeler stresses that, though these forms of change intermingle, under certain conditions some forms dominate, support or induce another kind of change and dictate the terms of development. As I will discuss in Chapters 5 and 6, the empirical work in Brazil illustrates the intertwining of these forms of change for rural development and resource management in the face of 'wicked problems'.

When undertaking institutional transformation strategies to address diverse types of, it is important to understand key features that have significant implications for monitoring.

1.2.3 Features of Institutional Transformation¹

Institutional transformation (or developmental social change) is characterised by five key features. These are: non-linearity and unpredictability of change; multiple efforts on multiple fronts; fuzzy boundaries; the difficulty of recognising 'valid' results; and the long timeframe for resolution.

Structural changes in rural development and resource management that tackle underlying injustices do not follow a linear or predictable trajectory, with uncertainty beforehand about impact and the most effective route of interventions. These complex change processes are multi-dimensional and result from multiple actions and circumstances, involving a mix of intentional and opportunistic actions. Furthermore, the challenges faced shift, with some obstacles fading while others surface. Thus rigid actioning plan or accountability around specific results are potential hindrances for strategic efforts. There must be space for seizing the moment and unanticipated innovations. Objectives shift as a result of contextual changes but also through compromises resulting from working in alliances, thus making problematic the use of pre-set indicators and strict adherence to predetermined objectives, as is common in mainstream monitoring and evaluation (M&E).

Second, the system-wide change that is being strived for requires efforts by multiple groups on diverse fronts. Hence, focusing on one component or seeking attribution of impact in terms of specific players or efforts is of questionable accuracy and value. The process and multi-dimensional nature of

¹ This section is based on Guijt 2007.

emergent change means that efforts intertwine in changing contexts, goals inevitably shift, and impact is perhaps best described in terms of 'emergent' phenomena². Mainstream M&E approaches based on fixed, time-bound achievements and segmented realities fail to do justice to sustained, intertwined efforts.

Development processes with fuzzy and moving boundaries requires valuing incremental shifts. A key problem occurs if institutional transformation is viewed not as a process with progress markers, but rather as an end point. This leads to a focus only on concrete outcomes and ignoring the value of small, incremental changes. There is a need to capture the little moments of truth, the value of the accumulated small steps, rather than only the final result:

... this [slum dweller relocation] project was clearly successful ... There were tangible, quantifiable outcomes.... partnerships involved, good governance, gender equity, and civil society participation...And yet ... this kind of assessment is unsatisfactory and even misleading ... without the full examination of the depth of the relationships of trust that evolved over years, the risk taking and creativity that produced workable innovations, the 'toolkit' processes that were refined and systematized over time, the story is a thin one. If the years of working and waiting, of two steps forward and one back, are not valued and not given their due, then the final resulting success is not properly understood. This not only fails to recognise the difficulties, tensions, triumphs and very essence of development, it then fails to help us change our understanding of development – perpetuating strategies and policies that have stood in the way of change that has benefited the poor. We need to see the full complexity and non-linear nature of such social change processes if we are to learn how to 'do development' differently (Patel 2007).

A fourth feature is that defining success and failure in a complex process poses interpretation difficulties. Part of the problem is the difficulty of striving towards results that may not be measurable, as the impact can take the form of something not occurring (or occurring less severely) or sustaining a past gain. It is not always about an improvement or a tangible change. A seeming success can suddenly shift from an upward change trend to stagnation or deterioration – or the reverse. Years of struggle can unexpectedly yield results. Such struggles often entail activities, including organising dialogues, lobbying governments and advocacy work, of which the intermediate results are not always evident. Although targeted campaigns have led to quick results, focus-

² An emergent property becomes apparent when several simple entities or processes operate in an environment but form more complex behaviours as a collective. Certain properties emerge that the entities/processes do not have themselves. Emergent properties cannot be predicted from the attributes of the constituting entities.

ing entirely on a tangible change as evidence of impact ignores what are often slow shifts in norms, institutions, political reform over the longer term.

Finally, a timeframe mismatch often occurs between the long-term impacts and expectations of short-term externally funded initiatives. Many intermediary organisations, such as NGOs, contribute to this by romanticizing and ‘commoditizing’ their social change work, in the process creating unrealistic expectations of the timeframe for goal achievement. Mainstream M&E processes are based on defining specific changes within the given time period that is commonly three to six years. Yet the timeframe to effect social change can be decades and requires negotiating which aspect of change is being expected and will be valued within a certain time period.

Responsiveness to signals about what is and is not working and changing focus and strategy en route are crucial to deal with the non-linearity and unpredictability of change processes that stretch for many years. These five features mean that adaptive behaviour by those involved in institutional transformation is critical.

1.2.4 Messy Partnerships and Adaptive Behaviour

The ‘wicked problem’ nature of rural development and rural resource management requires a convergence of efforts by diverse stakeholders on multiple fronts. Strategic alliances become critical and can engage any mix of the following:

- citizens by building rights awareness and capacities, and mobilising their collective action and leadership development;
- civil society organisations to act on behalf of the vulnerable, marginalised and dispossessed and to facilitate their empowerment;
- state agencies to influence policy at different levels, to ensure accountability and transparency of government funding, and contracted or collaborative programme/service delivery;
- the business sector by monitoring corporate behaviour, accessing markets, and economic policy influencing; and
- funding agencies by influencing their policies, strategies and procedures to make possible development innovations that sustainably improve the lives of the poor.

I refer to the convergence of such actors for concerted action as ‘messy partnerships’. Even when the full diversity of stakeholders is not present, but the work involves coalitions of like-minded NGOs and CBOS, then differences will exist in governance structures, culture, mandate, capacities, priorities and commitment to collective efforts. Such differences are the basis of the

‘messiness’, the reality of linkages that cannot be predicted and forced into controllable relationships. What keeps the partnership working is a common overarching vision for a geographic area, a particular social group, or a specific theme. The commitment to the partnership is sustained as long as the vision remains shared and the different partners perceive an added value in joint work. A powerful driver for partnerships is also inter-dependence, the recognition that one can only reach one’s goals if others also reach theirs.

This type of relationship for development contrasts with the vision of organisational hierarchies and contractual relationships that pervade much of the development sector. Instead messy partnerships can be viewed as a social network among organised groups that maintain relations due to a shared vision and ideals. Another way to understand ‘messy partnerships’ is as a heterarchy. A heterarchy is a network of elements, or partners sharing common goals in which each element or partner shares the same position of power and authority (Wikipedia contributors). This contrasts with a hierarchy where the locus of power resides at higher levels, with in both cases power dynamics shaping the actions of the system. A heterarchy can stand on its own or be related to some level of a hierarchy, while it can also house an internal hierarchy.

Messy partnerships are of wider interest for several reasons³. Even so-called hierarchies or networks will often operate more like ‘messy partnerships’ as coercive action is not always effective and voluntary collaboration is needed. Power resides in different places in a hierarchy, hence its resemblance to a heterarchy. Furthermore, the reference to ‘partnership’ in official development rhetoric shows no sign of abating and in the increasingly networked world, opportunities to create novel and strategic coalitions are increasing. Finally, many rural resource management problems are ‘wicked’ in nature and thus require the type of ‘messy partnerships’ which I encountered in Brazil.

The Brazilian case studies on which the empirical work in this thesis is largely based are examples of such partnerships. In Brazil, I looked at strategic coalitions of civil society organisations whose perspectives on the necessary societal transformations and strategies for achieving this have co-evolved over time. In Chapters 5 and 6, these coalitions are discussed in detail. They consist of: *local NGOs*, officially mandated and guided by a council composed of small-scale farmers and scientists but conceptually and practically driven by technical professionals; *small-scale farmers unions* with three-yearly elections and leadership changes and nested in federated structures; *municipal governments* with elected officials and non-elected bureaucrats that sit

³ With thanks to Dr. Rick Davies.

uneasily side-by-side; and *research institutions* with more focused and time-bound engagement. The motivation of this mix of stakeholders to participate in collaborative learning and action is highly personal and dynamic, needing to be fed by continual efforts to maintain and strengthen trust (Duran 2002).

‘Messy partnerships’, as I define them, are composed of organisations or groups with specific mandates and governance structures – some are elected, others not; some are time-bound, others not. The unique mandates of each member means dealing with different:

- communication styles and abilities;
- information needs;
- degrees of influence in decision-making on the direction of concerted action and related planning and monitoring processes; and
- legal responsibilities in contracts with funding agencies.

The members of the ‘messy partnership’ hold different degrees of allegiance to the partnership. The partnership as a whole cannot be assumed to have some type of stable identity that can be held to account externally for the totality of its actions. Several other salient features define a ‘messy partnership’:

- continual evolution of composition of the partnership
- driven by common concerns that require regular collective revisiting
- maintained by personal relationships of trust and reciprocity
- no guarantees over time of shared commitment to collaboration;
- operates through voluntary agreements, hence not possible to impose a singular approach to establishing objectives, M&E approaches, specific time frames for agreed activities, and so forth; and
- usually requires deliberate facilitation, though who is responsible and how this happens may well evolve.

One might at this point begin to wonder whether a ‘messy partnership’ is a rare event that is inevitably doomed to failure due to the complexity and multiple requirements for it to work. This impression would be mistaken. Messy partnerships are increasingly common as protagonists realise their inter-dependence in development dilemmas and seek to learn how to work in synergy.

Some of these features sit uncomfortably with the assumptions embedded in the mainstream M&E paradigm, presenting challenges for those seeking a singular, yet multi-functional information collection and analysis system. Dealing with ‘messy partnerships’ requires a different awareness and procedures, for example, a thorough understand of existing planning and M&E processes, particularly the informal ones, of all partners involved, in order to

find effective entry points into collective learning. Facilitating this process requires dogged and continuous awareness about the need to negotiate priorities and clarify roles and responsibilities. Chapters 6 and 8 will discuss this in more detail. I now turn to the question of what is needed for the adaptive behaviour of ‘messy partnerships’ to emerge from deliberate choice, rather than crisis or ad-hoc events.

1.2.5 Levels of Collective Learning

How can a diverse and fluid configuration of groups, not necessarily accustomed to concerted action, work well together around a ‘wicked problem’ in rural resource management? If societal adaptation and innovative change through deliberate efforts is part of the trajectory of change in rural resource management, then learning becomes essential. Learning is needed for several purposes: practical improvements, strategic adjustments and changes, and improving the learning processes themselves (Argyris and Schön 1978; Flood and Romm 1996)⁴. I define learning in more detail in 1.2.7.

This thesis looks at collective learning and its nested nature. In Brazil, different ‘collectives’ can be discerned around which learning takes place. At the simplest level (small) group-based learning takes place, such as farmers working together on a similar interest in agro-forestry, silage alternatives or honey production (see Chapter 6). A different collective is that of organisations, organisational learning, which occurs within the farmer trade unions or the NGOs that support the farmers (see Chapter 8).

A third level is that of ‘societal learning’ which involves the different organisations and groups in the two Brazil research sites, each with their constituencies, staff or members, and which required the convergence of information, sense-making and decision-making. Societal learning can occur when different groups, communities, and multi-stakeholder constituencies engage actively in a communicative process of understanding problematic situations, conflicts and social dilemmas and paradoxes, creating strategies for improvement, and implementing. Civil society organisations often take on special roles in this process. Brown and Timmer (2006) distinguish five roles: identifying issues; facilitating voice of marginalized stakeholders; amplifying the importance of issues; building bridges among diverse stakeholders; and monitoring and assessing solutions. As I will discuss in Chapters 5 and 6, the Brazilian NGOs took on these roles.

⁴ Also commonly referred to single-loop and double-loop learning (Argyris and Schön 1978). With single-loop learning, individuals or groups (including organisations) modify actions after comparing results with expectations. With double-loop learning, the values, assumptions and policies underpinning the actions are questioned and perhaps modified.

The overarching concept of ‘social learning’⁵ offers a way to understand the assessment and reflection processes needed for collective learning in general. It has been described by various authors in broad terms as a framework and process for knowledge generation and concerted action that underlies societal adaptation and innovative change (Holling 1995; Parson and Clark 1995; Röling and Wagemakers 1998; Waddell 2005; Gurstein and Angeles 2007; Wals 2007). The term ‘social learning’ is generic and, in and of itself, neutral, hence opening it up for co-option and confusion. The emergence of suicide bombers or manipulation by farmers of food industry standards (Lawrence 2005) can be cited as examples of ‘social learning’ as these, too, concern concerted action that seeks to resolve a perceived societal problem through an ‘innovative’ change. However, such manifestations are not included in the definition of social learning I use here. This does not mean that the outcomes of social learning are not sometimes contested. For example, in Brazil, large scale farmers resist the emergence of more articulate and economically solid small-scale farmers, as this challenges their long held power over municipal issues.

The overarching concern of ‘social learning’ in this thesis is to further sustainability through the critical learning capabilities of multi-stakeholder constituencies who face complex, problematic matters of common concern (Bawden *et al.* 2007). This means problematising societal injustice, challenging those hindering the claiming and asserting of rights, and re-infusing democracy with responsiveness. This focus is based on a perspective that modern society must learn how to respond to the often negative consequences of its own actions. But it must also learn how to overcome the limitations of current ways of ‘seeing’ and ‘doing’ – innovation means seeing and challenging long held epistemic assumptions. Modern societies need to learn more quickly, more effectively, and much more critically, than societies in the past that faced slower and less globally interconnected social and natural changes. This, in turn, requires citizens willing to participate actively in democratic deliberations and capable of learning collectively, with and from each other.

The understandings of social learning in the development discourse as discussed here are guided by several common normative elements or ‘principles’:

⁵ As a concept, social learning has two distinct definitions. The first and oldest, which is not relevant here is that of ‘behaviour modelling’ or ‘imitation’ and emerges in the literature on criminology and education (Bandura 1962). This is more than simply a difference in numbers, i.e. learning in dyads (Bandura’s version) versus in groups. Social learning as used in this thesis refers to concerted action (diverse behaviours that seek to work in synergy) rather than mimicked behaviour.

- Seeking to contribute towards a more just and sustainable world (see previous paragraph) and therefore concerned about questions of empowerment, poverty, ecology and democratic participation;
- Seeking to engage actively all relevant stakeholder groups, hence ‘participatory’ in a broad sense’;
- Valuing experience as the basis of individual and collective learning;
- Recognising that knowledge is emergent and co-constructed, rather than absolute and objective;
- Recognising that social learning involves ‘complex behaviour (emerges via multiple efforts in non-linear, unpredictable ways), hence values systems thinking; and
- Valuing the importance of facilitation that focuses on the process of joint discovery, inclusion, and solution seeking.

Interpretations of ‘social learning’ vary in several ways. First, variations occur around level, with social learning being viewed either as group-based or societal-level processes. Second, while the co-production of knowledge and plans is generally considered important, ‘concerted action’ is not always included as part of social learning. A third variation occurs between seeing social learning as fact-finding, negotiation, and planning of collective steps or as based on Kolb’s experiential learning cycles (Kolb 1984). A fourth variation lies in the levels or aspects of learning that are appreciated, made explicit and tackled. The focus solely on the collective level contrasts with views of social learning that include personal transformation or individual learning.

A final important difference is the extent to which social learning is viewed more as a means and method or a fundamental questioning of societal priorities and processes, especially underlying power inequalities. Social learning is sometimes presented as a set of steps that emphasise working with all key stakeholders from the onset. A more strategic perspective on social learning stresses the importance of critically questioning how society needs to change and organise itself to achieve sustainable development, including power inequality as a concern and the politics of change as important.

Irrespective of which variation is central, the common process is one in which group efforts, iterative cycles of action and sense-making, and consensus seeking are critical. In this thesis, I will discuss how monitoring figures in such a process at three interacting levels of collective learning: group, organisational and societal.

1.2.6 The Problem with Monitoring

The past 15 years has seen increasing recognition that the dynamics of

social, environmental and economic conditions require rural resource management approaches that are adaptive and negotiated. The emergence of discourses such as adaptive management, collaborative resource management and sustainable rural livelihoods as discussed in Chapter 3 are part of this recognition. Such discourses refer to monitoring as a key building stone, yet do not define it, thus potentially jeopardising the hope they offer of resolving the 'wicked problems' being tackled.

By and large, the reality is that mainstream approaches to M&E do not serve rural development and resource management that seeks institutional transformation through messy partnerships. And it is the mainstream of M&E that drives most monitoring practice in development. The core problem with mainstream M&E practice is its emergence from a theory of change that is based on assumptions which are not universally valid, including the universal validity of 'projectable' change or 'tame problems' to development. Reeler summarises as follows:

'Created to help control the flow of resources, these frameworks have, by default, come to help control almost every aspect of development practice across the globe, subordinating all social processes to the logistics of resource control, infusing a default paradigm of practice closely aligned with conventional business thinking. As such, Project approaches to change bring their own inbuilt or implicit theory of social change to the development sector, premised on an orientation of simple cause and effect thinking. It goes something like this: In a situation that needs changing we can gather enough data about a community and its problems, analyse it and discover an underlying set of related problems and their cause, decide which problems are the most important, redefine these as needs, devise a set of solutions and purposes or outcomes, plan a series of logically connected activities for addressing the needs and achieving the desired future results, as defined up front, cost the activities into a convincing budget, raise the funding and then implement the activities, monitor progress as we work to keep them on track, hopefully achieve the planned results and at the end evaluate the Project for accountability, impact and sometimes even for learning.'(Reeler 2007:6)

For 'projectable' changes, mainstream monitoring is adequate. But when it concerns the other types of change processes, then other assumptions and features of change need to inform the monitoring process.

Mainstream M&E systems and processes have evolved from an image of development as infrastructural. With institutional transformation occupying an increasing proportion of development agencies' priorities and budgets, tensions related to the expectations of mainstream M&E are increasingly

urgent to resolve (cf. Pratt 2007). One growing concern lies with the problematic core motivation that drives M&E, which leads to problems in practice (Batliwala undated). Many M&E efforts occur because funding agencies require them, enabling organisations to sustain or obtain funding that is used to expand and consolidate organisational structures rather than innovate or invest directly. Result assessment data are rarely shared with primary stakeholders, and are rarely involved in setting goals or shaping evaluation frameworks or in assessment processes themselves. Furthermore, such processes are rarely accompanied by or lead to critical reflection on or re-casting of the theories of change that guide the work.

Criticism is growing about the limitations of mainstream M&E practice to do justice to development as institutional transformation. Dlamini (2006) refers to the dominance of an instrumentalist managerialist approach to M&E that interferes with organisational intentions ‘to stand back from their ‘doing’ and genuinely try and see how things are going’ and inhibits the creation of the relationships on which change is based. The Institute for Development Research Canada has developed an alternative approach, outcome mapping (Earl *et al.* 2001), based on a recognition that development is often not possible to cast in terms of ‘projectable change’. And there is a growing appreciation of the role that narratives play in M&E (Davies and Dart 2005, see Chapter 7; Abma 2007). But besides methodological innovation, a more fundamental reframing of monitoring is necessary, to which this thesis seeks to contribute.

1.2.7 Linking Monitoring and Learning

Four terms are important in this thesis – M&E, PM&E, monitoring and learning. In Chapter 4, I will discuss M&E in depth with a focus on the dominant practice, namely programme logic-based monitoring. I will refer to this practice throughout the thesis as ‘mainstream M&E’, as it is, very much the mainstream in the development sector. In Chapter 5, I will discuss participatory M&E in some depth, discussing how, in theory, it differs from M&E.

In this section, I wish to focus on ‘monitoring’ and ‘learning’ in more detail as these two terms form the backbone of the thesis. Both terms are examples of boundary objects (see 1.2.1) in that they are subject to multiple interpretations, as I will illustrate in the case of ‘monitoring’ in Chapters 3 and 4. Hence seeking to relate the two terms depends on which definitions one picks.

In the development sector, expectations have grown over recent years about the potential of monitoring to contribute to learning as the now wide-

ly used phrase ‘accountability and learning’ illustrates. Monitoring becomes a sub-system of learning. But what distinguishes the two concepts in practice? Are they indeed different? FIGURE 1-3 illustrates the fluid definitional membrane of monitoring. The smallest box ‘Mainstream’ contains the activities usually associated with monitoring. As I will argue in this thesis, if monitoring is, indeed, to make a contribution to ‘learning’ then a wide range of other activities are needed to fulfil that expectation. These activities are found in the intermediate box ‘Monitoring’. The more of these activities that are undertaken, the more the definitional membrane of monitoring stretches towards that of learning, the largest box. I discuss the relationship between the two terms in Chapter 8, where I suggest that taking learning as the core idea, rather than ‘monitoring’ may offer some advantages.

Defining learning is, therefore, crucial. In this thesis, a Kolbian understanding of experiential learning is central. Kolb (1984) describes experiential learning as a cyclical process of reflecting on experience, conceptualising meanings that arise from reflection, deciding how new conceptual understanding can be used to improve future practice, and taking action which leads to new experience. Hence ‘action’ is integrated in this definition of learning. Maturana and Varela echo the action element in their definition of knowledge: ‘effective action in the domain of existence’ (1987). All learning depends on feedback (Sterman 1994), hence the iteration between theory and practice, or ‘praxis’ is important in experiential learning (Bos 1974; Bawden and Packham 1993).

Learning entails not just pragmatic problem-solving but also reflection on the process by which this happens and the underlying perspective on knowledge. Hence at its fullest, learning entails a self-reflexive, self-critical process that means developing the capacity to:

- learn to deal with ‘matters to hand’ of everyday concern (cognition);
- learn how to deal with how we deal with such matters to hand (meta cognition); and
- learn about the nature of knowledge and its influence on our ways of knowing (epistemic cognition) (Kitchener 1983).

So what constitutes proof of learning? The focus in this thesis lies with furthering social justice and environmental sustainability. Box 1-1 illustrates some examples of the types of improvements in actions, understanding and processes that can occur, when monitoring contributes to learning.

But there is more at play when it comes to learning. FIGURE 1-3 is simply a checklist of activities needed, as I will argue, to contribute to learning. It por-

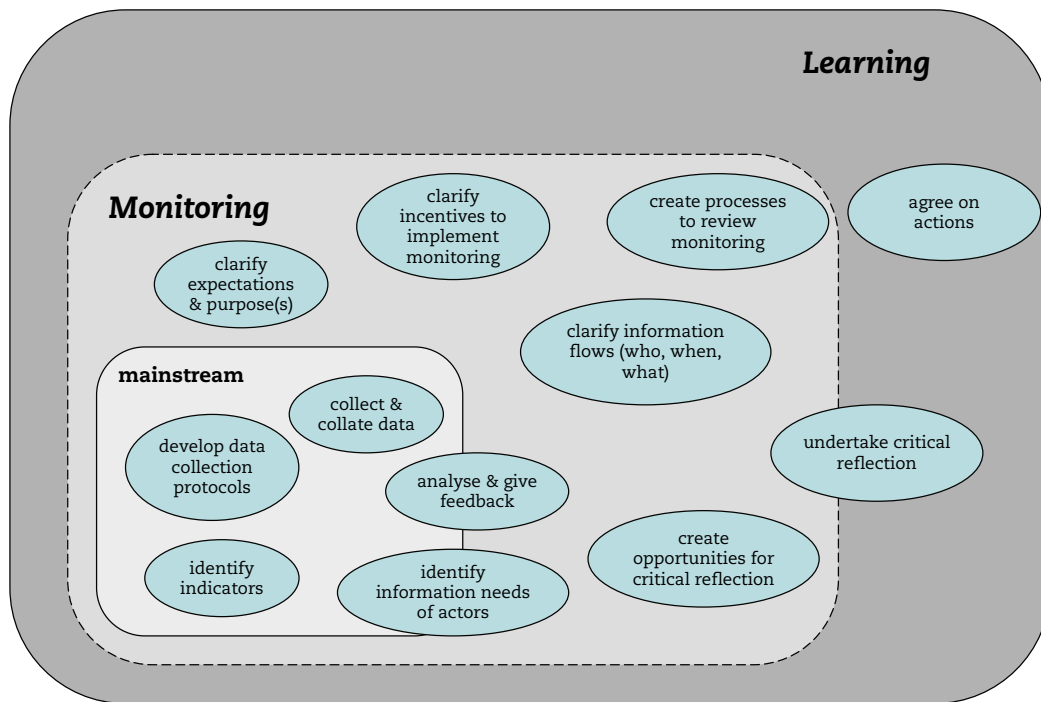


FIGURE 1-3 The sliding scale from (mainstream) monitoring to learning

trays mainstream monitoring, for example, as a simple feedback loop model – define indicators, then collect and collate data. What FIGURE 1-3 does not show is what happens behind the scenes. As Sterman argues ‘A simple feedback loop model of learning obscures the role that mental models and strategy, structure, decision rules play in our decision-making process’ (1994:26). A wide range of factors influence each of the activities in FIGURE 1-3.

FIGURE 1-4 shows a schematic process that illustrates the interplay of factors involved in sense-making and responding to change. A response (or action) results from a continual interaction between the events and ideas encountered in daily experience and sense-making. Sense-making involves assimilating observations, with beliefs and values, current interpretation (theory) and other response variables (Leeuwis 2002), to come to actionable options that are then subject to decision-making.

Sense-making becomes a process of inner dialogue if it occurs at the level of an individual and lies at the heart of formal and informal debates when it involves more than one individual. In both cases, sense-making can be more or less deliberate. Monitoring can make learning – and sense-making – more conscious and systematic through the deliberate implementation of the activities outlined in FIGURE 1-3. I return to ‘sense-making’ in Chapter 7.

I now examine the emergence of interest in the thesis topic.

1.3 The Growing Interest in Participatory Monitoring for Rural Resource Management

Were we an aberration, there in Brazil, struggling to make monitoring work for our particular ‘wicked problem’ and with our motley mix of change processes and stakeholders? A look at the literature shows monitoring is burdened by very high hopes in the rural development sector.

Monitoring for improved information and decision-making has captured the attention of many thinkers and practitioners in rural development and resource management – scientists, activists and policy analysts alike. Its central role is evident in several prominent discourses that are influential in rural development: sustainable rural livelihoods (Carney 1998; Scoones 1998; Ashley and Hussein 2000), collaborative resource management (Borrini-Feyerabend *et al.* 2004), adaptive management (Gunderson *et al.* 1995a; Stringer *et al.* 2006), participatory development (Abbot and Guijt 1998; Estrella *et al.* 2000), natural resource policy (Leach and Mearns 1996; Roe *et al.* 1999), and reflexive modernisation (Beck 1992). It is referred to in terms of a core design principle of common-pool resource systems (Ostrom 1990), the basis of countless recommendations of Agenda 21 and other global forums (UNCED 1992), the engine of collaborative resource management due to its assumed

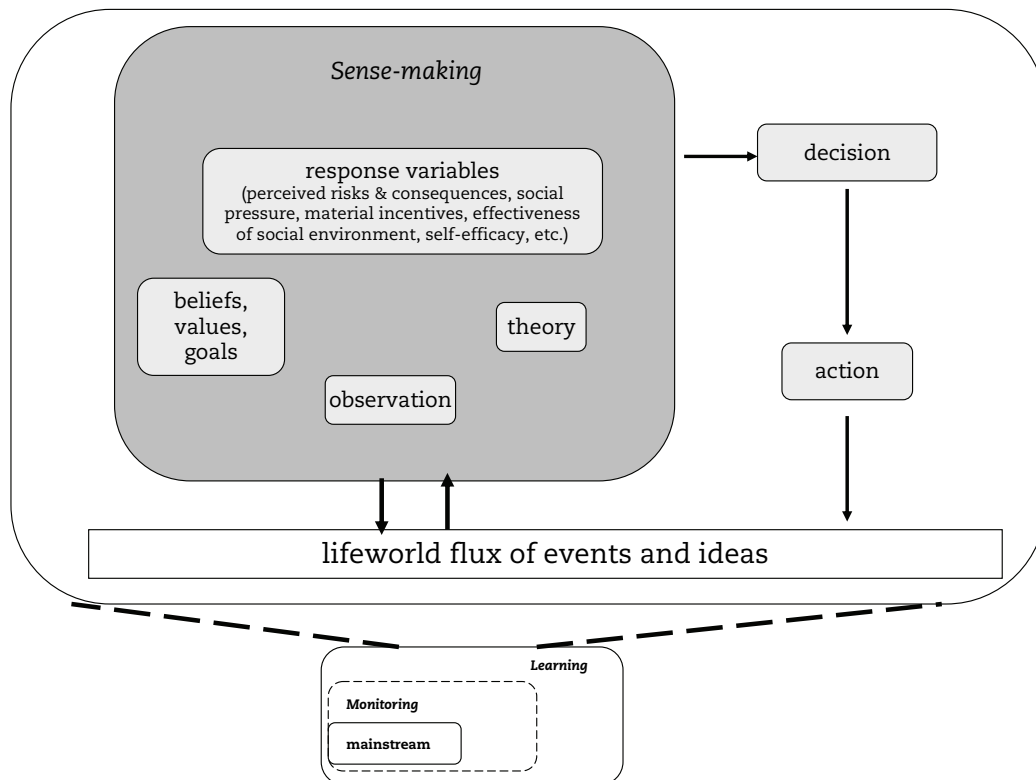


FIGURE 1-4 Behind the scenes of monitoring (after Woodhill 1999; Leeuwis 2002; Röling 2002)

Box 1-1 Reported local benefits of collaborative monitoring (Guijt 2007e)

- More accurate, detailed understanding of institutional, environment and resource problems
- Greater mutual understanding of forest management visions and options
- More informed and/or equitable decision-making about forest management
- Increasing capacity and willingness to question previously accepted norms (institutionally and technically)
- Resolution or management of conflicts
- Shifting perception from monitoring as 'policing' to monitoring as mutually beneficial
- Better social and organisational interactions (i.e. building social capital) and communication and (inter)group skills
- Increased equity in who is heard and to whom benefits flow
- Enhancing the sustainability of new, less harmful forest management practices and thus reducing harmful forest resource practices

capacity to fuel 'sustained participation' (Borrini-Feyerabend *et al.* 2004), the lynchpin of sustainable rural livelihoods thinking (Carney 1998), and a frontier of innovation for sympathetic critics of adaptive management (Dovers and Mobbs 1997; Allen *et al.* 2001)

Some of these authors have moved beyond the 'projectable changes' mentioned earlier and have taken on board certain issues with which this thesis is concerned. Indeed, I build on them in many ways. Yet, also in these discourses, monitoring is widely viewed in simplistic term as illustrated by statements in the International Soil Conservation Organisation 1996 pre-conference issue paper:

'Because soil and water conservation now encompasses a wider range of disciplines than before, the need to monitor what actually happens on the land is even more urgent. ... Apart from keeping track of environmental changes, monitoring should also cover the whole range of variables now considered vital in soil and water conservation. These include social and economic conditions, changes in policy at different levels, institutional and legal capacities at all levels, and the framework of economic conditions. Above all, the conditions that affect local land users are particularly important. Monitoring should be designed to address their concerns. ... for monitoring to be effective, it is important to develop land degradation indicators... Furthermore local land users should be involved in both the design and the execution of monitoring. Experience shows that when people study their own environments, they are far more interested in the

results... Involving them directly is probably the best guarantee that interventions will lead to more sustainable forms of resource use. ... Local efforts by land users could be even more valuable if greater effort were put into monitoring the impacts of natural resource management and projects, and if these impacts were measured with a long-term perspective.' (Hurni 1996:59-60)

This passage articulates high expectations of monitoring as enabling more 'sustainable forms of resource use'. Assumptions about the link between monitoring and improved rural resource management in this text echo those I identify in Chapter 4, and include:

- That the lack of information can be overcome as long as enough information on all possible variables is collected ('the need to monitor what actually happens on the land');
- That indicators are the key ('for monitoring to be effective, it is important to develop land degradation indicators');
- That participatory forms of monitoring are fundamental for success;
- That involving local people, i.e. participatory monitoring, is compatible with extensive information needs deemed necessary for successful interventions; and
- That it is feasible to combine local people's interests with the need for longitudinal and extensive data sets and that political, technical, institutional, financial constraints can be overcome.

These convictions represent, by and large, the default view of monitoring that guides those involved in rural development, including those who have moved beyond 'projectable change' and those who have embraced participation and sustainable development. This default view starts with the recognition that the world is facing unprecedented pressures that are threatening rural livelihoods and clean (agro)ecosystems. At the same time, the pace of natural, economic, social, political and institutional change has accelerated such that we need high quality information systems at all levels to inform us of the current state in order to know how to act. Those who are actively trying to intervene in threatened life systems – including their own – need to know whether their actions are having an impact, and if not, why not and what to do differently. Hence the need for quick, focused, ongoing and collective learning via monitoring data, that assesses the value of current action in order to identify the elements of future action. Lessons need to be learned from yesterday's and today's experiences that will help them move towards that elusive goal of 'sustainable development'. And monitoring can help with that, as long as all stakeholders are involved. Thus in this generalised view, monitoring is critical to deal with the multiple challenges and urgencies of rural life.

Few would argue with the basic intent in the description above. It is, as I will show in Chapter 4, a prevalent one. However, it is inadequate to guide practice and based on a series of presuppositions that have not been articulated or challenged sufficiently. The persistence of this partial and superficial understanding leads to monitoring processes that are often inappropriate or inadequate for concerted action, hindering the societal learning that is being sought.

Questioning and rethinking the understanding of monitoring as a process to foster learning for sustainable development is increasingly relevant in the light of three trends in development thinking. First is a growing unease about the effectiveness of aid and the limitations of current approaches to assess such effectiveness, particularly following the commitment to the Millennium Development Goals and concerns about progress towards their achievement (Collier and Dollar 2001; Commissie Dijkstal 2006; Hoek 2006; Inspectie Ontwikkelingssamenwerking 2006; Menocal and Rogerson 2006; Savedoff *et al.* 2006). Billions of euros are pumped into development initiatives around the world, often with inadequate understanding about impact or even outcomes. Hence any attempts to demonstrate effectiveness of investment through impacts on people and the planet is high on the development agenda. A second trend is the unrelenting urgency of the quest to ensure improved human wellbeing that does not jeopardise the environment. The challenges of 'sustainable development' and equitability are more urgent than ever. The perpetuation of poor development practice, despite attempts to identify and share lessons, indicate the need to understand better how to learn at a societal level. A third trend has been a growing recognition of the importance to manage through adaptations. Recent years have seen a shift in discourse in rural development and resource management from a controlling and forward planning one to that of adaptive management in the face of uncertainties and dynamic situations (Holling 1995; Dovers and Mobbs 1997; Roe 1998; Guijt 2007e; Leach *et al.* 2007). Thus recent resource management approaches stress the importance of 'monitoring' to learn ourselves out of resource-related problems, instead of basing all hope of success on enforcing comprehensive planning (see Chapter 3).

Together, these trends have led to ever louder calls to learn better, increase our understanding, improve our performance and be more accountable – and all eyes are turning to M&E approaches to fulfil these needs. Development actors, including government agencies, civil society, the busi-

ness sector, funding agencies⁶, struggle with these demands, particularly how to integrate 'learning and accountability', as the common cry is, and how to see and learn from the unexpected, not only the known.

So what do we have to work with? Monitoring is viewed by the mainstream as the systematic recording and periodic analysis of information (Davis-Case 1990:iii) for 'providing the people responsible for the work with sufficient information to make the right decisions at the right time to improve its quality' (Gosling and Edwards 1995:12). Much can and will be said about these definitions in Chapter 4. Of relevance at this stage are only two generic points. First, despite the definitional inclusion of analysis, monitoring in practice is largely viewed and implemented as a data collection exercise and rarely seen as a sense-making process or one in which meaning is negotiated. Second, is the focus on it being 'systematic', which in practice involves using predetermined indicators that track progress towards achieving objectives or ecological trends.

However, as I will argue (see Chapters 7 and 8), other types of information are needed to learn our way out of resource management challenges. Monitoring must also focus on mistakes, quality of performance, problems, feelings of unease about a situation and simply curiosity, in order to contribute to social learning. Particularly important are the unexpected impacts of interventions and surprising shifts in the operating environment that challenge our assumptions and turn (hidden) presuppositions into (explicit) assumptions. How can monitoring be understood and undertaken more broadly, so that the full diversity of information needs and learning purposes are met? This thesis represents an empirically-inspired exploration of these issues.



Source: IFAD 2002

⁶ Recent new player is the Bill and Melinda Gates Foundation that will be spending \$3 billion each year (three times the GNP of Burundi and the same as Albania, 1998 statistics), and who have just established a new Impact Planning and Improvement Unit.

1.4 The Core Questions of the Thesis and its Structure

My choice to look at the potential of monitoring and not evaluation is a conscious one. The distinction between the two terms that lends weight to the relative importance of monitoring lies, for me, in the idea of ‘learning en route’. Evaluations are often contractual obligations that do not feed into organisational decision-making. Often, they involve one-off exercises and are too late to guide implementation, though potentially useful for next phases of funding or others to learn from elsewhere. Interim reviews can provide guidance en route but do not force organisations or alliances to institutionalise mechanisms of communication, dialogue and decision-making to continually improve action. Furthermore, the key discourses I discuss in Chapter 3 focus on monitoring rather than evaluation precisely because of the need to learn with regularity.

I summarise my research objective as follows:

To analyse and describe how monitoring, undertaken within the context of messy partnerships seeking institutional transformation, could contribute to learning processes that can address rural resource management problems, and to draw the lessons for practice.

The research objective brings me to five sets of questions:

1. How is ‘monitoring’ viewed by rural development and resource management discourses that advocate more adaptive forms of rural resource management? On what assumptions and presuppositions⁷ about processes of monitoring, collective learning and improved action are these discourses based? What practical orientation do they give for learning-oriented monitoring? (Chapter 3)
2. What is the underlying logic – with related presuppositions – of mainstream monitoring approaches and hence what is the monitoring theory that is expected to guide practice? (Chapter 4)
3. What can practical experience from small scale rural change processes in Brazil and from a large rural development organisation show about what is needed for monitoring to contribute to collective learning? (Chapters 4, 5, 6 and 8)
4. What insights are offered by studies on cognition and organisational learning that can help fill the theoretical gaps and overcome the practical challenges of learning-oriented monitoring? (Chapter 7)
5. Given these empirical and theoretical insights, what would an alternative monitoring approach require so that it can trigger the forms of learning needed to ensure adaptive and collaborative rural resource management? (Chapter 8)

⁷ An assumption is an explicit theory about cause-effect, a presupposition is a tacit assumption (Chapter 2).

The search for answers has led me to the line of reasoning as presented in TABLE 1-1.

Chapter 2 presents the theories used to guide the analysis and describes the methodologies used in the empirical sections. *Chapter 3* summarises recent thinking on monitoring from three key rural development and resource management discourses that value learning and adaptive behaviour as the basis for sustainability and equity. These discourses are: adaptive management, collaborative resource management, and sustainable rural livelihoods. The chapter describes how these discourses view the role of monitoring for resource management and what, if any, practical approaches they suggest.

Chapter 4 turns to the mainstream M&E literature which appears to serve as the basis for most practical monitoring strategies. It exposes the underlying logic of the mainstream monitoring paradigm, thus providing a basis for comparison with empirical work. It highlights the relative paucity of clarity about monitoring, showing that it is often viewed and implemented as a mechanical, obligatory data collection process devoid of grounded understanding about collective analysis and learning. I use work from the International Fund for Agricultural Development (IFAD), a United Nations agency that funds rural development and resource management, to illustrate the limitations of mainstream understanding and question its validity.

A closer look at field evidence follows in *Chapters 5 and 6*, in which I discuss an action research process from 1996 to 2000 to develop a joint monitoring process in Brazil. *Chapter 5* sets the scene, outlining the organisational context and the nature of the partnerships involved. It dwells on the nature of the social change work that is being undertaken and the implications for monitoring and learning. *Chapter 6* outlines the action research process with two rural trade unions, farmer groups, and local NGOs, that involved testing the potential of participatory monitoring to guide rural resource management at a strategic and operational level. Despite its innovative nature, the participatory process was still based on several erroneous presuppositions about how monitoring processes could induce learning. Simply making a mainstream-inspired process more participatory was inadequate to lead to sustained learning processes. This chapter ends with a critical note on the expectations of participatory M&E as a workable alternative and identifies several important considerations to ensure it contributes to collective learning.

Chapter 7 outlines contributions from two new theoretical areas that challenge mainstream monitoring. One such theoretical domain is from studies on cognition that seek to understand how people perceive and know.

Interesting concepts I discuss are collective cognition, correspondence and coherence, cognitive dissonance, and distributed cognition. The second source of inspiration comes from the organisational learning literature, with its focus on the collective level. I refer to the concepts of multi-ontological sense-making, the ‘social life of information’, and organisational mindfulness. I discuss four ideas that integrate concepts from these two theoretical areas that can help imagine a different future for monitoring.

In *Chapter 8*, I return to observations of follow-up processes in Brazil with CTA-ZM, one of the NGOs, with which I have continued to work to date on monitoring and organisational learning based on the lessons outlined in *Chapter 6*. Merging these additional empirical insights with the theory from *Chapter 7* brings me to suggest an extended understanding of monitoring based on eight design principles that could make monitoring more effective for messy partnerships engaged in institutional transformation for rural resource management.

I close the thesis with *Chapter 9*, in which I summarise the main arguments of the thesis and discuss the implications of learning-oriented monitoring for key development actors: implementers, facilitators, funding agencies, and academics.

1.5 Looking Ahead at the Conclusions

The environment – natural, organisational and socio-political – constantly gives feedback but it needs to be perceived and interpreted for learning in rural resource management. Monitoring can be viewed as designing and implementing the feedback loops necessary to ensure that collective learning is fed by ongoing information flows within and among members of ‘messy partnerships’ and enables concerted action. However, the tracking of (much) information will not necessarily, in and of itself, lead to learning.

Monitoring is, by and large, described in neither comprehensive nor precise enough terms for implementation as part of rural resource management. Even relatively innovative development discourses that value collective learning and monitoring do not provide adequate practical orientation to ensure the desired ‘learning’. And learning is, itself, couched in too general terms to be operational – it is assumed to happen. The promising potential of more participatory approaches, if based on the same logic as mainstream M&E as is commonly the case, does not provide sufficient innovation.

Insights from my empirical and theoretical forays lead me to suggest that if monitoring in rural resource management is to be based on a central

TABLE 1-1 Thesis chapters, main purposes and lines of reasoning.

1 Introduction

Introduction to the research topic and the main line of reasoning and structure of the thesis.

2 Experience, Theory and Methodology

Discussion of the sources that inspired the research questions, three aspects of theory used in the thesis (contextualising discourses, the ‘theory of action’ of monitoring, new domains of theories) and the research methodology.

3 Perspectives of Rural Resource Management Discourses on Monitoring

Over the past decade, three fields of practice and discourse have become increasingly popular for addressing critical problems of complex rural development and natural resource management: sustainable rural livelihoods, collaborative resource management, and adaptive management. All attribute great importance to the role of collective monitoring to generate new insights but none elaborate on its implementation or how it generates improved action. They appear to assume that mainstream monitoring concepts and practices can deal adequately with the required methodological issues and needs for rural resource management.

However, therefore, I come to the importance of:

4 Understanding and Questioning Presuppositions about Monitoring within Mainstream M&E Models

Monitoring, as advocated within the mainstream, is based on various presuppositions about human and organisational behaviour. Thirteen presuppositions are identified and then questioned in terms of the consequences for ensuring the type of collective learning needed in emergent change processes. This occurs by a comparison with the monitoring practice of 33 IFAD projects and brings me to query the fundamental logic in mainstream monitoring practice that is prevalent in rural development and resource management. For the type of adaptive behaviour being sought to be likely to occur, participatory forms of monitoring appear promising.

For this I turn to,

5 Participatory M&E and Rural Partnerships in Brazil

The potential of participatory M&E is perhaps a way to deal with some limitations of mainstream M&E. I also introduce a three year action research process that undertook the design and implementation of a monitoring design and implementation process, based on the ideas embedded in PM&E. The key actors, their background, and the nature of their partnership are explained.

I illustrate the potential and limitations as evident from:

6 Participatory Monitoring in Practice: Insights from Brazil

Three years of action research in Brazil with NGOs and farmer organisations suggests that collective monitoring requires a more fluid, actor-specific and adaptive approach to learning at multiple levels than is suggested by participatory monitoring theory, which is strongly influenced by mainstream monitoring theory and practice. This

brings me to identify key areas where both mainstream monitoring and participatory monitoring need re-conceptualising.

Thus, I explore the significance of:

7 Insights from Studies on Cognition and Organisational Learning

Two bodies of theory offer important insights for improving the mainstream understanding of monitoring. *Cognition* examines how people perceive and react.

Organisational learning theory and praxis focuses on understanding how groups of people think, share information and make decisions, i.e. collective monitoring for enhanced performance. From both fields, I select several concepts and explain how they can help shift the mainstream understanding of monitoring

Reflecting on these theoretical perspectives enables:

8 Monitoring that Nurtures the ‘Golden Goose’

A critical look at subsequent work in Brazil from 2000 to 2007 with one of the Brazilian NGOs describes ongoing evolution of their ‘institutional learning’ processes. An analysis of advances as well as persistent challenges identify where understanding and practice are still weak, and how these relate to the insights from theory. This brings me to a set of design principles that I argue will deal with the limitations of mainstream approaches to monitoring. If rural resource management is to provide effective inroads for the current eco-social challenges that societies face, then collective monitoring will need to be conceived and concretised in ways that make jointly negotiated and implemented learning processes a feasible proposition.

In conclusion:

9 Conclusions: Towards an Extended Understanding of Monitoring

Rural resource management initiatives that recognise the emergent nature of change and the need to undertake action through ‘messy’ partnerships can only be effective if supported by deliberate strategies for social learning that use the full potential of collective monitoring. A new understanding and practice of monitoring has important implications for key stakeholders: activists, evaluation and facilitation professionals, funding agencies and academia.

concern for ‘learning’, this means extending the mainstream understanding of monitoring to include other components (see FIGURES 1-3 and 1-4) that make it more than data collection based on pre-determined indicators and view it as a sense-making process. Furthermore, the development sector needs to shift from assuming that monitoring should only focus on tracking desired outcomes of ‘projectable changes’ (Reeler 2007), which constitutes an idealistic approach (Kurtz and Snowden 2006:2) that ignores more naturalistic cognitive processes that occur in rural resource management.

Learning must be understood as cognition – making sense of the information, revising understandings of how the world works, agreeing on actionable

options, ensuring values and decisions are shared, understood and supported. Rural resource management has diverse information needs that need to be accommodated in monitoring systems. In Chapter 8, I describe nine learning purposes to which monitoring can make significant contributions. Each learning purpose determines monitoring in terms of specific time frame, degree of required rigour and formality, link to decision-making, degree of 'collectiveness', and depth of analysis. The variety of learning purposes and monitoring processes cannot be addressed through a single M&E system that is based on a programme logic model, as is implied in mainstream monitoring.

When undertaken collectively, the transformation of 'data' into timely recommendations for change passes many steps, each of which has the potential to work or to fail: agreement on information needs, collect, collate, comprehend and communicate the information. In the context of concerted action on which this thesis focuses, the people involved in monitoring will inevitably be diverse in terms of interests, capacities and values, and thus negotiation at each step is necessary. But more is needed than simply negotiating the practicalities for effective collective learning through monitoring. It requires investment in social interactions in such a way that information is exchanged in order to construct insights together and reach agreement on next steps, whether these be taken individually or collectively.

Monitoring can contribute to the learning needed in rural development and resource management by approaching it as a collective cognitive process, not as a proposition for an elaborate database. It requires moving from an information-focused interpretation of monitoring, to an acceptance that it encompasses individual perceptions, emotions and behaviour. And individuals must be recognised as enmeshed in relationships of power and identities that shape how they will see, make sense of and use information. Hence, the need to understand how cognition works at a collective level.

Development actors are embedded in contexts with incentives and disincentives for learning. The commitment to learning cannot be assumed to exist (Leeuwis 2002; Guijt *et al.* 2005) nor its intentional character (Kurtz and Snowden 2003). The system of incentives that permeates many rural development initiatives is stacked against the changes required for participatory modes of adaptive resource management. And human actions are quite simply often accidental. Hence the need for realistic expectations about what an improved understanding of monitoring can resolve.

This thesis has evolved from questions emerging from my involvement from 1994 to date in diverse interventions and organisations. This chapter describes the process of fusing the strands of experience into a cohesive argument by discussing the key experiences and theories on which I draw in this thesis, and the methodologies used.

First, I will summarise the experiences from which the research questions evolved. This leads me to discuss four aspects of theory I use to make sense of my experiences: contextualising discourses (Chapter 3), the theory-in-use of monitoring (Chapter 4), theoretical building blocks (Chapter 8), and methodological theory (this chapter). Then I summarise the research approach used in the empirical chapters (Chapters 4, 5, 6 and 8). In so doing, I aim to provide a transparent and comprehensive overview of the research methodology that enables the reader to assess its relative strengths. I end with my own critical note on the thesis as a whole.

2.1 Experiences Shaped the Research Questions

Just as a development project is not a linear transition from intention through activities to goals, this thesis has not been a linear process of knowledge accumulation along a structured path of pre-determined investigative steps. This thesis has arisen from reflective practice and, therefore, is fundamentally an emergent process from diverse experiences. And the inquiry continues. At the time of submitting the thesis, work with the Brazilian NGO CTA-ZM (Chapter 8) was revealing yet more insights (Guijt 2007).

The core experiences on which this thesis draws are:

1. From 1990 to 1998 – work with the International Institute for Environment and Development (IIED) on sustainable agriculture, that convinced me of the importance of learning theory and collaborative monitoring in practice, particularly through activities in Uganda;
2. From 1996 to 2000 – action research on participatory monitoring of sustainable agriculture activities with two local NGOs in Brazil that enabled a critical look at the potential of participatory monitoring (Chapters 5 and 6);
3. From 1997 to 1999 – visiting lecturer at the Department of Forestry, Australian National University that included work on community ecological monitoring;

4. From 1998 to 2000 – two years of consultancy with the World Conservation Union (IUCN) as M&E trainer and writer;
5. From 2000 to 2002, work with IFAD (the International Fund for Agricultural Development) as team leader to develop the organisation's M&E project guide drawing on 33 projects in 19 countries (IFAD 2002, see Chapter 4); follow-up action research with one of the Brazilian NGOs (see point 2 above) to improve their learning processes (Chapter 8); and member of the International Steering Committee of CIFOR's Adaptive Collaborative Management research project focusing on joint monitoring and social learning for collective action (Guijt 2007e).
6. From 2002 to 2007, diverse consultancy assignments on monitoring and learning processes, notably reviewing ActionAid International 'Accountability, Learning and Planning System' (Guijt 2004); taking stock of efforts by RIMISP (Latin American Center for Rural Development) to institutionalise learning within IFAD projects in Latin America (Guijt *et al.* forthcoming); and coordinating a Ford Foundation grant on 'assessing social change' (Guijt 2007b; Guijt 2007c).

These experiences fed my curiosity about how learning can occur and be enhanced by monitoring in contexts in which partnerships and collective action are key and strive to reverse inequitable and unsustainable development. I observed phenomena that fitted uneasily with the prescribed approaches to monitoring and motivated me to investigate matching monitoring methodology with in-situ realities. Some key observations are summarised below.

The influence of mental models. I started noticing the influence of implicit ideas (theories of change, mental models) that those involved have about collective planning and learning, for example, assuming stability and commitment of partners to the collective action, assuming the continuity of activities being monitored, expectations about data use, *etc.* This is discussed in more detail in Chapter 6.

The specific challenges of multi-stakeholder processes and influence of organisational structure. Monitoring logic and methodology operates with a more static and simple image of development than the reality of fluctuating and complex context of different organisations. Implications are many, for example, that multiple partners in joint learning requires understanding all existing planning and M&E processes, particularly informal ones, of all partners involved, in order to find effective entry points into collective learning. Large scale hierarchical organisations can be viewed as multi-stakeholder contexts, with commitment to collective monitoring and learning fluctuating throughout the learning chain. This is discussed in more detail in 1.3.1 and Chapters 4 and 6.

Dynamic contexts and the implications for planning and evolution of learning processes. While projects have contractually binding objectives and activities, organisations are more fluid in terms of strategy and emphasis, particularly working in a ‘messy partnership’. Organisations must learn how they learn and invest in adapting their existing learning processes. This is discussed further in Chapters 6 and 8.

Sustaining action. Monitoring is often approached as an accountability exercise, although its potential for fostering learning is increasingly valued. However, a third important overarching function can be that of motivating collective action. It is not uncommon to find that initial energy is high, but drops over time, in part due to lack of clarity about the merits of ongoing efforts and the increase of conflicts. This perspective on monitoring adds a psychological angle that requires attention. This is discussed further in Chapter 7.

Reflecting on the queries and contradictions that arose through these experiences and observations have led me far outside my initial reading on participatory monitoring and evaluation with which I started my inquiry in 1998. The next section summarises the theoretical angles that have offered new insights for the questions on which this thesis focuses.

2.2 Turning to Theory

Theory plays four roles in this thesis. First, I discuss three discourses on rural development and resource management (Chapter 3) to understand my unease about the limitations of monitoring practice I encountered. I call these ‘contextualising discourses’. The second role of theory is my own attempt to articulate a theory-in-use of monitoring based on mainstream practice (Chapter 4). I highlight the theoretical superficiality on which practice is based and identify areas that require stronger coherence with practice. The third role of theory is as building blocks to deepen my understanding of monitoring. For this, I turn to theories on cognition and organisational learning (Chapter 7) in search of insights to explain the contradictions and rethink monitoring (Chapter 8). Finally, I use theory on methodology to structure my claims to a valid thesis (this chapter).

2.2.1 Contextualising Discourses

My questions derived from practice needed grounding in the rural development and resource management literature. Did discourses sympathetic to notions of adaptiveness, (social) learning and interactive decision-making have more to say on monitoring than I had been aware of before starting the

action research in Brazil work? My examination of these discourses confirmed my doubts. Monitoring was, indeed, poorly treated in these discourses and totally inadequate to guide practise. Reading these theories helped me see how widespread and persistent myths about monitoring, learning and improved action were.

The three discourses I selected (Chapter 3) are: adaptive management, collaborative resource management and sustainable rural livelihoods. Several features made them particularly relevant. First, they claim to lay the basis for a more holistic approach to rural resource management than previous generations of theory and praxis. Each discourse is guided by analytical frameworks that are at the forefront of policy making, research and field work. They are popular frameworks with funding agencies, who consider them relatively innovative and useful to address critical problems in rural development and resource management. They are all viewed as fairly practical and value-based, *i.e.* pro-poor and pro-sustainability, and thus useful for guiding action. All discourse are explicit about (social) learning and adaptive management, value monitoring, and are based on stakeholder participation. I summarise them below.

Adaptive Management

Adaptive management is a conceptual approach to managing complex natural resource systems that is 'based on incremental, experiential learning and decision-making, buttressed by active *monitoring* of and feedback from the effects and outcomes of decisions' (Jiggins and Röling 2000, emphasis added). Interest in this view on resource management grew rapidly since the mid 1990s after a study of several large resource systems but was strongly inspired by Holling's earlier work in the 1970s on the fundamental contradictions between linear economic growth and cyclical ecological processes (Holling 1978). Its proponents recognise the intrinsic uncertainty of managing complex ecosystems, and thus stress ongoing, adaptive learning as the bridge between scientific research and institutional response. In so doing, adaptive management opens the way to learn to 'manage [situations of complexity] by change rather than simply to react to it' (Gunderson *et al.* 1995a:xi).

Significant for this thesis is that adaptive management recognises that knowledge of the system is always incomplete and that surprise is inevitable. Taking 'evolving systems' as a given, it is logical that this discourse focuses on understanding the evolving conditions and providing flexibility to resource systems so they can adapt to surprises.

Monitoring is important in adaptive management. Because the release of

human opportunity is considered key, this ‘requires flexible, diverse, and redundant regulation, *monitoring that leads to corrective responses*, and experimental probing of the continually changing reality of the external world’ (Gunderson *et al.* 1995a: 30, emphasis added). Ongoing collective learning by doing, discussing and deciding is central, thus clearly making the case for monitoring to help in that continuous experiment. In the literature, monitoring is treated as a condition for learning and as a core success factor, but also as an area where more work and investment is needed (*cf.* Dovers and Mobbs 1997; Berkes *et al.* 1998; Jiggins and Röling 2000). For this thesis, therefore, this discourse is interesting as it stresses the importance of learning and the supporting role of monitoring. However, as I will argue, it does not articulate the link between these two elements.

Collaborative Resource Management (CRM)

Collaborative resource management is a collective term that includes practices known as participatory resource management, integrated conservation and development projects, and community-based resource management (*cf.* Fisher 1995; Ghimire and Pimbert 1997; Larson *et al.* 1998; Hinchcliffe *et al.* 1999; Borrini-Feyerabend *et al.* 2004). CRM strives for the joint management of multi-functional landscapes. The main difference with adaptive management lies in the (relatively) local-scale focus of CRM and its emphasis on stakeholder participation and negotiation for agreeing on co-management conservation plans. It is more operationally oriented and more natural resource management focused than sustainable rural livelihoods.

CRM is used mainly in projects proposed and implemented through international and local development agencies and increasingly through government programmes. As such projects are commonly planned on the basis of the logical framework approach (LFA or logframe) or similar planning approaches, monitoring is envisaged largely along ‘logframe’ lines. This approach is based on a hierarchy of objectives, with each level monitored through predetermined indicators. LFA does not address notions critical to social learning such as partnership, knowledge management, learning or critical reflection, which have found their way into CRM practice via another route, that of the participation debate of the 1990s.

Few CRM sources comment on the specificities of monitoring other than in general project terms as outlined above. For this thesis, CRM is of interest as it is operational, stresses learning-by-doing (Borrini-Feyerabend *et al.* 2004) and the need for monitoring to support this, and appears to rely entirely on mainstream project-oriented monitoring processes.

Sustainable Rural Livelihoods

'Sustainable livelihoods' as a term has been around for some time (Conroy and Litvinoff 1988; Chambers and Conway 1992; Sen 1999). Currently, the term 'sustainable rural livelihoods' most commonly refers to a specific analytical framework that emerged in the late 1990s, which describes livelihoods in terms of five assets (financial, natural, social, human and physical), people's activities and their entitlements. Key drivers in developing this perspective conceptually have been the Institute of Development Studies and the Overseas Development Institute, and operationally the Department for International Development (DfID), the United Nations Development Program (UNDP), and the international non-government organisation, CARE.

Despite common reference to a singular approach, often abbreviated as 'SL', advocates recognise the existence and merit of multiple approaches for applying what is essentially a conceptual framework. They claim that using the approach 'shifts the focus from outputs to people and demands exploration of poor people's own priorities' (DfID 2000b). The approach is used to identify priorities and new activities, review activities not originally designed based on sustainable livelihood principles, and 'sharpen the focus of monitoring and evaluation systems ... and in the development of log frames' (ibid).

The approach rests on four principles: people-centred, holistic, dynamic, and sustainability. These principles stress the need to obtain focused information, thus implying the importance of a learning attitude. Furthermore DfID Guidance Sheets state that 'SL-guided projects are characterised by ... greater use of process-type approaches and more emphasis on learning (DfID 2000a). DfID states explicitly that 'the livelihoods approach will not be effective unless operationalised in a participatory manner by people who are skilled in social analysis and who share an overall commitment to poverty reduction (ibid).

What makes the sustainable rural livelihoods framework interesting for this thesis is its growth as an intervention design concept but also as a framework for M&E due to its supposed conceptual clarity. The framework has been used to review existing projects and programmes and to assess how to enhance impacts on livelihoods of the poor (e.g. Ashley and Carney 1999; Goldman 2005; Mancini et al. 2006). It is explicitly stated, however, that 'there is no set approach' (DfID 2000b). Notwithstanding a handful of efforts to articulate approaches, by and large, the M&E of sustainable rural livelihoods can be considered an idea in search of a method.

2.2.2 The Implicit Theory of Monitoring

These ‘contextualising discourses’ (Chapter 3) lead me to the conclusion that by default, mainstream monitoring is expected to deliver the goods in terms of information and learning. But what is the theory of monitoring that drives practice and is assumed to deliver the adaptive learning behaviour being sought in rural resource management?

Evaluation theory abounds as evident in the growing number of handbooks on various strands and paradigms of evaluation (Alkin 2004; Shaw *et al.* 2006). This includes work on democratic evaluation (House and Howe 2000), empowerment evaluation (Fetterman 2000), utilization-focused evaluation (Patton 1997), theory-based evaluation (Birckmayer and Weiss 2000), and participatory evaluation (Whitmore 1998; Mayoux 2005). For monitoring, there is no such diversity or depth of theoretical articulation, nor such an elaborate body of literature.

The closest one comes to theories on monitoring are present in two bodies of literature relevant for rural resource management: monitoring of implementation and ecological monitoring (Spellerberg 1991; Abbot and Guijt 1998). A typical example of the first is the logframe approach or ‘LFA’, as described in 2.1.2, in which the focus is on assessing the extent to which each level of the objectives hierarchy is being achieved. The latter focuses on tracking changes in the incidence of ecological phenomena, exemplified by State of the Environment reporting (environmental and heritage conditions, trends and pressures). In practice, these two perspectives on monitoring are not interlinked.

Nevertheless, despite the absence of explicit theories of monitoring, the practice described in the many existing M&E manuals and guidelines indicates the presence of an implicit theory. I draw on practical monitoring guidelines from the body of literature on implementation and suggest thirteen presuppositions that underpin the mainstream monitoring advocated by the three contextualising discourses. In so doing, I will articulate monitoring practice in terms of a theory-in-use (*cf.* Argyris and Schön 1978) (Chapter 4). Subsequently, by comparing this implicit theory of monitoring with practice, I will highlight existing theoretical limitations.

2.2.3 New Theoretical Building Blocks

The gaps and contradictions related to the understanding of how monitoring contributes to collective learning that are identified in Chapters 3, 4 and 6 need filling and clarifying. Insights are particularly needed about individual

and group-based aspects of perception and sense-making. Hence, I turn to studies on cognition and organisational learning which I summarise briefly below (see Chapter 7).

Cognition

Monitoring is essentially a cognitive process: 'the act or process of knowing in the broadest sense; specifically, an intellectual process by which knowledge is gained from perception or ideas' (Webster's Dictionary). This makes cognition, the study of how people perceive, of considerable interest to monitoring.

The practice as dictated in the existing methodologies of monitoring view the person or organisation as needing data. 'We lack information about the way the world works, thus we measure, record and interpret – and thus we know' is the main cognitive logic behind monitoring systems. Monitoring is mainly seen as a linear process that proceeds from planning actions, identifying indicators to tracking progress with actions, collecting data on actions, analysing data, and deciding if actions need adjusting. Monitoring guidelines are based on the assumption that perception (or observation) is followed by reflection and, via decisions, leads to action. Recent work on the Santiago School of Cognition and 'embodied, embedded mind' (Clark 2001a) offers exciting material to rethink monitoring in terms of collective and distributed cognition.

The study on cognition is vast and expanding rapidly. Making a selection of relevant readings was based on the direct and significant challenges that the authors offer to some of the contradictions and dilemmas of monitoring practice that emerged from the empirical work in this thesis. I have chosen to focus on four ideas (Chapter 7): collective cognition, correspondence and coherence, distributed cognition, and cognitive dissonance.

Organisational Learning

The field of organisational learning examines how a group of people communicate and deal with information, *i.e.* collective monitoring for enhanced performance, that is vital for the survival of their organisation. As in the case of cognitive studies, the literature on organisational learning is vast, although predominantly emerging from private sector experiences. It is a convergence of thinking and discussion on fields as diverse as psychology, management science, and cultural anthropology (Easterby-Smith 1997).

Until recently, the development sector did not avail itself of insights to this body of thinking, with two notable exceptions of Korten (1984) and Rondinelli (1983). But recent years have seen a surge of discussion, practice and literature on this topic (Britton 1998; Davies 1998; Mosse *et al.* 1998; Hovland 2003; Pettit and Roper 2003; Groves and Hinton 2004; David *et al.* 2006; Pasteur 2006).

Key authors on whom I draw within this body of theory are Brown and Duguid (2000), Weick (1995; Weick and Sutcliffe 2001) and Snowden (Kurtz and Snowden 2003; 2003; 2005; Kurtz and Snowden 2006; Snowden and Boone 2007). I have chosen these authors as they apply learning theories to organisational contexts, highlighting in particular the types of informal feedback mechanisms and learning-for-change behaviours in which I am interested. I have chosen to focus on three ideas (Chapter 7): multi-ontological sense making; organisational mindfulness; and the social life of information.

Chapter 7 enables me to conclude that people and the structures in which they function do not operate as linearly or disjointedly as the formal M&E structures are currently being conceived and constructed. Therefore, monitoring theory and practice needs to appreciate this and work with it, rather than against or around it, if the potential for learning and adaptive behaviour is to emerge via information and its analysis.

2.2.4 Methodological Theory

The fourth function of theory in this thesis has been to shape and validate the research methodology for the case studies and for the thesis as a whole. It took some time before I was able to locate my experiences in terms of methodological theory, as I was reflecting on a set of diverse experiences in which I did not always play the role of researcher. While each element of the thesis had its own internally consistent methodology (see section 2.3), I was searching for an overarching methodological framework.

I had not set out purposefully to prove or disprove an hypothesis in a deductive manner, thus 'the scientific method' of repeatable experiments (with structured methods based on theoretical readings and reviewed based on their insertion into an applied context) fell outside my options. My work does not meet the methodological requirements of grounded theory (Babchuk 1996), attractive though it seemed with its focus on 'emergent theory' such as I am attempting but which requires a process of open, axial and selective coding⁸. Finally, only part of my empirical work can be considered to fall within the requirements of participatory action research (PAR), namely the empirical work in Brazil.

⁸ Open coding requires 'breaking down, analysis, comparison and categorisation of data, ... in which incidents or events are labelled and grouped via constant comparison to form categories and properties. Axial coding represents the delineation of hypothetical relationships between categories and subcategories, while selective coding can be described as the process by which categories are related to the core category ultimately becoming the basis for the grounded theory.'(Babchuk 1996).

In the end, I found my home in what I translate as ‘developing research’ drawing on Joha and Joosten (1994) and Doets (1982)⁹. They define this as research that aims to develop an actionable improvement by setting up a process aimed at achieving that improvement (see 2.3.5).

By emphasising my position in various moments of the inquiry process as an ‘interacting individual’ (Guba and Lincoln 1994:10), I have hinted at my ontological and epistemological position, which is a relative constructivist. Guba and Lincoln (ibid:100) summarise the constructivist perspective as adopting ‘a relativist ontology, a transactional epistemology, and a hermeneutic, dialectical methodology.’ Translated to my situation, I consider:

1. my ontology to be mildly *relativist* in the sense that what I describe in my empirical material is experientially-based, is location-specific in nature, and represents a reality that is not driven by immutable laws and mechanisms. Nevertheless there are aspects of that reality that those involved, including myself, agree on and can be couched in predictable cause-effect terms (also see multi-ontological sense making, Chapter 7);
2. my epistemology to be *transactional* in the sense that my close proximity to the empirical work meant the insights were created together with colleagues and emerged from our joint experience of disjunctions and dissonances. In other words, some of my conclusions emerge from interaction and are based on multiple perspectives; and
3. my methodology to be *hermeneutic* because the thesis rests on interpretation of lived experiences and *dialectical* in the sense that planned interchanges in the form of workshops and debating interviews helped lead to conclusions¹⁰.

2.3 Research Design and Material

My research has involved two levels of methodology – one related to the empirical work (Chapters 4, 5, 6 and 8), and the second to the thesis as a whole, for which I have chosen the notion of ‘developing research’. TABLE 2-1 summarises the methodology.

2.3.1 Methodology for Question 1 – Locating the Call for Monitoring

After a broader review of literature on approaches to rural resource management, I focused my reading on three discourses based on criteria outlined in 2.2.1 above. The questions that guided my reading of these discourses were:

1. How does the discourse view the process of rural resource management and stakeholder participation in it?
2. What does the discourse expect from collaborative monitoring?

⁹ Thanks to Dr. Fanny Heyman for pointing out this material to me.

¹⁰ Some interpretations are mine alone as they were not debated to reach common agreement (although this does not imply disagreement.).

TABLE 2-1 How the questions (see Chapter 1) were researched

1 How is ‘monitoring’ viewed by rural development and resource management discourses that advocate more adaptive forms of rural resource management? On what assumptions and presuppositions about processes of monitoring, collective learning and improved action are these discourses based? What practical orientation do they give for learning-oriented monitoring?

Literature review of three discourses that call for an adaptive approach to resource management and stress the importance of feedback mechanisms: adaptive management, collaborative resource management, and sustainable rural livelihoods

2 What is the underlying logic – with related assumptions and presuppositions – of mainstream monitoring approaches and hence what is the monitoring theory that is expected to guide practice?

Analysis of the theory-in-use and presuppositions underlying monitoring

3 What can practical experience from small scale rural change processes in Brazil and from a large rural development organisation show about what is needed for monitoring to contribute to collective learning?

Participatory action research with two local Brazilian NGOs spread over two phases: Phase 1 with two NGOs (Projeto Paraíba and CTA-ZM) and Phase 2 focusing on CTA-ZM Consultancy work for a multilateral rural development funding agency (IFAD)

4 What insights are offered by studies on cognition and organisational learning that can help fill the theoretical gaps and overcome the practical challenges of learning-oriented monitoring?

Literature review focusing on new areas of theoretical relevance: cognitive sciences and organisational learning

5 Given these empirical and theoretical insights, what would an alternative monitoring approach require so that it can trigger the forms of learning needed to ensure adaptive and collaborative rural resource management?

Comparing issues emerging from question 3 with that of question 4, linking it back to the discourses discussed in question 1, and using it to redefine what emerges from question 2

3. How does it state or imply that monitoring for sustainability can be achieved?

4. What does the discourse add to understanding the practice of monitoring for adaptive behaviour and sustainable impact of rural development efforts?

2.3.2 Methodology for Question 2 – Identifying Presuppositions

To articulate a theory of monitoring out of praxis led me to identifying the underlying presuppositions embedded in a limited set of M&E practical guidelines. I focused on three recent comprehensive M&E guidelines used within

the context of rural resource management projects and programmes: Casley and Kumar's classic (1987), AusAid (2000) and IFAD (2002). Together, these guidelines are representative of the bulk of development funding agency M&E requirements. My first step was to compare accepted definitions of evaluation and of monitoring in order to identify gaps, ambiguities and contradictions. I then used the guidelines to identify the set of generic steps considered necessary for monitoring. In doing so, I asked myself what was being presumed in terms of a pre-condition or capacity for the step to work as set out and to deliver the expected outputs. Hence my reading of the guidelines focused on 'Is this feasible?', 'What is needed to make this happen?' and 'Is this likely; if not why not?'

I use Argyris and Schon's (1974) concepts of 'espoused theory' and 'theory-in-use'. While Argyris and Schon focus on the difference between what people believe their behaviour is based on and what their actual behaviour implies in terms of theories, my use of their two terms is not directly related to behaviour. Instead, I use the concepts to highlight the contradictions between the theoretical intention of monitoring as articulated in the guidelines I examine and the practice of monitoring as evident from examining over 30 IFAD project contexts. Hence I point to what could be called the methodological disjunction of monitoring. In this I differentiate between the (explicit) assumptions and the implicit (presuppositions) (Geet 1989:13), and focus on the latter as few assumptions are articulated in the guidelines.

2.3.3 Methodology for Question 3 – Dealing with the Empirical Material

The empirical material in this thesis comes from my involvement with two Brazilian local NGOs, Projeto Paraíba and CTA-ZM, and with the International Fund for Agricultural Development (IFAD) (see TABLE 2-2). It is important to stress that the empirical analysis does not constitute a chronological sequence. The IFAD work and the work in Brazil are parallel processes that led me to the questions I seek to answer in this thesis. The thesis has involved a number of iterations between theory and practice, in which I have returned to the IFAD and Brazil work several times well after their closure.

Brazil: Phase 1

Phase 1 of the Brazil work was a participatory action research project funded by DFID¹¹ between 1996 and 2000 that involved two NGOs (see TABLE 2-2). Both

¹¹ Project R6547 'Participatory Monitoring and Impact Assessment of Sustainable Agriculture in Brazil', DFID, UK (Guijt 1996b).

organisations are local NGOs that work with small-scale farmers and whose key partnerships are with local rural trade unions. The NGOs are dedicated to merging the political agenda of putting smallholder agriculture on the policy map with finding practical solutions that enhance the quality of life. CTA-ZM is six years older than Projeto Paraíba.

The NGOs were keen to change their way of using data to further their goals and sought to do this by trying out new approaches and reflecting on this critically. This is the essence of Participatory Action Research (PAR). 'Participatory action research is concerned with changing both individuals and the culture of the groups, institutions, and societies to which they belong. But ... these changes are not impositions: individuals and groups agree to

TABLE 2-2 Overview of empirical material

<i>Organisation and relevant chapters</i>	<i>Role in thesis</i>	<i>Methodology/research techniques</i>
IFAD (Ch 4)	<ul style="list-style-type: none"> • Understanding organisational constraints and dilemmas for shifting to a learning oriented monitoring approach 	<ul style="list-style-type: none"> • Field trip reports from consultants and own field notes, guided by a jointly agreed interview checklist
Projeto Paraíba, Paraíba, Brazil (Chs 5 & 6)	<ul style="list-style-type: none"> • Development of participatory monitoring in agricultural partnerships that helped identify lack of fit between intentions and practice of participatory monitoring 	<ul style="list-style-type: none"> • Participatory action research through collective methodology development, implementation and evaluation, focus (group) interviews, and participant (organisational) observation
CTA-ZM, Minas Gerais, Brazil (Chs 5, 6 & 8)	<ul style="list-style-type: none"> • Development of participatory monitoring in agricultural partnerships that helped identify lack of fit between intentions and practice of participatory monitoring • Second round of methodology development that allowed a more governance and interaction-oriented learning system to emerge 	<ul style="list-style-type: none"> • Participatory action research through collective methodology development, focus (group) interviews, and participant (organisational) observation • Perspective of key actors in the system on potential/reality of collaborative monitoring in complex partnerships (interviews with farmers, technical team members, members of the Executive (2002); Advisory work on monitoring and planning processes and systems (2002-2004); Consultancy on reviewing current monitoring and organisational learning processes (May 2007)

work together to change themselves' (McTaggart 1991:172). We jointly designed the process for answering our questions, iterating between implementation and joint reflection during the research period. We held several exchange visits for cross-fertilisation and comparison of work at both sites.

The practical work was supported by discussion papers on methods for monitoring sustainable agriculture interventions (Guijt 1996c) and a critical review of the debate on participatory monitoring in resource management (Abbot and Guijt 1998). ANNEX 2 lists all documents produced through this work.

Brazil: Phase 2

Subsequent work in Brazil focused on CTA-ZM mainly through an explicit social PhD contract between myself and the NGO. In return for access to meetings, materials and time for interviews, I committed to partly facilitating the organisation's strategic planning process and development of the organisational learning strategy and reviewing the outputs.

We sought to build on the limitations articulated in the final reflections from the PAR process (see Chapter 6) with which we ended in 2000. Thus our challenge was to develop a more comprehensive and learning-driven system that took as its starting point existing discussion and decision-making forums and valued informal monitoring interactions.

My sources of information were joint reflections to develop planning and learning frameworks (stakeholder workshops and email exchanges), dialogue on problems encountered en route, and individual semi-structured interviews with farmers, trade union leaders, and CTA-ZM staff. To check emerging insights, I continually fed back ideas to CTA-ZM staff, seeking critical comments on the ideas that now form the bulk of Chapter 8. Most recently in May 2007, I undertook a short (self)-assessment of CTA-ZM's current monitoring and learning processes (Guijt 2007f).

IFAD

My involvement with IFAD from 2000 to 2002 was as team leader to coordinate writing of a project M&E guide for all IFAD projects (IFAD 2002). An extensive review of the literature was undertaken by Dr. J. Wright and M. Salm, research assistants. The guide was written by myself and co-author, Dr. Woodhill. As part of the writing process, seven consultants (including myself) visited 33 projects in 19 countries, using a common interview guide (see ANNEXES 3 and 4). The insights were shared and cross-checked in a joint workshop in August 2001. During the writing process, several meetings were held in Rome with the IFAD staff coordinating this initiative, to ensure a close fit with perceived

needs and with organisational structures and systems. In October, a large workshop was held during which external feedback was received on the draft version of the Guide. The Guide was released in June 2002 on the web, with French, Spanish and Arabic versions in the pipeline. Currently the Guide is at the heart of the 'Regional Programme for Strengthening Management for Impact (SMIP) in Eastern & Southern Africa', funded by IFAD and implemented by Wageningen International.

2.3.4 Methodology for Question 4 – Inspiration from New Theoretical Areas

In seeking to understand the gaps and contradictions that the empirical work had highlighted, I turned to two bodies of theory (Chapter 7). Studies on cognition have not yet informed development sector-related work, while organisational learning theory has been the subject of increasing recent interest (see 2.3). Questions that guided my reading were:

1. What perspectives on perception, feedback mechanisms, sense-making, and decision-taking does the literature offer?
2. How are informal communication processes conceived?
3. What role does data have in decision-making according to the theories?
4. What alternatives does this theory offer to overcome the dilemmas, fill the gaps and deal with the presuppositions identified in Chapters 4 and 6?

Rather than seeking to present a comprehensive overview of the literature and its full significance for monitoring practice and theory, I selected a number of ideas that help explain why there is a mismatch between monitoring practice and theory.

In Chapter 8, I provide a critical reading of the second phase of work with CTA-ZM that spans from 2000 to 2007, reflecting on the extent to which the insights from the literature are present in the current approach to monitoring and learning. This enables me to pinpoint remaining issues that require further work and theoretical exploration.

2.3.5 Overall Thesis Methodology

Joosten and Joha (1994:1) refer to 'developing research'¹² when there are no ready made answers at hand and one needs to collect relevant knowledge and reshape this so it can serve to improve actions. Research is, they say, needed to collect knowledge and make it transferable, which happens by setting in

¹² This is translated from the Dutch 'ontwikkeland onderzoek', which is more accurately but less elegantly translated as 'research that develops'.

motion a development trajectory. They advocate the use of this research approach for social research that focuses on how people act. Doets (1982) describes what emerges from this type of research as context-bound knowledge, as it relates to the actions of actors within the situation being studied.

My research trajectory could be described along the lines of Joosten and Joha (1994:166) who characterises this type of qualitative research as follows:

1. *Use has been made of both theoretical knowledge and practical knowledge.* Chapters 3, 4 and 7 deal with the theories, while Chapters 4, 5, 6 and 8 deal with the empirical material.
2. *There is collaboration between researchers and stakeholders in practice.* The diverse collaborations between myself and stakeholders have been described in 2.3.3.
3. *Process evaluation is needed to make visible generalisable and transferable patterns.* In total ten workshops were held in Brazil with different stakeholders to assess our joint process, and across the two sites to assess differences and similarities (see ANNEX 3). External NGO staff were invited to the final workshops to provide additional critical notes. In the IFAD work, three guiding workshops were held in which progress was assessed by independent IFAD staff members, a workshop of the consultants was held to assess insights from the IFAD projects (and several other non-IFAD projects that had been visited), and a large workshop of 50 reviewers assessed the relevance and appropriateness of the draft guide.
4. *Developing a product and implementing the product need to be investigated together.* This occurred in the two Brazilian cases (Chapters 5, 6 and 8), as well as for IFAD. Tangible products were internal monitoring systems (Brazilian partnerships), an M&E framework (IFAD), shared understanding, and documentation (see ANNEX 2).

While this research approach shows some similarities with Participatory Action Research (see 2.3.3) and with grounded theory, there is a key difference. PAR research is conducted to answer questions that are identified by the client, in which the researched are the researchers (McTaggart 1991; Kemmis and McTaggart 1998). While the Brazilian work was a participatory action process, I have always been the sole researcher for the overarching research questions of this thesis. In relation to grounded theory, while I do aim to develop a theory in an interplay of gathering and analysing data from sources such as interviews, field observations and diverse documents (Strauss and Corbin 1994), I do not systematically follow the grounded theory procedures (cf. Glaser and Strauss 1967) and, hence, do not make this claim.

2.4 Reflecting on the Thesis Methodology

2.4.1 The Degree of Fit with ‘Developing Research’

Recognising my research as ‘developing research’ obliges me to match this with quality criteria developed within that same tradition of research that I followed. Degree of fit of criteria determines degree of quality. Inspired by Heymann’s (1999) thesis, I turn to Doets (1982:44-48), who offer six quality criteria for the research process¹³:

1. *An open and transparent research process, known as inter-subjective controllability or transparency (of function, purpose, method), which manifests itself in degree of reporting of the process, to what extent it is made public, and in the justification of activities (failures and limitations).* My empirical work has been documented in various research reports, approved publications and project documents (see ANNEX 2). For the detailed case study work, a formal research project document described our intentions, modus operandi and expected outputs (Guijt 1996b). I documented both positive and negative examples of our process. At the onset, I was explicit in all but one case, that of IFAD, that I was using material for the thesis. My own critical comments on the limitations of my work relate mainly to this criterion (see 2.5). The October 2001 workshop at IFAD served as a public forum to debate some of the issue that, via the IFAD route, have found their way into this thesis.
2. *Familiarity with practice – a good product can only evolve from thorough understanding and collaboration with actors in their situation.* I spent a year working closely with IFAD, trying to understand their needs, reading project documents, listening to project stories, discussing various versions of the core M&E approach with IFAD staff, and subjecting the draft guide to open review. The initial Brazil work involved three years of contact, twice-yearly visits, and joint reviews. Subsequent work in Brazil has involved an additional three years of contact and exchange, visiting different municipalities in which CTA-ZM works and interviewing diverse actors. Most recently, in May 2007, a visit to CTA-ZM enabled a joint analysis of the work undertaken since 2000 (Guijt 2007f) and, therefore, a more critical assessment of what has and has not been successful.
3. *Interaction between action and reflection.* Also central in PAR, this criterion is essentially about a dialogue between theory and practice. In broad lines, the thesis as a whole manifests this interplay. I draw on theories related to monitoring in resource management and the espoused theory of monitoring, shift to practice in Brazil and with IFAD, and turn back to theories on cognition and organisational learning. TABLE 2-3 summaries the interplay between these two aspects within each set of empirical material.
4. *Construction-oriented character of the research process – the researcher is aiming to develop something that is actionable and offers a repertoire of options, without an ad-hoc construing alternatives and with an explicit framework.* In the work with all

¹³ They also identify separate criteria for product quality.

the organisations involved, I was aiming to develop a workable M&E process that was imbued with the principles and practices of participation, learning at different levels, and adaptive behaviour or improved action. The limited success of this – and the difficulties encountered en route – is what led me to the reflections in this thesis. With this I hope to come to a more workable ‘espoused theory’ (Argyris and Schön 1974) than what is currently the rather problematic theory-in-use of monitoring. This thesis, as a product, offers a new perspective on monitoring which, with its focus on design principles (Chapter 8) and implications for key actors (Chapter 9) should be actionable.

5. *Flexibility of research process – quick reaction to developments in the situation (via data collection, construction, feedback, analysis, dissemination techniques)*. My approach with the work with IFAD, and in particular the Brazilian NGOs was to start each step with the question ‘where are you at and what do you need?’. This was critical in the Brazil case, as the inter-organisational dynamics between the partners involved in local development was such that roles, priorities, interests, energy levels varied and changed (see Chapter 6). In Phase 1 of the work, we adjusted the monitoring plan at six-monthly intervals. However, this all points to flexibility in the *action* process. As for the *research* process, the self-funded nature of the thesis, the need to ‘piggyback’ on consultancy work, to operate at different levels for each piece of work required a range of techniques. My mainstay was the simple notebook, in which I noted observations about the processes, interview material, and questions to myself.
6. *Dissemination of results – sharing of output with potential users*. All the work produced via the Brazilian NGOs (ANNEX 1) and IFAD (2002) is in the public domain, as is this published thesis. The results of various sub-stages and aspects of the work have had different audiences (from field workers to senior management) and have been further critiqued and exposed to public comment in other workshop forums (see TABLES 6-1 and 6-2, Chapter 6 and ANNEX 2). Dissemination of products was built into the Phase 1 Brazil work and formed part of the formal agreement between myself and CTA-ZM for subsequent work. Workshops and publications in different languages were the main form through which outputs were shared.

2.4.2 Quality in the Documentation

Another aspect of qualitative studies that often suffers and needs to be guarded for quality is the documentation. Based on McWilliam (McWilliam 2000), I strove to include sufficient detail on four aspects:

1. *Where the investigators are coming from, i.e. the theory and research underpinning a study as well as my credentials and philosophy*. McWilliam suggests referring to past research dealing with the same or similar topics, and including a ‘good introduction with a strong conceptual framework’. This aspect is covered in this chapter, as well as Chapters 3 and 4.

TABLE 2-3 The interplay between action and reflection in the empirical material

Sources of Observations	Action Elements	Reflection Aspects
Brazil–Phase 1	<ul style="list-style-type: none"> • Developing jointly the indicators and methods, assessing data 	<ul style="list-style-type: none"> • Assessing progress to date, what worked/what did not, what is missing, what is redundant at the start of each next step (3 times) • Regional workshops with other Brazilian NGOs on M&E work to date and sharing/discussing difficulties
Brazil–Phase 2	<ul style="list-style-type: none"> • Reviewing and jointly refining CTA’s strategic plan • Developing the organisational learning plan • Implementing first steps of learning plan 	<ul style="list-style-type: none"> • Evaluation at each step on progress to date and what needs changing • Joint analysis with NGO staff after 4 yrs of what has (not) been retained and been effective
IFAD	<ul style="list-style-type: none"> • Consultancy trips to projects • Writing the guide 	<ul style="list-style-type: none"> • Reviews on progress by IFAD staff • October workshop that reviewed first draft of the guide

2. *What the investigators did, i.e. my methods.* Detail is needed on how information was gathered, how I selected my participants, what kinds of interview questions I asked, and how I documented my observations. McWilliams suggests that ‘multiple viewpoints are [needed] in the analysis, such as joint investigators, member checks, ‘memoing’, peer debriefing, and other methods of allowing others into the investigator’s head.’ I need to provide enough description that the reader can decide whether findings are transferable to other settings. An audit trail and reflexive journaling (Lincoln and Guba 1985) are indications of attempts to make findings dependable. The details in this chapter should suffice.
3. *How they arrived at their findings, i.e. my analysis.* When authors show links from text to codes to categories to sub-themes to themes, for example, McWilliam asserts it is easier to determine the quality of the research. The reader needs to be able to confirm that the findings are grounded in data (Lincoln and Guba 1985) and not plausibly developed on the back of an envelope. The material for this can be found in Chapters 4, 5, 6, 7 and 8.
4. *What the study meant, i.e. how what I propose is helping to advance theory or practice.* The material for this can be found in Chapters 8 and 9.

2.5 A Final Critical Note

My concerns about this thesis lie not so much with its societal relevance or attempt at innovation. But critique could be warranted for the relatively unorthodox methodology. As I have explained, the thesis is a reflection on a collation of experiences that were not developed as research for PhD purposes. Hence the overarching research questions emerged later on as it became clear for me what the critical questions were, the common threads between diverse processes evolved, and the relevance of specific experiences clarified as time passed. The thesis grew from irregular reflections emerging from practice and do not constitute organisational analysis or grounded theory or PAR or any such methodology in the strict sense.

The main limitation that I see in relation to my material relates to my juggling of action and reflection roles. As a result, the empirical material that is discussed in the thesis was subject to limitations. My role as facilitator and adviser for specific organisations meant that my priority lay with their needs as voiced by themselves, limiting my freedom to explore other organisations and their perspectives. The influence of my evolving friendships with many of those involved would, some may argue, have affected an 'objective' interpretation of views and issues. Perhaps. But the personal ties have also enabled some frank and long term interactions that have, I feel, added depth to the issues discussed in this thesis.

PERSPECTIVES OF RURAL RESOURCE MANAGEMENT DISCOURSES ON MONITORING

3

Three discourses that deal with rural development and resource management offer insights about monitoring for sustainability and equity: adaptive management, collaborative resource management, and sustainable rural livelihoods¹⁴. These discourses are all concerned with adaptive behaviour, collective learning and interactive decision-making. They are value-driven, focusing on environmental conservation, equitable resource use, and poverty alleviation. They have a practical orientation and thus are actively implemented in rural resource management initiatives with multi-stakeholder negotiated actions at the centre.

Of interest to this thesis is how the discourses treat the notion of monitoring in general, and, in particular, participatory monitoring. Each discourse appears to view monitoring as a critical contributing factor to the types of collective learning needed to guide resource management decisions within a multi-stakeholder perspective. Monitoring emerges in a range of statements on what needs to be monitored, as being critical for guiding improvement, and as a lynchpin activity or process without which there will be insufficient knowledge and insight on which to base joint decisions.

This chapter aims to analyse what ideas these discourses offer about constructing monitoring and the link to adaptive change. I discuss adaptive management, collaborative resource management and sustainable rural livelihoods in terms of three questions:

1. How does the discourse view the process of rural resource management and stakeholder participation in that?
2. What does the discourse expect from (participatory) monitoring?
3. How does it state or imply that such monitoring can be achieved and foster learning?

The chapter ends by synthesising the expectations and key characteristics from these discourses in relation to monitoring.

¹⁴ Section 2.2.1 discusses the selection basis of these discourses in more detail.

3.1 Adaptive Management

3.1.1 How adaptive management views rural resource management

What is Adaptive Management?

Adaptive management has several identities in the literature: ‘short-hand for a paradigm’, ‘a guiding principle’, ‘an approach to learning’, and ‘a policy implementation approach’ (Lee 1999; Nyberg 1999; Jiggins and Röling 2000). In essence, it is a perspective on the management of complex natural resource systems that is ‘based on incremental, experiential learning and decision-making, buttressed by active *monitoring* of and feedback from the effects and outcomes of decisions’ (Jiggins and Röling 2000:29, emphasis added). It is aimed at ecosystem conservation within the context of human use and thus engages different and divergent stakeholders in negotiations.

This discourse explicitly views policy implementation, and management in general, as experiment in order to learn efficiently (Rondinelli 1983; Lee 1993; Dovers and Mobbs 1997; Lee 1999). The worldview is one of intrinsic uncertainty of managing complex ecosystems, either large (regional scale) (Gunderson et al. 1995a) or with strong social interdependence (Lee 1993:11). The idea of adaptive management arose from observations that attempts to manage ecological *variables* with normal fluctuations rather than *systems* led to less resilient ecosystems, more rigid management institutions and more dependent societies (Holling 1995:6). Rather than focus on ensuring a fixed state for a system, adaptive management emphasises ensuring its resilience (Johnson 1999b; Walker et al. 2002). However, the term ‘resilience’ is increasingly diffuse and contested, hence does not provide much clarity in practice (Brand and Jax 2007).

Prominent in descriptions of adaptive management is the so-called ‘adaptive cycle’ that describes the cyclic evolution of systems in terms of four phases: growth, production, release and renewal¹⁵ (see FIGURE 3-1). Advocates consider the adaptive cycle is not only deemed to be relevant to ecosystem succession but to any complex adaptive system, including institutions and societies (Holling 1995; Lee 1999; Walker et al. 2002; Maarleveld 2003). Walker and colleagues (2002:5) have paraphrased Holling’s original description as follows:

‘the movement of a system through four phases: a period of rapid growth and exploitation (r); leading into a long phase of accumulation, monopolization, and conservation, during which resilience tends to decline (K); a very rapid breakdown or release phase (creative destruction); and, finally, a very short phase of renewal and reorganisation’.

¹⁵ Also called: exploitation, conservation, release and reorganization.

Maarleveld (2003:109) gives an example from a historical review of the Dutch water sector. The 'growth' period was essentially about using the resource, getting water into citizens' glasses. It stretched from the mid 19th century to the 1940s and learning centred on being increasingly effective. The 'production' phase took place between the 1940s and the 1960s and sought to maintain and expand water use. The learning centred around how to expand. The 'release' phase between the 1960s and 1980s was triggered by the emergence of pollution and scarcity. This meant the water stakeholders had to learn to be efficient. The final 'renewal' phase since the 1980s has focused on learning to integrate a quantitative and qualitative perspective on both surface and groundwater.

Thus these phases follow each other in perpetual succession, as in a 'lazy eight', but with varying speeds and periods of persistence. Within the longer term structural shifts described by Maarleveld, smaller sub-cycles occur nested within each phase (ibid:117). Information needs vary over time, per phase and per sub-cycle, and data collected will need to be understood within the context of its current phase. Hence monitoring processes will vary in terms of role and content.

From a management point of view, two critical decision points occur – when the system is moving from rapid growth to exploitation and from breakdown to renewal. In the first instance, management for 'production' by implementing policies is central, while the second transition relates to management for resilience or sustainability, i.e. seeking alternatives to emerging crises (Gunderson et al. 1995b:450; Walker et al. 2002:5).

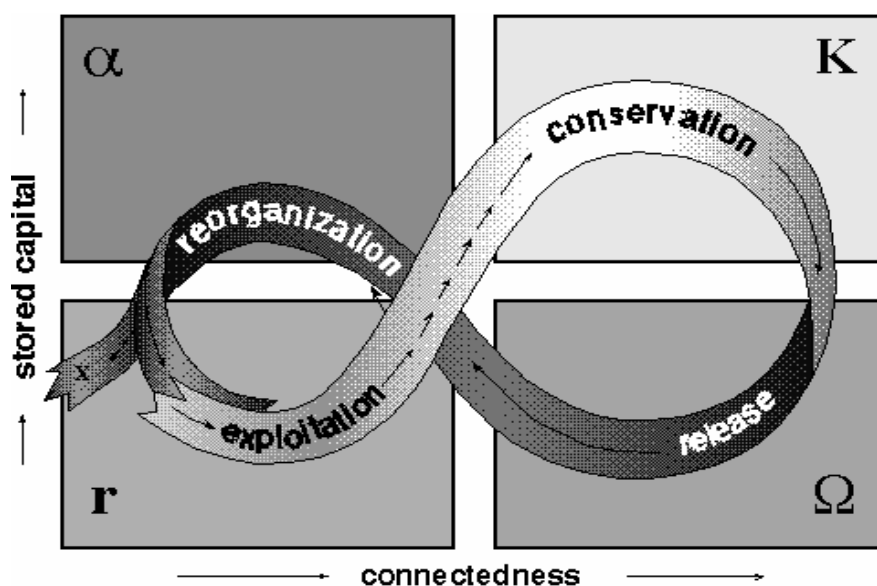


FIGURE 3-1 Holling's cycle (Holling 1995)

The Practice of Adaptive Management

Johnson summarises the practice of adaptive management:

Typically, adaptive management begins by bringing together interested parties (stakeholders) in workshops to discuss the management problem and the available data, and then to develop computer models that express participants' collective understanding of how the system operates. The models are used to assess the significance of data gaps and uncertainties and to predict the effects of alternative management actions. The stakeholders develop a management plan that will help to meet management goals and will also generate new information to reduce critical data gaps and uncertainties. The management plan is then implemented along with a monitoring plan. As monitoring proceeds, new data are analysed and management plans are revised as we improve our understanding of how the system works. (Johnson 1999a:2).

Adaptive management in practice starts by synthesising existing knowledge, exploring alternative actions (via visions through scenarios and simulations), and suggesting management improvements (Nyberg 1999). Visions of the ecosystem one is trying to guide serve as 'a baseline for defining surprise' (Lee 1999:4). Diversity and dynamism feature strongly in the ecosystems in question, so Holling advocates for 'flexible, diverse, and redundant regulation, monitoring that leads to corrective responses, and experimental probing of the continually changing reality of the external world' (Holling 1995:30). Monitoring programmes are needed to generate reliable feedback to help explain outcomes and indicate improvements. A purely ecological, economic or social orientation is inadequate (Holling 1995), hence the need to create social learning and understand interrelations between nature and people and the social construction of ecosystems (Lee 1993:11). This, in turn, demands a fundamentally interdisciplinary approach and a methodological mix of historical, comparative and experimental approaches at scales appropriate to the issues (Holling 1995:13).

The literature places learning at the centre as the link between explicit experimentation¹⁶ and institutional response: 'the central tenet [is] that management involves a continual learning process that cannot conveniently be separated into functions like 'research' and 'ongoing regulatory activities', and probably never converges to a state of blissful equilibrium involving full knowledge and optimum productivity' (Walters 1986:8). Experimentation is considered the route for speeding up the accumulation of reliable know-

¹⁶ Experiment is defined broadly as a systematic way of answering a question (Lee 1993:69) and set within the messy and ever-changing reality of people, actions and nature.

ledge that feeds social learning (Lee 1993:54). Stakeholder involvement is critical as some experiments may carry negative risks for stakeholders who wish to maintain their system. Learning occurs by questioning basic management assumptions (Lee 1993:9) and testing hypotheses, which are usually predictions about how one or 'more important species will respond to management actions' (Lee 1993:53). In so doing, managers can learn how 'manage by change rather than simply to react to it' (Holling 1995:xi).

Nyberg and Taylor (1995) state that common elements between scientific research and adaptive management include hypothesis-testing, experimental design, data collection and analysis. But in adaptive management, managers lead projects rather than scientists, the application scale is the field (not laboratories or small plots), design rigour is reduced, and measurements focus only on key response indicators.

Lee (1993) contrasts adaptive managers with the normal trial and error of human learning. Adaptive managers are not simply 'learning by doing', but they explicitly experiment with complex systems to learn from them (Smith 1999a). An adaptive manager, Lee says 'makes measurements so that action yields knowledge – even when what occurs is different from what is predicted. ... Adaptive management plans for unanticipated outcomes by collecting information' (Lee 1993:9). Learning from measuring and, therefore monitoring, is critical.

If models are being used to steer the management experiences, then Lee urges for a clear paper trail, as this will be essential to know if a given model of reality works (Lee 1993:62). This requires explaining the chain of reasoning from the data base to the output. This is important as it enables a clear picture of the theory of change or ecosystem model to emerge of which the validity can then be tested using monitoring data. Only then can human misunderstanding be challenged and errors corrected (ibid).

The Role of Stakeholders

Stakeholder participation is considered critical in adaptive management as different quotes illustrate:

'It is difficult to imagine that truly adaptive management will not demand anything other than *more, closer and longer* participation. Such participation will need to occur at a variety of levels, from national policy formulation down to on-ground management, and in a number of styles and degrees of intensity, from awareness-raising through to negotiation and engagement in ecological monitoring or co-management' (Dovers and Mobbs 1997:5)

'A successful outcome of any procedure aiming at achieving social-ecological sustainability is fundamentally dependent on the active, positive involvement of all relevant stakeholders' (Walker *et al.* 2002).

'Learning is information-intensive and requires active participation from those most likely to be affected by the policies being implemented'. (Lee 1999:4)

'to create more sustainable management strategies, stakeholders must forge new relationships to enhance multidirectional information flows, learn from each other, and together develop flexible ways of managing their environments' (Stringer *et al.* 2006, referring to Carpenter and Gunderson 2001).

The image of a gyroscope – that stays oriented regardless of any movement of the base on which it rests – graphically represents civic participation in adaptive management, or democracy (Lee 1993, referring to Carpenter and Gunderson 2001). Ecosystem management requires complex decision-making contexts with multiple interests and values, hence the need for democratic process to make sense of scientific insights and for effective learning. Democratic process has that gyroscope function. This image arguably idealises participation, as practice demonstrates irreconcilable conflicts may be involved.

Despite valuing stakeholder participation since the adaptive management discourse emerged, the practical implications have only been articulated and questioned more recently (Stringer *et al.* 2006). One issue is the diversity of reasons for investing in participation, ranging from functional (improving management plans) to more strategic (strengthening democracy) (*ibid*:4). While stakeholders have always been considered key for the all-important visions that help shape the management options and form the basis of forecasting (via scenarios or simulations), Springer and colleagues stress the need for more diverse roles for stakeholders, particularly resource users.

Participation requires biologists or computer specialists, as much of the earlier and Western-oriented adaptive management literature presumes the need for computer visualisation to help stakeholders 'understand complex relationships and model outputs' (Johnson 1999b:4) and to design management experiments. Only in this way can modelling become a learning tool, by helping people decide what aspects of the system need management attention and where the critical uncertainties lay that need experimentation. More recent literature (Colfer 2005a; Stringer *et al.* 2006) that include non-Western

applications (see Box 3-1) do not refer to computer modelling as mandatory, but still refer to technical specialists as critical players in the process.

Springer and colleagues (2006) identify a number of challenges for participation in adaptive management situations. A long-term perspective on participation is needed rather than one that is tied into short-term political agendas. But this difficult to implement, costly, and requires capacities that few societies have. This is particularly the case when it concerns a large scale system and interventions. The authors stress the importance of flexibility and thus a context-specific and evolving approach to designing and adjusting participatory processes. They also stress that the desired vertical learning that enables linking of local insights to policy changes cannot be assumed to happen and requires a mediating organisation considered legitimate by those involved. Importantly, they stress the need for focusing on explicit strategies to include more marginalised voices as these tend to get drowned out by those more used to multi-stakeholder interactions.

3.1.2 Monitoring theory and practice in adaptive management

The Role of Monitoring

The explicit inclusion in adaptive management theory of monitoring mechanisms contrasts with the neglect of monitoring in conventional approaches to resource management (Nyberg 1999). In the literature, ‘monitoring’ is

Box 3-1 ACM in practice – the CIFOR version

Adaptive management, as described above, focuses mainly on large-scale ecosystems¹⁷ and derives mainly from experiences in the more industrialised parts of the world. Since 1999, CIFOR (Centre for International Forestry Research) has been investigating how to achieve equitable forest management by institutionalising effective collaboration and conscious learning among diverse stakeholders¹⁸ through the Adaptive Collaborative Management (ACM) research programme. Collaborative monitoring has been a key concept in the research process. Many of the research sites¹⁹ cover small areas, where research teams have explicitly sought to develop and document cycles of learning. The African sites have emphasised facilitating ‘effective and sustainable systems of infor-

¹⁷ Others refer to the merits of adaptive management for small scale system management (Johnson 1999b; Roe et al. 1999).

¹⁸ From 1998 to 2002, I was a member of the International Steering Committee for this research project.

¹⁹ Research sites were located in Cameroon, Malawi, Tanzania, Zimbabwe, Indonesia, the Philippines, Nepal, Peru, Brazil and Bolivia.

mation feedback in forests managed by local communities, by developing frameworks and practical tools for integrating information from locally- and externally-derived indicators using participatory action research (PAR) techniques' (Gilmour *et al.* 2002:7).

CIFOR's action research programme has drawn together theoretical concepts (and related methods) for concepts such as formal and informal decision-making platforms, gender and age dynamics of community forest management, forest-agriculture livelihoods, land tenure and conflict, and feedback mechanisms for sub-regional and national policy processes. The teams view ACM as a value-adding exercise to existing participatory and adaptive processes by strengthening processes of collaboration, information exchange and communication. In line with the original adaptive management notion, the teams have sought to embed management and use actions within a framework of conscious learning (Colfer 2005b).

The ACM teams operate in contexts that need clear and feasible collaborative monitoring mechanisms. For example, in Palawan (the Philippines), people's organisations can be registered as managers of designated forest areas. Essential for approval is the submission of a Community Resource Management Framework which includes a strategic resource management plan that, in turn, contains the 'community's' proposed environmental and socio-economic impact indicators and for monitoring performance based on the terms of the tenurial instrument' (Department of Primary Industries and Energy 1991:20). However, no guidance is provided for identifying such indicators, nor how to integrate these into sense-making and decision-making procedures.

It was only in a later phase of CIFOR's ACM research that the focus shifted from ensuring a solid planning process and management design to collaborative monitoring. This has now led to a number of documented experiences (Guijt 2007e) that echo many of the concerns addressed in this thesis, notably the need to move well beyond linear and static understandings of monitoring through indicator sets if learning is to occur.

treated as a condition for learning, as a core component of successful adaptive management, but also as an area where more work and investment is needed (Dover and Mobbs 1997, Holling 1995, Johnson 1994). An adaptive management system is considered to have two elements 'a monitoring system to measure key indicators and the current status of things, and a response system that enables modifying key indicators' (Hilborn and Sibert 1988:112).

Commonly cited features of such a monitoring process include (Lee 1993; Johnson 1999b; Lee 1999; Nyberg 1999; Pinkerton 1999):

- indicator-driven (for forecasting, model building and hypothesis testing);
- embedded in the scientific method (replication/control sites) but different from research;
- integration of data from multiple sites/components via computer modelling, databases, visualisations;
- costly and slow (often only one data point per year);
- desirability of a good baseline; and
- mainly ecological (sometimes tracking performance of social innovations).

In short, the expectation of monitoring is that careful selection of indicators and regular data updating can, when analysed (in particular compared to original targets and models), offer insightful information. Such information is critical at two moments:

1. in the development of the model to test assumptions, which constitutes a form of hypothetical modelling, and
2. by comparing actual changes to original targets and the model that drives the intervention, in order to assess the validity of working hypotheses.

Monitoring is thus considered capable of revealing surprises and other insights that inform improved action – but only if there are hypotheses with which to compare the data. Important is that monitoring of data is not intended for managing a single optimal state but for a range of acceptable outcomes (Johnson 1999b).

The discourse highlights four key features in monitoring for resource management: the hypothesis-refining effect of models by using simulated monitoring data; the role of indicators to make tangible the visions, targets and resource states; the importance of investing in long-term data collection and deliberative processes on that data; and the focus on scientific experimentation and surprise.

The Practice of Monitoring

In operational terms, monitoring fulfils the need in adaptive management to provide mainly ecological insights that are then used in what are called ‘social learning’ processes in order to inform interventions and policies. Thus methods such as ecological monitoring, risk assessment and stakeholder forums for data collection and its analysis are pursued side-by-side. Precise measurement is not necessary for all steps. For example, ‘stakeholder visions’ can be developed by high precision, high-tech future scenario simulations or from estimated informal ‘wishing pictures’, but is best when informed by both (Berkes *et al.* 1998).

The monitoring objects are ecosystemic, rather than social or economic, as befits an approach aiming to conserve ecosystems (Busch and Trexler 2002)²⁰. Hence ecological monitoring is prominent. The system and its problems influence decision about what to monitor. The focus should ideally be on key response indicators, i.e. organisms that are sensitive to a significant set of ecological dimensions (Lee 1993:67). Johnson suggests that modelling can help identify these indicators and the appropriate time and spatial scales for data collection (1999b:4).

Its value lies in assessing ‘how actions *actually* affect indicators’ (Nyberg 1999:7 original emphasis). The focus of monitoring should, therefore, be on checking what work has been carried out as planned, if objectives were met, and which hypothesis turned out to be correct. Nyberg distinguishes between data collection as monitoring and the explanatory step as ‘evaluation’²¹, in which the data are analysed and results are compared to the original forecasts. Box 3-2 summarises the steps for monitoring. They display many parallels with conventional project M&E as I will discuss in Chapter 4, notably the separation of the data collection (monitoring) from its analysis (evaluation).

Monitoring within the context of experimentation and hypothesis-testing due to a recognition of uncertainty means that adaptive management efforts are essentially action research projects (Bosch *et al.* 1996). Bosch and his colleagues, therefore, identify four prerequisites for successful monitoring (*ibid*:2):

1. the issues, goals and targets are known (why and what to monitor);
2. monitoring tools are available to assess and interpret the outcomes of implementing the strategies and policies;
3. the options and strategies to achieve these goals are directly accessible by land managers and policy makers; and
4. the usefulness of new data and information from monitoring activities is maximised.

The Prominence of Surprise

Surprise is an important concept within adaptive management in two ways. First, it is considered an inevitable occurrence. Adaptive management theory states that our knowledge of any system will always be incomplete. And so surprise is inevitable, irrespective of how much is measured and experimen-

²⁰ Where adaptive management has more of a socio-economic development orientation, then socio-economic indicators are chosen, for example, women’s empowerment as part of one adaptive management initiative in Thailand that led to data collection on gender of participation in all meetings (Stringer *et al.* 2006).

²¹ This distinction is paralleled in some definitions of mainstream M&E (see Chapter 4).

Box 3-2 The practicalities of monitoring for adaptive management (Nyberg 1999:3-6)

Indicators are identified after assessing the resource problem being tackled and constructing a management plan: 'identify key indicators for each objective ... select indicators that are relevant to objectives and responsive to management actions ... select some indicators that respond in the short term, some in the medium term, and some in the long term ... that respond at different spatial scales (e.g. site, landscape, region).'

Within the management plan, four steps are critical for monitoring:

1. Design the monitoring protocol: type and amount of baseline (pre-treatment) data required; frequency, timing and duration of monitoring; indicators to be monitored at each interval; appropriate spatial scales for monitoring different indicators; who is responsible for undertaking different aspects of monitoring.
2. Plan data management and analysis: specify method(s) that will be used to analyse data; set up system for managing data over the long term (e.g. storage, analysis, access); agree on who will interpret data and who will have access to it.
3. State how management actions or objectives will be adjusted: identify *who* needs *what* information *when* in order to make timely changes [original emphasis], define the intensity and degree of response in an indicator that will trigger a change in management actions or objectives.
4. Set up a system to communicate results and information.

ted. Not only is the science incomplete but the system itself is a moving target due to changes caused by management interventions and growing human influences (Holling 1995:13). A research-based approach centred on explicit experimentation with controls and replication is suggested to help streamline the surprises. Replication and control is considered critical as this provides comparisons that form the basis of learning (Lee 1999:9).

The second reference to surprise is in relation to learning: 'without surprise, learning does not expand the boundaries of understanding (Lee 1999:4). Chapter 7 focuses on surprise, or cognitive dissonance in some detail. Other references in the adaptive management literature add:

'systematic monitoring to detect surprise ...the complexity [of natural systems] suggests that even simple steps may yield surprising outcomes – and science is an efficient way of recognizing and diagnosing surprise' (Lee 1999:2)

'Monitoring ... may detect 'surprising' events.' (Nyberg 1999:7)

'Efforts to monitor the ecosystem for surprises rather than only for product therefore withered in competition with internal organisational needs,

and research funds were shifted to more operational purposes. Why monitor or study a success? Thus the gradual reduction of resilience of the ecosystems went unnoticed by any but maverick and suspect academics whose research was driven simply by curiosity.' (Holling 1995:8)

Three types of consequences of actions and external events can be differentiated: expected, expected but random/unpredictable, and unpredicted and unexpected (Lee 1993:65). The last type are 'surprises', for which, by definition, it is difficult to describe or estimate the probability but to which adaptive managers (should) stay alert. As adaptive management explicitly views the system as an experiment, surprising results are allowed when expectations are articulated and are then not met. This perspective often sits uncomfortably with the role of project managers who are responsible for ensuring a set result, hence the discomfort with which 'surprise' is embraced.

The ecologist Holling and colleagues (Gunderson *et al.* 1995a) argue that societies inevitably encounter 'surprises' resulting from the cyclic and changing nature of ecosystems but that are not equipped to deal with these surprises. To deal with these surprises that also emerge from political and economic systems and social processes, they must become visible. As surprises (and errors) are inevitable in situations of uncertainty, where there is too much uncertainty and little data, surprise might be unexceptional and hard to steer by, for example, in large ecosystems. 'With limited theory comes poor knowledge of the limitations of theory. Predictions are often wrong, expectations unfulfilled, and warnings hollow' (Lee 1993:58).

In this discourse, experiments are looked to as potentially being able to 'surprise the experimenter, and one mark of a good scientist is that she recognizes surprise and pursues its implications' (Lee 1999). But as Lee continues, 'This has not been considered the mark of a good manager, however, who is rewarded instead for steadfast pursuit of objectives.' No guidance is offered on how to recognise a surprise, other than when data contrasts with expectations. It also remains unclear how Holling and Lee suggest pursuing surprise explicitly other than through curiosity and experimentation. Lee acknowledges the problem of knowing when a surprise is or is not worth pursuing.

Critical Reflections on Adaptive Management

Adaptive management is not without its critics, including from among its advocates (Johnson 1999b; Nyberg 1999; Smith 1999a; Jiggins and Röling 2000). Lee's review of results (1999) concludes that it is 'an idea that has little proof as such' of working. Here I will summarise critiques related to monitoring.

An important obstacle is the lack of time for solid experimentation. Dovers and Mobbs (1997) list the requirements that a comprehensive version of adaptive management would need: informational, intellectual, statutory, ecological/substantive, participatory, institutional and political. They observe that several requirements would be hard to fulfil, such as achieving enough information flow through research, monitoring and communication; collaboration across disciplinary and professional boundaries; and the political will to maintain efforts. They note such requirements sit uneasily with politicians' and bureaucrats' unwillingness to invest in long term, costly monitoring and experimentation programmes, driven as they often are by a decision-making timeframe dictated by political and administrative deadlines. Mahanty and colleagues also note this difficulty: 'The time needed to get a participatory project off the ground has meant that monitoring was not attended to until well into the project cycle (5 years in for a 7-year project), although baseline assessments commenced earlier. Not surprisingly, implementation of plans has so far been limited as they have only recently been developed' (Mahanty *et al.* 2007:408)

Critical is the inherent tension between an experimental, surprise-seeking working style and what Lee calls 'the mark of a good manager ... who is rewarded instead for steadfast pursuit of objectives' (Lee 1999:2). Set within the limitations of human institutions, Lee (1993) highlights that the notion of a solid experiment that features strongly can suffer from one or more of four factors: reliance on agency staff with limited capacities and operating under performance pressure, political changes that influence the system, political whims that can abort experiments, and the need for managers to be flexible and negotiators.

Other obstacles for effective monitoring within an adaptive management perspective include the following:

- *Time-consuming.* Lee (1999:6) refers to an Australian fisheries programme that yielded solid results – after a decade of monitoring and hypothesis testing (Peterman and Peters 1998). This may be hard to reconcile with the urgent decline of highly valued species or landscapes, and with the more common political and funding horizons of three to five years.
- *Ample scope for scientific error.* Lee himself, while strongly advocating for control/replication experimentation, cites many possible errors related to internal and external validity (Lee 1993:69-80). However, he sees them as threats rather than a *sine qua non* for failure.
- *Monitoring via models remain hypothetical and precludes surprise.* The use of models with policymakers to help shape their decisions requires that scientists deve-

lop acceptable predictive models and that the other stakeholders are able to use them for joint decision-making. Monitoring here consists of the use of hypothetical data to demonstrate what would happen under which decision. The model, therefore, can only ever operate within what can be anticipated – real surprise will only emerge in the messy process of active resource management. Hence the importance of monitoring expected behaviour, yet staying open to surprises that are unrelated to hypotheses and data expectations.

- *Expense of information.* The attention and funding required for effective monitoring (fieldwork, data storage/analysis/communication) are often in short supply in agencies with too many other daily tasks and operating at the scale needed for adaptive management. Advocates suggest cost-saving measures (including monitoring by volunteers) and careful consideration of what kinds of information can be afforded, while maintaining that the expected value of the new knowledge derived will often outweigh the costs (*e.g.* McAllister and Peterman 1992, cited in Nyberg and Taylor 1995; Lee 1999:4).
- *Open access to information.* Experimentation and open discussion carry risks for managers when uncomfortable information and unwelcome surprises emerge (Lee 1999:5). Larger scale system management means that government agencies are inevitably involved, who may bring with them a desire to control data (Pinkerton 1999), particularly when it reflects negatively on their efforts.
- *State of ecological monitoring.* Dovers (2000) criticises ecology for being insufficiently connected to policy or questions of human-natural system interactions, and poorly used. The tendency remains for piecemeal solutions to complex problems, *e.g.* single species management, and hence single variable monitoring (Pinkerton 1999).
- *The central role of scientific experimentation.* The focus on experimentation as defined by clear hypotheses, controlling for extraneous factors and replications to check reliability (Lee 1999:3) sit uneasily alongside the unpredictability and quirks of society and policy. The feasibility of replication and thus reliability is questionable.²² Other recent experiences with adaptive management do not mention experimentation in such scientific terms, suggesting that it can be viewed more flexibly (Stringer *et al.* 2007).
- *Achieving agreement on what merits experimentation and therefore needs to be monitored.* Francis and Regier cite the example of the Great Lakes Basin Ecosystem, for which in Canada alone (not to mention USA) there are 28 federal and 34 provincial monitoring activities, after 20 years of discussion about what to monitor (1995:260). Advocating that indicators emerge from consensus can jar with divergent priorities among stakeholders. Chapter 6 provides an example of this and suggests that conflict and disagreement must be harnessed rather than avoided.

²² Development agencies hope for replicability in some form and do replicate programmes, perhaps more often than is justified. The Cynefin framework provides one explanation of the contexts in which replication are valid and those where it might be a waste of resources (Snowden and Boone 2007).

- *Limited insights on collaborative monitoring.* Collaboration is discussed in terms of visions, target setting and even modelling, but collaborative monitoring does not feature prominently. Lee implies its importance when saying ‘experimentation helps to create a social system to recognise the needle of real surprise in the haystack of mundane error’ (Lee 1993:66). Others refer to the potential cost-cutting benefits of having resource users collect data (Johnson 1999b:5). This suggests a certain naivety about the real challenges and potential of joint design of monitoring systems and data analysis to foster social learning. CIFOR’s ACM programme is partly overcoming this hiatus (Guijt 2007e). Chapter 6 discusses this in some detail.

3.2 Collaborative Resource Management

3.2.1 How collaborative resource management views rural resource management

What is Collaborative Resource Management?

Collaborative resource management (CRM), as discussed here, refers to initiatives that label themselves with any of the following adjectives: participatory, joint, co-management, community-based, round-table, or multi-party. They aim to achieve environmental conservation and socio-economic development objectives. These initiatives include forms of participatory watershed development, integrated conservation and development projects, and community-based resource management where multi-party agreements have been drawn up (Fisher 1995; Ghimire and Pimbert 1997; Larson *et al.* 1998; Hinchcliffe *et al.* 1999; Borrini-Feyerabend *et al.* 2000; Jeanrenaud 2002; Vania and Taneja 2004; Warner 2007). As this constitutes a sizeable literature, I have opted to focus on two influential sets of authors that guide practice (Margoluis and Salafsky 1998; Borrini-Feyerabend *et al.* 2000; Borrini-Feyerabend *et al.* 2004) and several critical reviews of participatory practice in the context of resource management.

The gist of CRM is that local people take on responsibilities for protecting resources and the resource base and in return receive (negotiated) access to these resources (Fisher 1995) or improvements in the quality and quantity of their resource. The output of CRM is generally a co-management plan in which (individual and/or group) rights and responsibilities for resource use and maintenance are set out in relation to multiple ecosystem functions. In broad lines, these plans aim to sustain use and benefits from natural resources for conservation and social development. Sometimes co-management plans are not developed, such as in participatory work on improving soil fertility (Defoer 1998), weed management (Bosch 1996) or integrated pest manage-

ment (Fakih *et al.* 2003). In such cases, action must take place on individual plots and the focus is on achieving a collective impact rather than collective ownership or management of common property resources.

In either scenario, CRM involves working with multiple parties, in often formalised partnerships, on problem assessment, visioning, planning and implementation. Smith (1999b) distinguishes between two main types of CRM: (1) small communities managing their own resources and (2) government and local communities working together. Inevitably, however, small communities sooner or later work in some form of partnership with government, as key aspects such as adjusting tenure arrangements or sharing benefits often require policy support.

Whereas uncertainty is the driving principle behind adaptive management with experimentation and hypothesis-testing being its practical route, the pursuit of sustainability of natural resources with a concern for local economic development is the essence of collaborative management. The practical route lies in participation and negotiation for establishing conservation and utilisation agreements. A 'learning-by-doing' mindset forms the methodological basis. In comparison with the sustainable rural livelihoods discourse (see section 3.3), CRM focuses on natural resource management agreements and not on the entire gamut of livelihood options, and is more operationally-oriented (see Box 3-3).

Despite these differences, there is no hard and fast distinction between adaptive management and CRM. Depending on the people involved and their own grounding in adaptive management, experimentation can, for example, take a more prominent role in CRM than the literature suggests. Some authors iterate between CRM and adaptive management, such as Salafsky *et al.* (2001) whose later work refers more to adaptive management, and Springer *et al.* (2007) who describe what constitutes CRM under the heading of 'adaptive management'. Recent years have seen the ideas of adaptive management that had a scientific tendency and Western application take on relevance for conservation and/or development projects in the South and an increasing merging of the two discourses (Fabricius and Burger 1997; Jiggins and Röling 2000; Salafsky *et al.* 2001; Stringer *et al.* 2006).

The Practice of Collaborative Resource Management

CRM was initiated in the context of externally-mediated and financed projects, often proposed and implemented through international development agencies and local NGOs. But its presence in government programmes is growing, and is significant as this largely determines the way in which monitoring is viewed (see under 'The Practice of Monitoring' below).

Box 3-3 Co-management in practice: the example of CAMPFIRE (PLA Notes 55 2006, Mapedza 2007)

The Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) emerged in the mid 1980s due to the recognition that no one would invest in wildlife as long as it belonged to the state. It aimed to reallocate control of rural (wild) resources to poor communal lands adjacent to national parks and offer economic opportunities that act as environmental management incentives. Since its official start in 1989, it has involved more than 250,000 people in diverse wildlife management practices and benefiting from active but judicious use of wild lands. By allowing local people to gain financial and other benefits from wild species on their land, CAMPFIRE encourages rural people to manage and maintain their wildlife in the face of other land-use options.

Some of the ways that communities use their wildlife is by leasing out hunting concessions to safari operators, and harvesting animal products such as crocodile eggs. To ensure sustainable wildlife use, the Department of National Parks helps communities to estimate their wildlife populations and set annual sustainable quotas.

Campfire, in true collaborative style, brought together a wide range of partners with specific mandates:

- NGOs, such as Zimbabwe Trust supports with training, institution building, and community skill development; Africa Resources Trust monitors external policy and regulation that affect CAMPFIRE and provides information to decision-makers worldwide; ACTION focuses on environmental education, training and materials to local schools;
- CBOS, such as the CAMPFIRE Association represents rural district councils and, therefore, community interests, and coordinated the programme;
- government agencies, including: Department of National Parks and Wildlife Management for technical advice to communities on wildlife management; Ministry of Local Government, Rural and Urban Development with overall responsibility for the rural district councils who have authority over wildlife;
- international NGOs, such as World Wide Fund for Nature for funding, ecological and economic research, monitoring, and advisory services to CAMPFIRE and also assists in training; and
- academia, such as The Centre for Applied Social Sciences at the University of Zimbabwe for socio-economic research and local monitoring.

CAMPFIRE involves problem analysis regarding wildlife presence and use, setting quota (maximum number to be killed, per animal type per year), close monitoring of wildlife presence and shooting, and resetting of targets. The process revolves around clear sharing of dividends (from hunting and other CAMPFIRE-related activities) with families, although men typically receive the money.

CAMPFIRE is widely regarded as a success story but criticism has emerged. Sithole

and Frost (2002), for example, cite several issues where generalised conclusions led to inflated impressions of success. For example, overestimating support for the programme as this is assessed per family and does not account for intra-family differences, incomplete reporting of damage by wildlife to fields (as damage on women's land is not recorded separately and crops are domestic thus considered as less valuable), ongoing poaching by those villages most prone to wildlife attack to ensure harvests, and low returns per animal that provide inadequate compensation for households.

Since 2000, the widely acclaimed success of CAMPFIRE has declined substantially due to national political and economic changes (Mapedza 2007), with resource management initiatives stagnating, resource areas being depleted and disappearing, inflation has decimated financial incentives, and financial accountability has stopped. Today's CAMPFIRE is an example of CRM in crisis.

Borrini *et al.* (2000:5) identify the key concepts that underpin practice: adaptive management, pluralism, governance, patrimony, conflict management and social communication. They identify four components in CRM – the context, the process, the plan/agreements, and organisations. The CRM process involves three main phases: preparing for the partnership, collectively negotiating plans and agreements, and implementing plans with necessary revisions. Implementation occurs via an organisation or entity that is established and entrusted with this task and is guided by the idea of 'learning-by-doing' (Borrini *et al.* 2004). The authors stress that each situation will dictate how CRM will evolve and be implemented, in line with the idea of adaptive management.

Margoluis and Salafsky identify seven phases in an iterative CRM project cycle (1998:11-12):

1. clarify group's mission;
2. design a conceptual model based on local site conditions;
3. develop a management plan with goals, objectives and activities;
4. develop a monitoring plan;
5. implement management and monitoring plans;
6. analyse data and communicate results; and
7. iterate by using results to adapt and learn.

In later work, Salafsky and his colleagues specify that step 4 should focus on developing a monitoring plan that tests assumptions. They also stress the importance of step 2 for learning:

A good model also enables your team to predict the positive and negative impacts of your activities. These predictions will provide the foundation

for learning later on. Once your activities are implemented, you can then go back to your model and see if your assumptions were correct. You can thus use your model as a foundation for learning as you move through the project cycle. (Salafsky *et al.* 2001:39)

The Role of Stakeholders and Collective Learning

Not surprisingly, with a focus on collaborative resource management, Borrini and her colleagues as well as Margoluis and Salafsky place stakeholders central throughout, from design to evaluation. Both authors devote considerable attention to articulating who to bring together, how to ensure that voices are heard, negotiating differences as a necessary part of each step of the process, how to merge different perspectives on indicators, and so forth. These issues are considered critical for success.

Both authors work with relatively formally organised configurations of stakeholders. Neither authors have a 'messy partnership' focus (as in partners with diverse and conflicting and unclear objectives, see Chapter 1). Borrini and colleagues discuss diversity of stakeholders in relation to a formal organisation or entity established to implement the agreed management plan. Margoluis and Salafsky talk about 'the project', which makes formal project staff essential for ensuring success. A management plan is also viewed as the core output around which stakeholder engagement is focused. For them, project staff act as facilitators for the other stakeholders.

Collective learning is paramount for both authors. Borrini-Feyerabend and colleagues' notion of social communication²³ lies close to that of learning but focuses specifically on providing conditions for informed decision-making by stakeholders (2004:152). They stress the role of 'social communication' in the preparatory phase of a co-management process to describe the on-going dialogue and information flow between the Start-up Team and the interest groups, and among the interest groups themselves' (*ibid*:151). This is then followed by 'interactive learning' after the preparation stage. They discuss social communication in terms of cementing the partnership early on, while interactive learning is advocated through M&E processes based on assessing whether or not objectives have been achieved (*ibid*).

In their breakdown of the elements of communicating, 'interactive learning' figures alongside 'informing', 'raising awareness' and 'training' (Borrini-Feyerabend *et al.* 2000). They advocate the need for interactive learning to

²³ Social communication is defined as 'bridging understanding within a human community, exchanging messages (communicating) to create meaning and enrich common knowledge, often in order to face change (adapted from Ramirez 1997)' (Borrini *et al.* 2000:11).

deal with top-down expert authority, particularly when ‘there is a gap or a conflict between what is *legal* (prescribed) and what is *legitimate* (emerging from social consensus)...’ (ibid). For practice, they advise: ‘plenty of occasions for dialogue and discussion, and the opportunity for everyone to express their own views, to ask questions and to dissent’ (ibid:13).

Margoluis and Salafsky refer to learning explicitly as one of the three main components of integrating adaptive management type thinking into community-based resource management (1998:221). Learning for them occurs when monitoring data are used to prove or disprove basic assumptions of the resource management initiative, following in the steps of adaptive management. Where assumptions are challenged by data, they then advocate using the information to adapt and improve the initiative by trying to explain why an assumption might be incorrect and identifying changes to the project (see below for more details). Creating a model of anticipated change enables the articulation of different perspectives that then converge around a common understanding²⁴ (Salafsky et al. 2001:40). Through this, collective learning is considered possible. But it does depend on assumptions being clear and this is often a problem in practice (see next section).

3.2.2 Monitoring theory and practice in collaborative resource management

The Role of Monitoring

Collaborative resource management efforts refer to monitoring in terms of a logic model perspective (Borrini-Feyerabend et al. 2004, see Chapter 4) and hypothesis testing (Salafsky et al. 2001). Salafsky and colleagues are quite clear where they feel the emphasis should be:

‘There are two primary reasons for monitoring a project. The first is so that you can convince other people that you are doing what you set out to do. This type of monitoring is typically done to satisfy donor requirements or to help your boss or board of directors conduct a performance evaluation. The second is so that you can learn whether your actions are working or not working so that you can take corrective action if needed. From an adaptive management perspective, you should be much more interested in the second reason. You undertake monitoring because you want to see whether you are being effective and to learn how to improve.’ (ibid:48)

The logic model perspective is used for the planning of CRM initiatives and consequently also helps structure monitoring. Monitoring is defined as ‘the

²⁴ Note that the authors do not refer to *multiple* models of expected change, relating to different stakeholder interests.

regular recording and analysis of selected information on a given phenomenon or activity' (Borrini-Feyerabend *et al.* 2000). 'Information' refers to indicators for each of the objectives in the co-management plan. Margoluis and Salafsky prioritise learning to test assumptions as the purpose of a monitoring plan, in relation to which they define monitoring as 'the periodic collection and evaluation of data relative to stated project goals, objectives and activities' (Margoluis and Salafsky 1998:7). In practice, they then advocate the identification of indicators to 'confirm that each link along the [causal] chain is or is not occurring' (Salafsky *et al.* 2001:49).

Box 3-4 provides an example of the role of monitoring in a collaborative management initiative, in this case, that of the CAMPFIRE programme (also see Box 3-3). Monitoring consists of an ecological comparison of wildlife allocation versus use in yearly cycles, with stakeholder meetings to analyse data and agree on adjustments to the allocations. The focus is on wildlife numbers and use that drive the monitoring system. Other examples of what is monitored in the context of forest management includes the monitoring of (il)legal forest use activities, types and quantities of utilised species and products, ecosystem impact, user presence, and community attitudes (Watts 1996, McDougall *et al.* 2007, Nyirenda and Kozanayi 2007, Kamoto 2007). Sometimes more socio-economic aspects are monitored, such as income from forest use (Cronkleton *et al.* 2007) or the implementation of an agreement about returning land following disputes (Oyono *et al.* 2007).

Reference is sometimes made in the literature to monitoring the process of coming to a co-management plan. This involves identifying and tracking qualitative indicators, such as active participation of partners, degree of participant's satisfaction with the plans, availability and quality of process facilitators, etc (Borrini-Feyerabend *et al.* 2000:60). This does not appear to be driven by a theory about the participatory process but rather by ideas about the quality of an ideal process, as the focus is on lists of indicators about, for example, 'good preparatory phase'. For some (Hobley 1996:105), the presence of monitoring and monitors who are accountable to users represents an indicator of robust local forestry institutions.

The Practice of Monitoring

As mentioned, one perspective on monitoring of CRM derives from logic models (Borrini-Feyerabend *et al.* 2004). Logic models focus on monitoring indicators related to specific pre-determined results (see Box 3-5 and Chapter 4) to prove progress and ensure accountability. The indicators focus on achieving set objectives, which will include ecological monitoring (see BOXES 3-4 and 3-6). If aspects

such as the quality of the partnership and partners' performance is explicit in the objectives, then indicators may be formulated related to that and learning can be possible. However, often the focus in practice is on activity reporting, notwithstanding growing interest in emphasising higher level results that enable understanding the accumulative effect of activities (see Chapter 4).

The joint articulation and continual assessment of indicators is central to monitoring CRM. Indicator analysis should reveal changes related to the status and quality of the natural resources and to any related social and economic objectives (Bosch *et al.* 1996; Borrini-Feyerabend *et al.* 2000:58). For each indicator, a method needs to be found and clarity given about how, where and by whom data will be collected. Contextual information collection is also

Box 3-4 Monitoring within CAMPFIRE, Zimbabwe (Child and Jones 2006)

The Campfire Project has triggered the development of a range of monitoring tools (<http://www.policy-powertools.org/related/campfire.html>). These include: quota setting, problem animal reporting, financial management toolbox, and counting wildlife.

Tracking changes in the wildlife populations is based on information from various sources:

- Aerial surveys that concentrate on the visible elephant, useful as an indicator species and due to it being the highest income earner (through trophy hunting).
- Professional hunters and safari operators who spend much time in the field observing wildlife make significant estimates of species that occur in moderate numbers, such as wildebeest, sable, waterbuck, lion, and leopard.
- Community-based wildlife counts based on village maps with monthly animal sightings that are cross checked with neighbouring villages to rule out double counting.
- Annual community workshops in which expertise is pooled to come to estimated wildlife populations per CAMPFIRE district.

Taking population estimates as the starting points, sustainable harvesting quotas are set based on local conditions. Communities are being trained to be able to set their own quotas. Quotas are issued annually when hunting records from the last season are analysed by the Department of National Parks.

Monitoring to check that quotas are not exceeded were ensured by:

- Safari operators obligation to record trophy quality;
- Detailed records of game animals used for cropping, problem animal control, live sales, other use;
- Game counts, aerial surveys and wildlife sightings on animal populations.

encouraged in order to help use the conceptual model that underpins the management plan. All information, when collected and analysed systematically, is supposed to help improve the project by showing if initial design assumptions are incorrect, interventions poorly implemented, the context has changed, or a combination of these factors (Margoluis and Salafsky 1998:8). Thus information derived from monitoring efforts can help change underlying (design) assumptions and the interventions themselves.

Borrini *et al.*'s detailed and practical guide (2000) on collaborative management talks in general terms about constructing learning from monitoring. Statements include: 'in order to learn by doing it is not only important to collect data and information, but also to have a constructive attitude' (ibid:58); 'this may include the gathering of data and information not even mentioned in the follow-up protocol ... Such data and information should be documented and analysed, to understand in detail the main factors that have an impact on the natural resources and the stakeholders Both negative impacts and positive influences and accrued benefits' (ibid:59). That it is intended to be collaborative can be discerned from statements such as 'the factors identified shall be brought to the attention of the responsible [collaborative management] organisations in the monitoring, evaluation and review meetings' (ibid).

The second focus of CRM monitoring, hypothesis testing is the same as for 'adaptive management' where assumptions are formulated and matching indicators are found around which to collect data that can confirm or refute the hypothesis. Data should only be collected related to the task of testing assumptions. The authors sketch an ideal, which they acknowledge is difficult to achieve:

Stating your assumptions in a clear fashion will enable you to figure out what data you need to collect to test them. This includes designing the

Box 3-5 Logic models

LFA is an approach to planning that starts with a problem-oriented situation analysis that leads to formulating a hierarchy of objectives – from goals to purposes, outcomes and activities. Each level of this hierarchy is monitored with predetermined indicators. It is a framework for structuring a certain kind of information needs. It is most useful when dealing with outcomes that are expected and of agreed significance (Davies and Dart 2005). Where outcomes are unexpected or there is no agreement on the significance of outcomes then the use of indicators becomes more problematic (ibid). Chapter 4 discusses the logic models in detail.

appropriate comparison and selecting the right indicators to measure. In figuring out what indicators to use, you need to keep in mind that having lots of data does not necessarily translate into having good information. In fact, you may find that having lots of data on unrelated topics may actually make it harder to find and use the specific bits of data that you actually need to test your key assumptions. (Salafsky *et al.* 2001:48)

Margoluis and Salafsky provide a hypothetical example (1998:223), that of an initial assumption being ‘that rattan collectors who received a 25% increase in their income would not continue to use destructive harvesting methods’. If initial data shows that most families still use destructive methods despite a 32% increase in income from rattan collection, then the core assumption on which the entire project is based is incorrect. Examples of the adaptations that a project might opt for – depending on the final analysis – is inclusion of a training component on sustainable harvesting techniques, negotiating rules and enforcement systems, or increasing target income increases to

Box 3-6 Monitoring in collaborative management (Borrini-Feyerabend *et al.* 2000; Borrini-Feyerabend *et al.* 2004)

‘For each plan and each agreement, the institutional actors have identified expected results and impacts, as well as indicators and procedures to monitor and evaluate them (follow-up protocol)... The protocols [for the co-management plans] make explicit the results each activity is expected to obtain, what indicators will be used to assess them and what changes each indicator is expected to reveal. The indicators will likely refer to the status and quality of the natural resources in the NRM units as well as to the social and economic objectives of the accompanying agreements. Besides monitoring results, however, the process of co-management itself deserves to be monitored. To do so, a variety of qualitative indicators are useful. All indicators should be monitored regularly and the measured data and collected information should be made accessible to the institutional actors and general public. Unplanned collection of unexpected information may also be extremely useful.’ (2000:58)

‘Regular monitoring and evaluation of both the process and results of the co-management initiatives is needed to assess and fill gaps in design and implementation, and to gauge whether progress is being made and is likely to remain sustainable. For both, essential ingredients are baseline data and adequate resources to sustain the collection and analysis of information through time... Monitoring should be carried out at an appropriate frequency and the measured data and collected information should be made accessible to the relevant actors and the general public. The indicators should be identified on a case-by-case basis, although some examples of indicators for the different phases of a co-management process may provide useful ideas.’ (2004:314)

50%. Margoluis and Salafsky also encourage a close look at contextual factors to explain the data and at the monitoring and analysis methodology to see if indicators were incorrect, data collection was inaccurate, etc.

Margoluis and Salafsky (1998:85-104) summarise the process of developing a monitoring plan as three steps:

1. determine audiences (for information), information needs, monitoring strategies, and indicators;
2. select methods and determine tasks necessary to collect data; and
3. determine when, by whom, and where data will be collected.

These steps echo the standardised logic of project M&E that I will discuss in Chapter 4. Noteworthy is the absence of an analytical stage. They also suggest a departure from the ecology-heavy monitoring approach advocated by adaptive management by suggesting a focus on monitoring the reduction of key threats (Salafsky and Margoluis 1999). This, they argue, is perhaps less direct, but more sensitive to perceive changes, and above all practical to use.

Unlike in the case of adaptive management, the collaborative resource management literature does not deal explicitly with the notion of 'surprise' other than by way of general encouragement to be open to the unexpected (see end of first quote, Box 3-6). Margoluis and Salafsky (1998:230) advise project staff not to be discouraged by changes in plans: 'the most interesting results – the findings that lead to true advances in understanding – are the ones you never expected to get. You will only benefit from these unexpected results, however, if you are ready to look for them, learn from them and act on them.' In more recent literature, with a stronger emphasis on adaptive management surprise is recognised as a principle of adaptive management and encourage its use to point to flaws in understanding in generic terms. In neither case is practical guidance provided (Salafsky *et al.* 2001:72).

Critical Reflections on CRM

Criticism on collaborative resource management centres around simplification of relationships, scope of relevance, and general optimism about humanity as harmonious and willing to share benefits that together create an impression of success, when in fact, there is limited understanding of its impact. These are criticisms common to the participatory development discourse as a whole (*cf.* Cooke and Kothari 2001; Hickey and Mohan 2004) but I will focus here on issues related to monitoring and collaborative resource management.

Many critics object to the simplicity with which 'community' is approached in much CRM (Mosse 1994; Sarin 1998; Agrawal and Gibson 1999; Leach and Fairhead 2001; Leach 2002; Guijt 2007e). The literature on CRM tends to identify

partners as homogenous blocks, such as 'community' or 'local', 'government', 'civil society' or 'NGOs' and allocating to each group certain roles during CRM. Based as it is on the notion of representation, simplifying social groups in this manner makes it appear a more manageable and clear-cut task but still leaves the practitioner with the difficulty of knowing with whom to negotiate, as not all significant groups have clear forms of leadership (Fisher 1995:33). This lack of clarity obviously has implications for whom to involve in what way when developing and implementing monitoring – and what can be expected of them.

A CRM process based on stakeholder representation aims to accommodate considerable diversity of interests. This is assumed to be possible via joint situation and problem analysis that is a hallmark of the participatory methodologies (Leeuwis 2000) through which CRM occurs. Leeuwis summarises the prevalent methodology for achieving social change as 'a mixture of planning, decision-making and social learning models' (ibid:933) before proceeding with a resounding critique. He particularly objects to what he sees as unjustified confidence in dialogue and joint analysis to resolve differences. Edmunds and Wollenberg (2001) note that it is ironical how the very diversity that is valued and brought together in stakeholder negotiations is then eliminated at the negotiation table by pushing for consensus that requires participants to 'gloss over dissenting views' (pg 3). This leads to unrealistic expectations about the 'degree and durability of agreements reached' (pg 3) but also forced agreements on what to monitor, how and by whom (see Chapter 6, this thesis). Furthermore, involving local stakeholders across wide spatial scales can be prohibitively time consuming and expensive (Stringer *et al.* 2006).

The simplification of social actors and their participation extends itself to an optimistic view on human nature and over-optimism about the likelihood of equitable sharing of benefits. Agreeing on and implementing equitable benefit sharing becomes complex due to the intersection of many actors, scales and institutions (Leeuwis 2000; Mahanty 2002; Cronkleton *et al.* 2007; Guijt 2007e; Kamoto 2007; McDougall *et al.* 2007; Nyirenda and Kozanayi 2007). Collaboration in practice requires trust between groups at the centre, holding the process strings so to speak, and local groups. Yet often the stakes and related conflicts are too high to allow for meaningful collaboration. CRM assumes that incentives are sufficiently high and equitable to ensure compliance to negotiated agreements, an assumption that is hard to uphold for resource situations where benefits accrue slowly (Fisher 1995) or are simply inadequate or unequally distributed (Baland and Platteau 1999). In Chapter 6, I illustrate how limited interest in concerted action directly affects the quality of joint monitoring.

For this thesis, CRM is interesting as it is practical and multi-actor oriented and stresses learning-by-doing with the help of monitoring, and appears to rely on standard M&E processes. Due to the reliance on standard monitoring practice, I will leave the bulk of my critical comments on CRM-related monitoring to Chapter 4. Here I highlight five aspects briefly.

Critics point out the *island mentality of collaborative resource management*, saying that while small-scale efforts may be designed and implemented effectively, their success can always be threatened by a lack of, unimplemented or contradictory higher-level policies. Common examples include that of community-based forestry amidst widespread condoning of large scale illegal logging or giving vast logging concessions (Campbell 2002) or the project ensuring local fisherfolk do not dynamite coral reefs to increase fish stocks while national government sells large fishing concessions in the same zone to foreign fishing vessels (Makoloweka and Shurcliff 1997b; Makoloweka and Shurcliff 1997a). Hence monitoring the micro, without linking it to macro processes and phenomena, can lead to great accuracy about ineffective actions.

The *methodological focus has largely been on standardised planning of implementation and of monitoring with little accommodation of ongoing problems with practice*. CRM in practice recognises and advocates context-specific processes, negotiation and conflict resolution. However, the methodological rigidity with which highly diverse contexts have nevertheless been approached have created situations of imposed agreements and bureaucratisation (Fisher 1995). Furthermore, ideas for monitoring have not been fundamentally rethought. No one disputes the core ideas of what 'should be done'. Yet relatively little attention is paid to resolving the many ongoing difficulties with monitoring practice. Salafsky and colleagues (2001:33-63) refer to several problems: very limited hypothesis-testing due to insufficient time and analytical capacities; over-reliance on indicators with insufficient eye for the limitations of what they convey; difficulty of investing in clarifying 'model' versus implementing it; overly rigid following of models; ongoing tendency for excessive indicators; insufficient time spent on entering and using information, analysis receiving inadequate attention due to lack of time and prioritizing implementation. These are significant obstacles for which no guidance is offered in the CRM literature.

Useful indicators, being the backbone of this approach, are difficult to identify let alone agree on in the case of multiple stakeholder engagement. Abbot and Guijt (1998:37) state: 'Selecting indicators is one of the most difficult steps in setting up a participatory monitoring methodology. It is this stage that high-

lights, more than any other, the different information needs and expectations of monitoring of different stakeholders. It also reveals that what one group considers 'trustworthy' information, does not necessarily hold for another.' They summarise some aspects of indicators in participatory resource management that require more attention (ibid:38-43):

1. if we acknowledge multiple stakeholders and multiple views of reality, then the notion of pre-defined and 'objective' indicators must be replaced by 'negotiated' indicators that are 'channels for bridging realities and meanings' (Ricafort 1996) – yet objective indicators still dominate;
2. highly differentiated patterns of natural resource use must be reflected in socially differentiated indicators but are rarely done so;
3. as indicators are a communication tool, they must be easy to understand and capture the imagination or 'resonate for the intended audience' (MacGillivray and Zadek 1995).

These challenges, and thus the viability and desirability of joint indicator identification, is not questioned in CRM.

The CRM literature is dominated by a focus on predefined indicators, while the social processes surrounding monitoring, such as the joint construction of insights from data, remains unclear. Analysis is increasingly recognised as being important (Salafsky et al. 2001:55-58) but it is treated in general terms, i.e. its importance and the need to distil lessons. No practical guidance is given on how that can happen or on the difficulties relating to identifying lessons (cf. Patton 2001; Snowden 2003). This does not diminish the value of some interesting monitoring method innovations that have emerged from CRM, such as the use of palmtops (small hand-held computers used for data entry) and mapping to track resource use in Namibia (Larson et al. 1998) or making a time series of photos of changing field borders. Such mechanisms focus on the 'how' of data collection, and not on the critical issue of how data are to be socialised and analysed in order to lead to learning that can enhance collective actions.

Finally, the *accountability rationale of monitoring in CRM* means monitoring is driven mainly by a need to know impact of the initiative in question and is worth continuing (Hobley 1996). Little attention is given to considering how monitoring can work to advance alternative – emergent and transformative – forms of development for rural resource management by 'messy partnerships' (see Chapter 1).

Overall, the complexity of collective monitoring is simplified (Lawrence 2002). Issues such as how to deal with the heterogeneity of data (different levels and formats from different sources), merging different information needs in the same system, interpreting information and implications with

people driven by different norms and priorities, heterogeneity of data for larger scale initiatives, and the long time frames needed for reliable ecological information, are not addressed. Notable is the paucity of attention paid to the critical issue of whom to invite to be a partner in the monitoring process and how to negotiate what role each is to have and how this can evolve. Calls for more development of participatory monitoring also acknowledge the challenge of designing 'simple, affordable monitoring methods that will channel information to key people in a stimulating way ... particularly local monitoring systems implemented by the users and managers of forest resources' (Hobley 1996:244). Part of the difficulty is how to track critical changes, that relate to key concerns such as empowerment, security and voice (ibid:244; Guijt 2007a).

These criticisms can be made of those CRM initiatives that actually include thoughts on monitoring (and evaluation). But some attribute little importance to this for learning within participatory resource management. For example, Farrington and Lobo (1997) mention five pre-conditions for scaling up participatory watershed development in India, none of which refer to learning and feedback mechanisms. They emphasise solid planning and negotiated partnerships as sufficient for successful resource management.

3.3 Sustainable Rural Livelihoods

3.3.1 How 'Sustainable Rural Livelihoods' views rural resource management

What is the 'Sustainable Rural Livelihoods' concept?

Coinage of the term 'sustainable livelihoods' is commonly attributed to Gordon Conway and Robert Chambers who merged the three concepts of capability, equity and sustainability in their definition:

the capabilities, assets (stores, resources, claims and assets) and activities required for a means of living. A livelihood is sustainable which can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at both local and global levels and in the short and long term. (1992:6)

In 1997, the Institute of Development Studies (IDS) (Scoones 1998) and the Department for International Development (DFID) (Carney 1998) took the concept, added 'rural' and developed this into an analytical framework that has since then increasingly been used as an organising principle for DFID rural

development policies, particularly agriculture. Additional conceptual input has come from the Overseas Development Institute (ODI), while those making it operational besides DFID (since 1998) include UNDP (since 1995), CARE (since 1994), and Oxfam-UK (since 1993). It is also an online network (<http://www.livelihoods.org/Network/Network.html>).

Sustainable rural livelihoods (SRL or SL) has been described as an ‘approach’ (Farrington *et al.* 1999), ‘a way of thinking about objectives, scope and priorities for development’ (Ashley and Carney 1999:6), ‘an analytical framework’ to understand poverty more holistically (Toner 2002), and an ‘integrating device, helping to form and bring together the perspectives which contribute to a people-centred SL approach’ (Farrington *et al.* 1999:8). Below I will refer to it with the more recent term ‘sustainable livelihoods approaches’ (SLA) (Toner and Franks 2006).

The SLA framework now commonly used (DFID 2000a) describes livelihoods in terms of five livelihood assets or capitals (financial, natural, social, human and physical) (see FIGURE 3-2). In brief, the framework states that assets are initially affected by the vulnerability context in which they emerge, are traded off against each other, are dynamic over time, and differ between households and communities. Access to all assets is vital for the sustainability and resilience of the livelihood in question. These five assets are transformed by a range of policies, processes and institutions into livelihood strategies, which lead to certain livelihood outcomes, such as growth of various assets and related flows of goods and services. The existing stock of

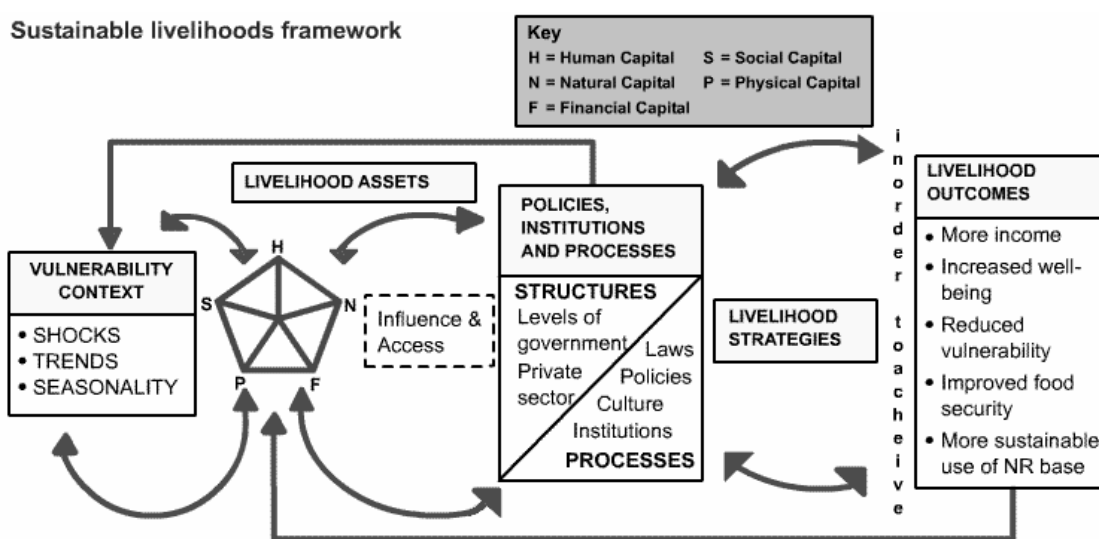


FIGURE 3-2 The SLA framework (DFID website)

assets is partially shaped by contextual factors. 'It can be used in both planning new development activities and assessing the contribution to livelihood sustainability made by existing activities' (DFID 1999:1).

Environmental concerns, central in both adaptive management and CRM, is only one of the five capitals and not usually the focus of livelihoods interventions. Instead, a more generic notion of sustainability is the main concern, based on the rationale that previous rural development policies focusing on natural resources and their use has failed to maximise rural opportunities (Carney 1998). The natural resource base is viewed more as a key contextual factor for improving livelihoods:

'A livelihood is sustainable when it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and assets, *while not undermining the natural resource base*' (Scoones 1998:5 emphasis added).

Sustainable Livelihoods Approaches in Practice

Sustainable livelihoods approaches rest on six principles: people-centred, holistic, dynamic, building on strengths, macro-micro links and sustainability. In practical terms, analysis, often qualitative and participatory (DFID 1999), starts with people's livelihoods and changes therein. UNDP has outlined five activities to try to operationalise the concept (DFID 2000b), although these remain generic:

- A participatory assessment of the risks, assets, indigenous knowledge base, and coping and adaptive strategies of men and women within particular communities;
- Analysis of the macro-, micro- and sectoral governance and policies that influence men and women's livelihood strategies;
- Assess and determine the potential contributions of modern science and technology that complement indigenous knowledge systems in order to improve livelihoods;
- Identify social and economic investment mechanisms (*i.e.*, micro finance, expenditures on health and education) that help or hinder existing livelihood strategies; and
- Develop an M&E system, with accompanying indicators, to assess progress towards livelihood sustainability.

Various methods have been identified to support implementing SRL programmes at the country level (Pasteur 2001; IDS 2007). The methods as such are not new, including, for example, visual Participatory Rural Appraisal (PRA) methods for assessing specific aspects, stakeholder analysis, participatory evaluations, and institutional histories. The novelty lies in the analytical use

of the framework to construct a common language around which to organise observations and findings.

In practice, the concept of sustainable livelihoods has been used mainly as a framework for analysing poverty and identifying development priorities.

It has also been used for:

- programme (re)design or reorientation, by ‘structuring the understanding of poverty and of rural development options’ (Goldman *et al.* 2000:1);
- identifying how discrete projects and government services fit into the rural context in question (*ibid*);
- clarifying what policy is needed to support sustainable livelihoods (*ibid*);
- generating a range of potential development entry points in a transparent way (Ashley and Carney 1999); and
- assessing impacts (Ashley and Hussein 2000).

While adaptiveness and social learning are not explicit in SLA, unlike with adaptive management and collaborative resource management, the principle of dynamism highlights the importance of a learning attitude. The approach ‘seeks to understand and learn from change so that it can support positive patterns of change and help mitigate negative patterns’ (DFID 1999:6). Furthermore the DFID Guidance Sheets assert that ‘SL-guided projects are characterised by ... greater use of process-type approaches and more emphasis on learning (DFID 2000), thus it should in theory be able ‘to respond flexibly to livelihood concerns and opportunities’ (Ashley and Carney 1999:39). This requires support for those involved in implementing to innovate and then have opportunities to reflect on lessons.

The Role of Stakeholders

Three of the six principles relate to stakeholders: ‘people-centred’, ‘responsive and participatory’, ‘conducted in partnership’. Hence sustainable livelihood approaches advocate inclusion of stakeholders but does so in a generic way. Instead of a specific vision or overarching guidance for participation, reference is made to generic principles and intentions of what should happen:

‘At a practical level, this means that the approach:

- starts with an analysis of people’s livelihoods and how these have been changing over time;
- fully involves people and respects their views;
- focuses on the impact of different policy and institutional arrangements upon people /households and upon the dimensions of poverty **they** define (rather than on resources or overall output *per se*);

- stresses the importance of influencing these policies and institutional arrangements so they promote the agenda of the poor (a key step is political participation by poor people themselves); and
- works to support people to achieve **their own** livelihood goals (though taking into account considerations regarding sustainability).’ (DFID 1999, original emphasis)

In operational terms, the SLA literature refers to a collection of processes and methods on participatory development. For example, the SLA toolbox highlights five aspects: policy, institutions and processes; programme identification and design; planning new projects; reviewing existing activities; and monitoring and evaluation (IDS 2007). Each of these aspects contains a list of methods, toolboxes, manuals, and/or frameworks that were developed by other organisations and are listed as possible suggestions for use. Particularly under ‘programme identification and design’ reference is made to a range of generic participatory processes and tools, such as participatory communication planning tool, participatory vulnerability analysis, participatory livelihoods assessment, and participatory farm analysis. However, there is no integrative framework or guidance provided on how to link these processes to the conceptual framework (see FIGURE 3-2). Nor is there reference to critiques of participatory development.

DFID states explicitly that ‘the livelihoods approach will not be effective unless operationalised in a participatory manner by people who are skilled in social analysis and who share an overall commitment to poverty elimination. The approach incorporates and builds upon existing participatory methodologies.... Indicators of impact are expected to be negotiated with local people. This idea of ‘negotiation’ goes well beyond minimal ideas of participation as consultation’ (DFID 2000:9). However, in a review of various livelihoods-oriented projects, the authors conclude:

The concepts of ‘ownership’, ‘participation’, ‘empowerment’ and ‘partnership’ need to be worked through critically in relation to the exercise of power in all stakeholder relationships. Acknowledging and seeking to reduce disparities of power in implementation is a considerable challenge, requiring new skills and working practices for all parties. (Franks *et al.* 2004:v)

3.3.2 Monitoring theory and practice in sustainable livelihoods approaches

The Role of Monitoring

While livelihood approaches have been used to review existing projects and programmes and assess their local impact, it is not associated with a set M&E

approach (DFID 2000). Instead it appears to rely on existing M&E practice, which suggests that in most cases it will be based on the logical framework thinking that guides much externally-driven/initiated development interventions (see Chapter 4).

Perceived changes in livelihood outcomes and strategies are assessed against aspects from the framework, namely changes in assets, changes in activities or trends, changes in policies, institutions or processes. One impact assessment looked at: '(a) current livelihood strategies, achievements and outcomes, (b) how livelihoods are influenced by the project, and what the key internal and external influencing factors were, and (c) differences between stakeholder groups' (ibid) (Ashley and Hussein 2000). However, many project managers are likely to have included such elements in impact assessment without the need for a livelihoods framework.

The role of monitoring is couched in general terms. For example, Pasteur (2001:4) refers to the importance of developing a participatory M&E system with partners and stakeholders in 'the negotiation phase' of planning an intervention based on SLA. Such a system aims to learn lessons from implementation and correct problems quickly (Toner 2002:10).

The checklist function of the livelihoods framework is mentioned as useful to structure M&E processes (Ashley and Carney 1999:2). Its supposed conceptual clarity is assumed to help frame the discussion of monitoring information into 'domains' and objectives. The framework has been used to sort and draw together 'a vast array of positive and negative impacts' and structure the analysis, which helped to reduce the floundering amidst detailed observations (Farrington *et al.* 1999:7).

Another role of monitoring within SLA is to help guide implementation of the approach. Toner (2002) stresses the importance 'to establish principles and a process for mutual learning by both donors and partners (p.10). Toner mentions the importance of learning mechanisms in general, and with it workshops, retreats and exchange visits in order to reassess and adjust original plans. However, it is unclear what monitoring is expected to contribute to this general need.

In theory, monitoring of SLA is conceived as a cycle of 'knowledge, learning, performance' (Ashley and Carney 1999:44). So what should its practice look like?

The Practice of Monitoring

The livelihoods framework has several features that could, in theory, facilitate monitoring. It acknowledges the dynamic nature of strategies and out-

comes. Conceptually, it emphasises learning: ‘SL approaches require on-going learning throughout implementation and therefore highlight the importance of monitoring and evaluation’ (ibid:27). The themes are identified in the framework (assets, stresses, institutions, strategies, outcomes, etc), for each of which indicators or some form of monitoring could be conceived. More optimistically, ‘the SL framework is a useful checklist for the design of monitoring systems’ (Ashley and Carney 1999:2).

Shaxson (1999:1) points out: ‘Adopting a livelihoods approach to poverty means changing the way in which agricultural research is implemented and monitored’. With a broadening of the understanding of poverty, and contextualising natural resource management as part of human activity, this ‘incorporate[s] intersectoral issues, micro-meso-macro links, the effects of institutional failure and the need to negotiate indicators of impact’ (ibid).

The livelihoods literature does not offer detailed steps for monitoring SLA-based interventions. Box 3-7 summarise several key features. The list constitutes a bit of a paradox. On the one hand, it contains various steps, each of which contains many challenges, and yet urges ‘modesty and realism’ as a last step. The list represents an idealised, overly simplified and arguably unrealistic perspective on monitoring.

The practice of monitoring in the context of the sustainable rural livelihoods discourse is ‘an idea in search of a method’. To date, those involved in

Box 3-7 Steps in monitoring sustainable livelihoods initiatives (Ashley and Carney 1999:27-29)

- negotiate indicators with the poor and other stakeholders
- monitor a range of livelihood impacts, though not all are possible, ‘SL analysis can help identify the priority second-round effects – both positive and negative – to be monitored’
- monitor assumptions
- conduct socially differentiated monitoring
- combine process and impact indicators of policy change – ‘measures of process and organisational change should be linked, where possible, to local indicators of effects on the ground’
- balance negotiated indicators with taxpayer accountability and combining with technical data
- aim for ‘cost-effectiveness over the long term, using indicators developed with partners rather than short-term economic calculations’
- be modest and realistic and manage expectations of what is possible

SLA-based interventions appear largely to have relied on mainstream project monitoring approaches (Ashley and Carney 1999; Franks *et al.* 2004; Toner and Franks 2006). UNDP encourages focusing efforts on detailing the 'right' set of livelihood indicators, while others conclude that methodologically the solution lies in using a range of PRA-type and conventional tools while accepting that trade-offs will remain, and thus that participatory approaches to M&E are essential (Ashley and Carney 1999:2). The core reference in the SLA toolbox to 'best practice in PM&E' is a document I wrote in 1997 (Guijt 1999). This has not been updated in a decade. Furthermore, it is based on the work in Brazil, which as I will argue in Chapter 6 this thesis was guided by a common but problematic set of assumptions.

More recently, Toner and Franks compared ten SLA-based interventions and conclude:

'With regard to day-to-day monitoring of intervention, the case studies show that monitoring systems tend to be constructed in order to meet donor requirements and expectations. Donor monitoring requirements were often predefined through the use of logical frameworks (and other planning tools) and were reported quarterly in most cases. Evaluatory processes appear to be more tailored to meet the specific management needs of the intervention with respect to learning from actions taken and assessing the satisfaction of partners and beneficiaries. Some attempts were shown in the case studies to establish participatory (and more qualitative) M&E systems involving beneficiaries. In the majority of cases, information flows are upwards from the micro to the macro level and there is limited top-down accountability to beneficiaries. Several of the case studies tried to use participatory feedback and drive the process from the bottom upwards but experienced problems in institutionalising systems and feedback and participation by the ultimate beneficiaries was fairly limited.' (2006:88)

For DFID, the monitoring and evaluation of SLA is considered one of the more problematic areas (Ashley and Carney 1999:40), and a challenge that has been tackled 'if ongoing learning is to be effective' (*ibid*:42). Particularly important is the adjustment that is being demanded of existing project cycle procedures 'to make way for the flexibility, process-orientation and lesson-learning implicit in SL approaches, and to monitor changes in livelihoods' (*ibid*:37). Franks (2004:49) summarises the challenges as follows:

- more emphasis on M&E as the reflective part of action learning;
- focus on a single system of reporting based on existing systems, rather than multiple or complex reporting procedures;

- more local orientation of M&E processes (local consultants, local language outputs); and
- participatory feedback mechanisms (involving beneficiaries and front-line staff) need to be built into systems.

Critical Reflections on Sustainable Livelihoods Approaches

Some critical comments on monitoring of SLA-based development have been mentioned in the section above. I focus here on three overarching concerns.

Analytical complexity. While comprehensiveness of analysis is laudable and important for guiding efforts, the current level of complexity with several levels and interlocking components of analysis can lead to information overload and the identification of too many intervention options. Its focus on non-income, i.e. less tangible, aspects of livelihoods makes it difficult to pinpoint where to look for change, and will require a balancing of quantifiable and non-quantifiable aspects of livelihood changes. Additional conceptual challenges occur where rights-based approaches are to be merged with a livelihoods perspective. Introducing greater complexity will not make it any easier to discern cause-effect relationships and impacts of discrete initiatives. Such features make it difficult to know what to measure. Furthermore, introducing a rights-based approach that seek to shift institutionalised forms of oppression will require attention to the challenges posed by ‘emergent change’ as discussed in Chapter 1.

Catch-all boxes for large ideas. The framework includes many big ideas and large categories. The big ideas include ‘participation’, pro-poor, inclusive, dynamic and so forth. Yet in operational terms, the literature does not go beyond stating intentions of what ‘should’ happen. Regarding the categories, while their general linkage in a framework (see FIGURE 3-2) is useful, the problems inherent within each category remain. For example, there is a category on meso/macro issues: ‘Lumping markets, government policies and local institutions together may undervalue the importance of each’ (Ashley and Carney 1999:19) and may be too broad to understand links between poverty and environmental change (ibid:34). A general concept such as ‘sustainable’ is not made clearer through the framework. As Ellis (1999:3) explains: ‘Sustainability need not equate with the sustainability of all components of underlying ecological systems due to substitutions that occur between assets during processes of livelihood adaptation over time’. How negative changes might be compensated by positive ones will require subjective judgements and indicators will still need to be negotiated among stakeholders, which poses major challenges when identifying what needs to be monitored.

Conceptual, not practical. Its lack of operational aspects make it difficult to justify its status as an 'approach'. Instead it relies on existing methods and approaches, such as PRA, stakeholder analysis, gender analysis, etc. In so doing, it perpetuates the problems inherent in these approaches and the erroneous assumptions about development planning, such as the merit of strategic planning generally (Mintzberg *et al.* 1998), the extent to which new institutions that should deliver better development can be designed (Clever and Franks 2005) or the ability to achieve pro-poor sustainable change and yet not address power inequalities head on (Franks *et al.* 2004).

3.4 Synthesis of Expectations and Features of Monitoring from Rural Resource Management Discourses

This chapter has discussed the growing interest in monitoring for sustainability of rural development and resource management efforts related to three influential discourses. It describes what each says about monitoring. This section summarises the perspectives of the three discourses on monitoring (see TABLE 3-1). Learning with and by stakeholders is an important principle in all three approaches. How learning should occur is articulated mainly in terms of intentions and principles, with practical references being made towards existing logic model or hypothesis-testing approaches and to existing participatory methods. The complexity of how to deal with data prioritisation, collection and critical analysis in the context of 'messy partnerships' is not examined.

Monitoring within the context of concerted action, as supported and pursued by the three discourses discussed above, is closely connected to the idea of social learning: 'Social learning comes from the accumulation of knowledge within a network of organisations and from conflict between organisations and their environments' (Lee 1993:115). The practice of monitoring is expected to provide the raw data and reflection spaces that are to create the necessary knowledge. Yet none of the discourses are clear about how this should occur. By default, they appear to rely on existing views on and approaches to monitoring to which I turn in Chapter 4. I conclude this chapter with four challenges that arise from the discourses.

First, how can we deal with the excess of information that appears to be inevitable? Simon warned many years ago of the tension between information and analysis: 'What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention, and a need to allocate that attention efficiently among

the overabundance of information sources that might consume it' (Simon 1971:40). Given that humans operate with bounded rationality, the cognitive limitations on the information gathering and processing capacities of people (see Chapter 7), learning soon becomes 'a costly, step-by-step search for better alternatives, in which local improvements may or may not benefit the whole' (Lee 1993:53). One option is offered by Lee, through deliberate experimentation as a learning accelerator as this 'isolates part of complex reality, makes simple changes in it, and watches for results' (ibid). Unfortunately, this presents the limitations inherent in reductionist thinking. Furthermore, it does not help resolve the problem of how to deal with the long lead times needed for seeing ecosystem changes amidst the immediacy of short term policies that are often driven by equally short term political agendas. Chapter 7 discusses a deliberate 'sense making' strategy, the Cynefin framework, as one alternative.

The need for timely decisions brings me to the second point, the limits of deliberative learning via the monitoring-inspired experimentation that is advocated in adaptive management literature, and with it, in collaborative resource management. As Roe and his colleagues (1999:7) say:

'More deliberative and even learning-oriented management is neither a necessary nor sufficient condition for better natural resource management, when management becomes more and more urgent in a world where information is always less than reliable. Consensus-building deliberations and trial-and-error learning are no guarantee against longer-term mistakes and irreversibilities in resource management, when such exercises encourage 'group-think', discourage healthy scepticism, or are continually being overtaken by events before consequences of previous actions become clear, if ever'.

In this case, there is no time for experimentation and decision-makers will need to fall back on prevailing theories and broad analytical approaches for resource management. Levinthal and March refer to this as one of the problems with 'organisational myopia': 'There is no guarantee that short-run and long-run survival are consistent. It is easy to imagine situations in which the only strategies that permit survival in the short run assure failure in the long run and vice versa.' (1993:101). Hence an important consideration is how to think about monitoring in terms of balancing the information needs related to short term and longer term survival.

A third challenge relates to the mixing of learning functions within the practice of monitoring. In the discourses, learning via monitoring focuses

TABLE 3-1 Summarising the views on monitoring of three rural resource management discourses

Discourse	Features of monitoring	Gaps and emerging questions
<i>Adaptive management</i>		
	<ul style="list-style-type: none"> • Linked to experimentation and testing of hypotheses • Indicator-driven – to cement visions, targets and resource states • Importance of recognising surprises • Recognition by some of the role of ‘politics’ and negotiation in social learning • Monitoring given a research function • Hypothesis refining effect of models by using simulated monitoring data • Important to invest in long-term data collection and deliberative processes 	<ul style="list-style-type: none"> • Lack of attention to how social interactions will affect monitoring for learning • Experimentation is the route for assessing surprise – thus always within the domain of the experiment • Strong emphasis on role of scientists (sometimes seen as presenters of neutral data) which is not an option for all situations • Long timeframe of experimentation sits uneasily with urgent decisions
<i>Collaborative resource management</i>		
	<ul style="list-style-type: none"> • Logframe-driven, and therefore via indicators and causality thinking • Recognise need for participation in monitoring • Some recognise importance of re-examining hypotheses • Rely on existing (participatory) M&E • Learning-by-doing is recognised as essential • Meetings considered important mechanism 	<ul style="list-style-type: none"> • No attention to structuring forums for critical reflection and analysis • In practice, little testing of hypotheses occurs • Suffers from existing limitations of PM&E
<i>Sustainable rural livelihoods</i>		
	<ul style="list-style-type: none"> • Expectation that M&E is aided by a more comprehensive analytical framework • Rely on existing (participatory) M&E • No detailing of learning, analysis, reflection either conceptually or practically • Refers to ‘dynamism’ but not how to deal with this 	<ul style="list-style-type: none"> • Risk of information overload due to assumption that all aspects of livelihood complexity should be monitored • Unclear how to deal with the analytical complexity of the framework when it comes to monitoring • Simplistic discussions on ‘participation’ in M&E and thus suffers from existing limitations of PM&E

largely on the need to reassess strategies, re-examine hypotheses, and question assumptions – in short, a monitoring for improvement function. Yet as I will argue in Chapter 4, most M&E processes are designed around the need for financial accountability. Data needs to be collected in set formats for funding agencies to ensure them that money is being spent wisely. This ‘monitoring for accountability’ function is also about learning – learning *about* what has happened in relation to plans, but does not necessarily indicate what needs improving and how. The challenge relates to how these functions can be mixed in practice. As Chapter 4 will show, while the literature increasingly recognises the need for both learning and accountability, this has not, by and large, been translated in changes to M&E systems to ensure both functions can be fulfilled. Chapter 8 offers one design principle that relates to this problem.

The fourth question arises from the tension between wanting to design the future by planning and the limits of ‘crafting’ the future due to the variability and dynamism of social change processes. Cleaver and Franks specifically question the feasibility of institutional design that includes mechanisms for monitoring, commenting on the difficulty of defining indicators due to ‘the multiplicity of resources and the way they are linked to one another and utilised’ (2005:9). The paradox is that learning processes for resource management seem to require some stability but the topic in question is characterised by change (Lee 1993:11) – changes in actors, their understanding of monitoring, information needs, capacities. By implication, an evolving learning system is needed, yet one with sufficient continuity to allow accumulation of insights and improvements.

These issues are not just pertinent to those approaches that formally are labelled or label themselves as ‘adaptive management’, ‘collaborative resource management’, or ‘sustainable rural livelihoods’. The centrality of adaptiveness and reflexiveness is present in a much wider discourse that refers to ‘the challenges of governing technological, environmental and development issues in a dynamic world’ (Leach *et al.* 2007:23).

As these three discourses appear to rely largely on the M&E processes followed in mainstream project management and ecological monitoring, Chapter 4 will discuss the existing theory and praxis of such monitoring approaches. In doing so, I identify the assumptions on which monitoring is based and their resonance – or not – with the realities of rural resource development interventions.

UNDERSTANDING AND QUESTIONING PRESUPPOSITIONS ABOUT MONITORING WITHIN MAINSTREAM M&E MODELS

As Chapter 3 showed, existing approaches to rural resource management commonly make use of mainstream approaches to monitoring and evaluation (M&E). Thus it is important to understand how these approaches view monitoring and where possible pitfalls and gaps might lie.

My argument in this chapter is that mainstream development approaches to monitoring are motivated by the need for accountability and are driven by a logic that views development as ‘projectable change’ (Reeler 2007, see Chapter 1). As I will explain, this does not fit well with those interested in enhancing collective learning in ‘messy partnerships’.

The chapter is divided into four sections. First, I will discuss definitions of both ‘evaluation’ and ‘monitoring’ to highlight ambiguities and uncertainties in mainstream understanding of monitoring. Then I will describe the espoused theory of monitoring as documented in three M&E guidelines. I refer in this chapter regularly to the term ‘M&E’ rather than ‘monitoring’, as the guidelines while distinguishing the two concepts in definitional terms, refer to ‘the M&E system’ as a linked practice. I will look at definitional issues, the focus on information and construction and implementation, which leads me to identify a set of presuppositions that embody the implicit theory of monitoring. In the third section, I compare these presuppositions to the practice of the International Fund for Agricultural Development (IFAD), which aims to pursue a ‘monitoring for learning’ approach in its global work on rural development and resource management. Finally, I draw several interim conclusions about the degree of fit between mainstream thinking on monitoring and the contexts in which this is intended and expected to work. In so doing, this chapter enables me to highlight several significant anomalies and how monitoring is understood, on which I build in subsequent chapters.

4.1 Questioning the Definitions of Evaluation and Monitoring

Evaluation has been the object of considerable study, bringing forth several systems of classification and theory during more than three decades of debate (cf. Weiss 1972; Scriven 1987; Lincoln and Guba 1989; Patton 1997; Whitmore 1998; Alkin 2004; Fetterman 2005; Shaw *et al.* 2006). Monitoring has received far less attention conceptually. My starting point is the many definitions that

demonstrate significant similarities and differences. TABLES 4-1 and 4-3 list various definitions of evaluation and of monitoring. In selecting these definitions, I chose those that recur in the development literature and relate directly to the experiences that I analyse in section 4.3 and Chapters 5, 6 and 8. I make one exception in including the notion of ecological monitoring in TABLE 4-1, as this is pertinent to adaptive management (see Chapter 3). I will first refer to definitions of evaluation which are often twinned with monitoring.

4.1.1 Evaluation

evaluation²⁵ – from Fr. *evaluation*, from *evaluer* ‘to find the value of,’ from ex- ‘out’ + *value* (see *value*).

Many definitions of evaluation stick close to the original meaning – that of assessing overall value. Notwithstanding Scriven’s observation that comparison against standards is a form of non-judgemental evaluation (Scriven 2001), standards are generally used to say ‘above’ or ‘below’ the standard and related to that a judgement on performance. Therefore valuing remains the essence of ‘evaluation’. TABLE 4-1 lists seven definitions from development-focused organisations, while TABLE 4-2 summarises recurring features and noteworthy variations from these definitions.

Evaluation is treated somewhat differently in the development tradition than in the North American tradition that has produced much of the theoretical evaluation literature. Broadly speaking, the North American tradition deals with evaluation as an overarching concept that includes diverse forms and functions of using evidence, subsuming monitoring as one form.

In the development tradition, evaluation is a more specific practice (see TABLE 4-1), usually referring to infrequent studies that seek to understand changes in a certain situation as a result of a development effort and thus to assess its overall merit (for a certain time period, often a funding period). Depending on when evaluations take place in the funding cycle, they can also serve to lead to improvements (mid-term evaluations) and/or generate new knowledge (final evaluations). Most development interventions include other activities, such as monitoring, reviews, supervision missions, assessments, that cover other aspects of feedback but are not considered equivalent to evaluation.

Not all the differences in interpretations of evaluation are evident from the definitions in TABLE 4-1. Another key difference that should be noted is who is considered responsible for evaluation. Some organisations assert that this task should only be undertaken by external teams to maintain objecti-

²⁵ <http://www.geocities.com/etymonline/e3etym.htm>

TABLE 4-1 Definitions of evaluation

-
- a** 1. To ascertain or fix the value or worth of. 2. To examine and judge carefully; appraise. 3. Mathematics: To calculate the numerical value of; express numerically. (HMCO 2000)
- b** The periodic assessment of the relevance, performance, efficiency, and impact of the project in the context of its stated objectives... usually involves comparisons requiring information from outside the project – in time, area, or population (Casley and Kumar 1987:2)
- c** An assessment at one point in time of the impact of a piece of work and the extent to which stated objectives have been achieved and what the impacts have been (Gosling and Edwards 1995:13)
- d** A systematic (and as objective as possible) examination of a planned, ongoing or completed project. It aims to answer specific management questions and to judge the overall value of an endeavour and supply lessons learned to improve future actions, planning and decision-making. Evaluations commonly seek to determine the efficiency, effectiveness, impact, sustainability and the relevance of the project's or organisation's objectives. An evaluation should provide information that is credible and useful, offering concrete lessons learned to help partners and funding agencies make decisions. (IFAD 2002)
- e** Evaluation of an activity or intervention examines its relevance, effectiveness, efficiency, impact, sustainability and costs in comparison to the original objectives. (ActionAid International 2001)
- f** Evaluation is the non-standard and more irregular collection of usually already processed information and its associated elaborate analysis and explicit valuation provided by the evaluators with respect to specially defined purposes and activities, and in preparation of major decisions. Evaluation often has, but does not necessarily have, a predetermined point of reference. (Kolkma 1998:20)
- g** The systematic and objective assessment of an on-going or completed project, programme or policy, its design, implementation and results to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact and sustainability. ... determining the worth or significance of an activity, policy or program. (DAC Working Party on Evaluation 2002)
-

vity and credibility of results, while others encourage broader involvement to ensure accuracy, relevance of insights and uptake of results. Where evaluation involves the implementers, reference is increasingly made to 'self-evaluation', while evaluations shaped and implemented by intended beneficiaries are referred to as 'participatory evaluation'.

Evaluation is essentially supposed to be about learning – practical learning for improving, theoretical learning to add to knowledge, accountability learning in order to prove the merit of one's efforts. Nevertheless, how eva-

TABLE 4-2 Recurring features and differences in definitions of evaluation

Recurring features

Intended to derive some judgement about value, either by comparing against stated norms or standards

Infrequent, rather than continuous

Comparison oriented

Generally driven by questions, such as relevance, efficiency, effectiveness, impact, sustainability, why something happened, etc.

Variations in definitions

Different understandings about prime function – accountability and/or improvement-oriented (often confusion between the two within a single evaluation process)

Varying degree of specificity about (and variation in) the driving questions

Variation in specificity about type and level of information needed

Variation in form of comparison (e.g. against original objectives, compared to other similar initiatives, compared to certain ‘standards’, etc.)

evaluation relates to learning varies depending on the methodological tradition. In the well-known debate between the figureheads of two critical North American traditions – Scriven and Patton (Patton 1997:181), Scriven advocates a hands-off role for evaluators who should undertake goal-free evaluation and present an analysis of effects. This analysis can then be transformed into something useful by the client itself. Meanwhile, Patton’s stance is encapsulated in the title of his volume ‘Utilization-focused Evaluation’, as he urges evaluators to engage with the client and focus evaluations around what clients want to learn and what use it will have for them. More recently, learning and evaluation have been linked via the notion of organisational learning (Torres and Preskill 2001) (also see Chapter 7), in terms of self-evaluation (Rugh 1986; UPWARD 1996) and through lessons learned (Patton 2001).

4.1.2 Monitoring

monitor²⁶ – from L. *monitor* ‘one who reminds, admonishes, or checks,’ from *monere* ‘to admonish, warn, advise,’ related to *memini* ‘I remember, I am mindful of,’ and to *mens* ‘mind.’ The Monitor Lizard is so called because it is supposed to give warning of crocodiles.

Monitoring, too, is marked by variation in understanding. Kolkma (1998:20) offers one definition: ‘the essence of monitoring lies in its fixed purposes set

²⁶ <http://www.geocities.com/etymonline/e3etym.htm>

out *ab initio*, the fixed point of reference ..., regularity and speed of observation and reporting, conciseness in view of the standardisation of data collection procedures, and (therefore) relatively unanalysed supply of information'. TABLE 4-3 shows that while this is a relatively clear definition, it is a personal interpretation. For example, not all would agree with Kolkma's reference to it being 'relatively unanalysed'. Various definitional features are noteworthy and relevant in order to understand the term 'monitoring'.

Recurring features in the definitions of TABLE 4-3 include the focus on standardised and systematic rather than ad hoc efforts. Regularity is a second feature, as in a continuous or regularly conducted process, rather than one-off or discrete events. Data collection is another prominent feature, which is generally performance related. While monitoring practice is overwhelmingly indicator-focused, this is not specified in any definition but that of the OECD.

Variation occurs in the degree to which the purpose(s) of monitoring are specified. Many definitions remain quite generic, sometimes stating simply 'servicing basic information needs'. Some definitions of monitoring identify different topics, such as 'financial administration, 'process monitoring', 'activity tracking', 'programme monitoring' (Gosling and Edwards 1995:81) but the use to which this is to be put is generally not specified other than 'decision-making'. I elaborate on monitoring purposes in sections 4.2.2 and Chapter 8.

Therefore, definitional variation also occurs in the type and level of information that is considered necessary. Some say that monitoring must consider progress, others include context, some refer to inputs and activities only. An exception is formed by ecological monitoring that looks at ecosystem changes. In section 4.2.3, I discuss in greater detail how monitoring deals with information.

A critical point of debate is the extent to which 'analysis', or the process of sense-making, is considered part of monitoring. Some refer to this or imply it, such as Gosling and Edwards (see definition c, TABLE 4-3), while others equate analysis with 'evaluation'. This leads to variation on whether monitoring includes assessing merit or value and, therefore, how it relates to decision-making.

Kolkma (1998:20) discusses the paucity of clarity about the term monitoring within the development literature:

'The definitions also sidestep other issues such as whether monitoring is only an internal activity and evaluation external (cf. UN ACC Guidelines

TABLE 4-3 Definitions of monitoring

- a** 1. To check the quality or content of (an electronic audio or visual signal) by means of a receiver. 2. To check by means of an electronic receiver for significant content, such as military, political, or illegal activity: 'monitor a suspected criminal's phone conversations.' 3. To keep track of systematically with a view to collecting information: 'monitor the bear population of a national park; monitored the political views of the people.' 4. To test or sample, especially on a regular or ongoing basis: 'monitored the city's drinking water for impurities.' 5. To keep close watch over; supervise: 'monitor an examination.' 6. To direct. (HMCO 2000)
- b** The continuous assessment both of the functioning of the project activities in the context of implementation schedules and of the use of project inputs by targeted populations in the context of design expectations ...an internal activity (Casley and Kumar 1987:2)
- c** The systematic and continuous collecting and analysing of information about the progress of a piece of work over time, to identify strengths and weaknesses and for providing the people responsible for the work with sufficient information to make the right decisions at the right time to improve its quality (Gosling and Edwards 1995:12)
- d** The regular collection and analysis of information to assist timely decision-making, ensure accountability and provide the basis for evaluation and learning. It is a continuing function that uses methodical collection of data to provide management and the main stakeholders of an ongoing project or programme with early indications of progress and achievement of objectives. (IFAD 2002)
- e** Continuous process of observation and assessment of change caused by an intervention, as compared to its objectives, in a given context. This requires continuous collection of information about progress with the intervention. (ActionAid International 2001)
- f** Monitoring is the standardised and regular collection of concise, relatively unvaluated information and its subsequent (speedy) processing in preparation of routine decision-making with respect to pre-defined purposes and activities. Monitoring has a predetermined point of reference. (Kolkma 1998:20)
- g** A continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing development intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds. (DAC Working Party on Evaluation 2002)
- h** *Note – this definition is from the ecological literature, not the development literature.* Monitoring is the process by which we keep the characteristics of the environment in view. It provides the essential data on how systems are changing and how fast. It provides the essential feed-back loops to management, so that we can adjust what we are doing and get the best out of the system. (Spellerberg 1991:xi)
-

1984), whether monitoring is only concerned with the present as opposed to evaluation which deals with the past (van de Putte 1991), whether monitoring is for day-to-day control and evaluation for learning or policy development, whether monitoring can question the assumptions of the project (cf. Deboeck and Kinsey 1980, p. 10) and whether monitoring is solely concerned with targets, time-frames and budgets (Valadez and Bamberger 1994) or whether monitoring covers the inputs, outputs and activities, and evaluation the effects and impacts (World Bank 1981).'

Ten years on, there is still little additional clarity about Kolkma's concerns. The ambiguity, variation and generality of definitions of monitoring highlight the importance of developing more accuracy on what it encompasses. This makes it difficult to undertake a detailed critical review of monitoring for rural resource management, either conceptually or practically. In the next section, I will propose a more detailed espoused 'theory of monitoring', which then enables comparison with practice in section 4.3 and Chapter 6.

4.2 Articulating the Espoused Theory of Monitoring and Underlying Presuppositions

4.2.1 About Espoused Theory and Presuppositions

In this section, I suggest a theory of monitoring derived from practical M&E guidelines. I make use to Argyris and Schön's distinction between two types of theory of action: the espoused theory and the theory-in-use (Argyris and Schön 1978). 'Espoused theory' is the theory of action, or the words used to express what we think we do and why, or what we would like others to think we do. Articulating the espoused theory of monitoring requires identifying the (explicit) assumptions and (implicit) presuppositions on which it is based. The theory-in-use defines the actions that are actually taken. Theory-in-use and espoused theory may or may not be congruent (ibid). Argyris (1980) suggests the more congruence there is, the more effectiveness there is, i.e. there will be less divergence between expectations and consequences. In other words, the better aligned the theory and practice of monitoring are, the more likelihood that expectations of monitoring can be met. Hence if the espoused theory of monitoring says 'this will lead to learning', yet the actions taken (the theory-in-use) do not enable learning to happen, then it should come as no surprise that monitoring does not lead to learning.

The espoused theory of monitoring is articulated in official policies and formalised procedures. I have chosen to analyse three guidelines. I use Casley and Kumar's 1987 classic – 'Project Monitoring and Evaluation in Agriculture'

– that continues to guide much thinking on M&E within the rural development sector. In addition, I have selected two more recent M&E guidelines that are used within rural development and resource management projects and, thus, are linked to my empirical material. These are: AusAid’s guidelines for project cycle management (AusAid 2000) and IFAD’s M&E Guide (IFAD 2002).

The IFAD Guide is the most recent and comprehensive of the guides. It already embodies some emerging alternatives, such as incorporating the concept of participation in M&E, learning as a guiding notion, and viewing M&E as a management function. Nevertheless, it is constrained by its exclusive focus on programme logic, among other limitations.

It might appear strange to undertake a critique of the IFAD Guide, as I was co-author and team leader of the writing process. This could amount to critiquing my own ‘espoused theory’. IFAD, as client of this guide, set the parameters of the guide by opting for a programme logic-based (see next paragraph) M&E framework. Hence I was bound by this logic, despite the conceptual tensions and anomalies that emerged during the field visits that shaped much of the contents and my own emerging ideas about alternatives. We, as a writing team, were only partially able to respond to observed anomalies in adapting the given framework due to the nature of IFAD’s projects, IFAD’s vision and needs, and our own limited understanding of the presuppositions about M&E. It was, in part, the development of the IFAD guide and the questions that remained unanswered which motivated me to reflect further and culminated in this thesis. Examining the presuppositions as detailed in this chapter helped me see the extent to which I, too, was captured and blinded by the programme-logic based M&E.

The three guidelines are based on the programme logic model, specifically on the Logical Framework Approach (LFA or logframe) (see Box 4-1). This model and related logics dominates in the design and management of rural resource management initiatives. They are based on development as ‘projectable change’ (Reeler 2007, see Chapter 1). The insights emerging from the three selected texts could also have been obtained from other M&E guidelines, such as Gosling and Edwards (1995), World Food Programme (2001) or any similar approach based on the programme logic model (cf. den Heyer 2001). It is implicit in a number of key references used in Chapter 3, notably in relation to collaborative resource management (Borrini-Feyerabend *et al.* 2004) and sustainable livelihoods approaches (DfID 1999; DfID 2000a).

I will discuss the espoused theory of monitoring in terms of three defining aspects and their related presuppositions:

Box 4-1 The programme logic of LFA and related approaches

The logical framework model is often associated with a matrix. But the most important part of the LFA is actually the planning process that has been developed to improve the quality and clarity of project design. One version of these key steps, to be undertaken with a group of well-selected and diverse stakeholders, is:

- establish the general scope or focus of the project;
- agree on the specific planning framework, terminology and design process;
- undertake a detailed situation analysis;
- develop the project strategy (objective hierarchy, implementation arrangements and resources);
- identify and analyse the assumptions and risks for the chosen strategies, modifying the project design if assumptions are incorrect or risks are too high;
- develop the monitoring and evaluation framework.

The written output of the LFA is the logframe matrix. The standard matrix is a table with four rows and four columns. This matrix summarises:

- what the project should achieve, from the level of an overall goal down to specific activities;
- the performance questions and indicators that will be used to monitor progress and overall achievement;
- how these indicators will be monitored or where the data can be found;
- the assumptions behind the logic of how activities will eventually contribute to the goal, plus associated risks for the project if assumptions turn out to be incorrect.

Similar methodologies in common use in development initiatives are: Results-based Management (RBM) and Zielorientierte Projektplanung (ZOPP, or Goal-oriented Planning). Critics of programme logic models, in particular LFA, argue that its use:

- can lead to a rigid and bureaucratically controlled project design that becomes disconnected from field realities and changing situations;
- focuses too much on problems, rather than opportunities and vision – and thus limiting the development potential;
- includes insufficient attention to problems of uncertainty where a learning and an adaptive approach to project design and management is required;
- tends to lead to poorly considered sets of activities and objectives to be entered into a matrix, which gives the appearance of a logical framework, while the key elements of the analytical process have been skipped;
- is often not appropriate to programme level planning where it may be necessary to deal with a number of parallel or cross-cutting issues.

- definitional boundaries of monitoring;
- focus on information and its use; and
- constructing and implementing monitoring processes.

The English language distinguishes between assumption and presupposition. An assumption is an explicit hypothesis. Extrapolation always requires an assumption: 'From an observation to a general conclusion we require an additional general premise, an assumption.' (Mill, quoted by van Geet 1989). Van Geet (*ibid*) defines assumptions as conditions that logically (and not necessarily temporally) precede an event or proof. More broadly speaking, it refers to any conviction or basic attitude that influences the emergence of new thoughts, convictions. Whatever comes after the assumption is influenced by it. Presuppositions are implicit, unconscious, and not articulated (Geet 1989:13) or the tacit component of knowledge (Polanyi 1958:170-173; Nonaka and Takeuchi 1995). Presuppositions can emerge from experience – and become assumptions – but cannot be deduced (Geet 1989:14).

In my readings on M&E, I found no explicit mention of assumptions underpinning the theory of monitoring, although there is much in the different theories of evaluation (see 4.1). Therefore, I derived a set of presuppositions that shape my version of the espoused theory of monitoring. I am using the term presuppositions to signify the formulations of rules that have not been documented but appear to capture the explicit guidelines on M&E. I am aware that the list of presuppositions I identify is incomplete. I have focused on those that my experience has led me to observe as being pervasive and significant in terms of explaining the problems encountered in monitoring.

Presuppositions are not by definition invalid or erroneous. My reason for articulating them is to enable a comparison with practice and from that identify where espoused theory does not match theory-in-use. In section 4.3, I turn to the theory-in-use, which is often tacit, is dynamic and can be inferred from observing organisational behaviour (Argyris and Schön 1978:15). I do this by comparing each of the presuppositions with experiences from IFAD and, in so doing, raise questions about the validity of some of the presuppositions.

I discuss three sets of presuppositions that deal with key aspects. The first aspect (Presuppositions 1, 2 and 3) concerns the definitional boundaries of the term 'monitoring'. The second cluster of Presuppositions 4 to 8 looks at how the guidelines deal with information that is so central in monitoring. The third cluster of Presuppositions (9 to 13) examines the construction and implementation of monitoring processes. For each presupposition, I will first explain the core issue and then suggest the presupposition.

4.2.2 Aspect 1. Definitional Boundaries of Monitoring

There is considerable variation among organisations in the distinctions they make between monitoring and evaluation (see Box 4-2, and section 4.1). This, in part, emerges from the definitions discussed in 4.1 but also results from organisational choices. The point here is not the nature of the basis of the distinction but that a distinction is made between two terms.

The persistence of both terms, given the lack of clarity about what each is, begs the question of whether forcing a distinction between these terms is perhaps not diverting attention from the more useful question of identifying purpose-specific processes. Instead of referring to monitoring, evaluation, or M&E, and talking in terms of, for example, the 'learning and improvement system', 'the financial accountability process', or 'the strategic reflection process', more attention could be given to defining the different purposes for which information is sought and from that develop processes that can contribute to learning, rather than perpetuating unclear distinctions. This leads me to suggest the first basic presupposition.

Presupposition 1

It is necessary and/or useful to define 'monitoring' as distinct from 'evaluation' and this can be made on the basis of a range of different aspects (the people involved, information used, validity of findings, information and feedback systems needed, etc.)

Moving on to a second presupposition brings me to management. Each definition of monitoring comes with its own version of the purpose for which information is being collected. A look at TABLE 4-4 shows the recurrence of 'management' as a prime focus of monitoring. This relates to a wide range of purposes. Even at its most simple, management entails visioning, checking, guiding and enhancing performance. The definitions consider monitoring to be critical for judging and influencing implementation, generating insights, effective decision-making for corrective action. Monitoring is also expected to promote discussion, contribute to accountability, and to influence policy. Some consider that monitoring should not continuously question strategy (Casley and Kumar 1988), while others often identify this as a prime task of managers and, therefore, of monitoring. Clearly, monitoring is expected to provide considerable benefits to management. This leads me to suggest the second presupposition.

Presupposition 2

That because monitoring is intended principally to serve management, this will automatically happen, i.e. those involved will know how to make monitoring serve management.

Box 4-2 Varying basis of differentiation between monitoring and evaluation

- reflective, evaluative activities that the project/programme staff members undertake by themselves as ‘monitoring’, while activities carried out by an external person or team are considered ‘evaluation’ (Guijt field notes 2000)
- monitoring focuses on assessing performance (or performance measurement systems) and thus on outputs and intermediate outcomes, while evaluation is expected to deal with aspects such as measuring unintended outcomes recommendations, assumption testing, explaining results (Wholey 2001:345)
- monitoring is ongoing reflection within the broad term ‘evaluation’ (Torres 2002), monitoring is ‘real-time evaluation’ to provide rapid feedback to guide programme implementation (Love 2001:441) illustrate this inclusive definition
- M&E is a continuum of accountability and learning processes (IFAD 2002) and, therefore, no strict division is needed between the two terms or their functions

The diversity of purposes, the centrality of management, and the ‘M’ and ‘E’ split leads me to consider the issue of ‘analysis’. Analysis is often assumed to fall outside the remit of monitoring (see TABLE 4-3). This would make monitoring synonymous with data gathering and mathematical processing.

But if evaluations are few and far between, how is monitoring-derived information supposed to aid in decision-making unless it is also analysed? Evaluation events and outcomes, as defined in the development discourse, focus mainly on infrequent assessments or discrete studies. This is not enough for the daily information needs of managers, project staff or other development actors. They need more than infrequent moments of reflection to make decisions, be they strategic or practical. As (continual) sense-making is critical for information to lead to learning, thus analysis is as essential in monitoring as it is in evaluation.

By forcing a split between monitoring and evaluation and their respective purposes, an impression is created that certain activities and outputs belong exclusively to one or the other²⁷. By saying that monitoring is not about strategic guidance and making evaluation an activity undertaken by those outside the initiative being evaluated, this appears to imply that strategic guidance is not needed in the interim and that monitoring data will not reveal insights that might lead to interim strategic adjustment. The lack of

²⁷ For example, Patton discusses monitoring briefly and solely in terms of management information systems or databases, seeing monitoring programmes as routine management information (Patton 1997). It is unclear whether he implies that any observation that is not routine is to be saved for evaluations.

TABLE 4-4 Comparing the purposes of monitoring

Casley and Kumar 1987

- For management purposes: focusing on physical delivery of structures and services (plus financial records); use of structures and services and initial consequences of that use, reasons for unexpected reactions (p5)
- For managers to help judge and influence project implementation but not to continuously question strategy: 'monitoring should provide managers with the information that will maximize their chance of succeeding with the chosen tactics' (p8)

AusAid 2002

- Make available timely and relevant information on implementation for effective decision-making by key stakeholders
- Promote discussion in AusAid and with other stakeholders, plan corrective action
- Contribute to accountability
- Provide performance information for internal management and external reporting requirements
- Influence policy

IFAD Guide 2002

- To support impact-oriented management, M&E operates alongside 'ensuring effective operations', 'creating a learning environment', 'guiding project strategy'
 - Providing data via informal and formal processes to generate insights that have implications for the project
-

emphasis on analysis or strategic reflection sits uneasily with other expectations of monitoring, such as that 'monitoring staff need to identify problems encountered by the project and conduct studies related to these' (Casley and Kumar 1987:4). This leads me to suggest a third presupposition within mainstream understanding of monitoring.

Presupposition 3

That strategic analysis and sense-making do not need to be explicitly designed for in monitoring.

4.2.3 Aspect 2. Focus on Information

Much of the effort of monitoring is invested in developing the right systems to get the right information. However, the views on *what* needs to be monitored vary as much as the interpretations of purpose (see TABLE 4-5). Furthermore, M&E protocols and plans are expected to be formulated as an integrated part of the initial planning process. Information needs are not

viewed as dynamic but as stable. With the exception of the IFAD Guide, no allowances are made in the guidelines for revisiting and updating information needs (see Presupposition 13).

Information needs range from recurrent references to inputs, outputs and operational aspects, to less frequent mentions of information on problems, impacts, explanations of performance, and the unexpected. However, this bypasses the issue that it is not always the lack of information that is critical but that there might be too much irrelevant or unused information. The focus on data and, therefore, finding the 'right' set of indicators detracts attention from other aspects, notably how information is to be used and processed in order for learning to become possible. This brings me to three related presuppositions.

Presupposition 4

That absence of sufficient information is critical and requires most of the investment, rather than developing appropriate processes to make sense of and use information.

Presupposition 5

That it is possible for stakeholders to anticipate their information needs adequately, at the onset, in terms of a comprehensive and fairly stable set of indicators (with related data collection methods and processes), irrespective of the diversity or development of actors or issues at stake.

Presupposition 6

That certain processes (notably analysis, critical reflection, interpretation, communication), needed to transform information into learning to fulfil different purposes, do not need to be described in M&E methodology as they are too obvious or simple, and/or will occur automatically.

Indicators are considered the prime vehicle for seeking and presenting the required information. AusAid explicitly states that indicators allow for objective and, therefore, compelling information that overcomes the limitations of personal judgements or pure description (AusAid 2000). The debate on the advantages and limitations of indicators is extensive (Abbot and Guijt 1998; Cobb and Rixford 1998; Graaff and Nibbering 1998; Roche 1999; Estrella *et al.* 2000; Earl *et al.* 2001; Cummings 2005), as is the literature on what constitutes a good indicator, how to identify indicators, and what are accepted critical indicators (Herweg *et al.* 1998; MacGillivray *et al.* 1998; Ministry of Foreign Affairs Danida 1999; Riley 2001). Various frameworks exist for selecting indicators, such as: the Inter-American Foundation's Grassroots Framework (Zaffaroni 1997; Ritchey-Vance 1998; Alzate 2000; Torres 2000), the OECD pres-

TABLE 4-5 Comparing what type of information is needed

Casley and Kumar 1987

- Monitoring = Comparing activities to implementation schedule and use of inputs: financial and physical records, details of inputs and services provided, data from surveys, beneficiary contact monitoring
- Evaluation = comparison-focused, with additional impact studies
- Indicators are needed to assess progress against project implementation targets and initial outcomes or outputs, plus outside forces to explain and foresee preconditions of success (p59-65)
- Indicators must be: unambiguous, consistent, specific, sensitive, easy to collect

AusAid 2002

- Availability and use of project resources and achievement of outputs on time and within budget
- Key data needs identified by the project Logframe through its 'indicators of performance'
- Outcome monitoring that defines extent to which outputs are achieving or likely to achieve anticipated outcomes, and so requires assessing factors outside project's direct control
- Must be compared to budget or target to indicate progress and performance

The use of indicators:

- Should follow the World Bank approach to performance indicators
- Organise information to clarify links among impacts, outcomes, outputs, inputs and help to identify problems en route
- Serve as tools for measuring the flow of change
- Must be: relevant, selectively chosen, practical, owned by project
- Should include: intermediate and leading; quantitative and qualitative

IFAD Guide 2002

Note – this source treats M and E as a continuum though external evaluations are intentionally excluded.

- Will depend on what different stakeholders need to know
- Information needs need to be updated.

Information is needed:

- That can help assess relevance, effectiveness, efficiency, impact and sustainability
- That can explain progress
- Related to cross-cutting issues (quality of participation, gender/poverty impact)
- For each level of the hierarchy of objectives: goal, purpose, objectives and activities
- On operational issues to assess optimal use of resources and quality
- Unintended positive and negative impacts.

Indicators:

- Are to be identified only after performance questions and their related information needs are clear.
 - Must be: clearly defined (various criteria for this), representative, reliable, feasible
 - Can be developed with relevant stakeholders
-

sure-state-response approach (Group on the State of the Environment 1993; Röling 2003, Röling 2005); community renewal (Walker et al. 2000); and IUCN's Sustainability Assessment (Guijt et al. 2001).

Of the three core references analysed in this chapter, the IFAD guide (IFAD 2002) marks a shift from this route by suggesting that (performance) questions are more fundamental, for which indicators can sometimes be found to help answer the questions but additional (non-indicator) information will often also be needed.

The limitations of indicators relates to two trends for which there is growing recognition. First, much of what matters in people-centred development (such as empowerment, self-confidence, leadership) cannot be measured easily, if at all, via a limited set of indicators (Guijt 2007a). Second, development interventions are 'systems' and the emergent properties of systems do not fit easily within the hierarchical and static nature of most monitoring systems. So 'while systems ideas demand a holistic perspective, a practical response to the question of how to identify, track and assess changes to the whole system as well as the parts remains unanswered' (Hodge et al. 1999:6). Recent literature on systems thinking and evaluation that urges for a more holistic information base (Williams and Imam 2006) or on collaborative resource management that recommends contextual information (Salafsky et al. 2001) still does not specify how to limit the information needed. Thus far, mainstream monitoring is still based on the following presuppositions.

Presupposition 7

That indicators are an appropriate form in which to express and convey all key information and which enables learning that supports management decisions.

Presupposition 8

That a balanced picture of information is produced from the chosen set of indicators.

4.2.4 Aspect 3. Constructing and Implementing Monitoring Processes

The three frameworks I discuss are examples of a programme logic model, and thus are characterised by the advantages and limitations of this model when it comes to constructing and implementing monitoring. The conceptual and practical problems have been documented in detail elsewhere (Gasper 2000; den Heyer 2001; Davies 2002; see Box 4-1). Therefore, this section will only identify those aspects of logic models that are particularly pertinent for the monitoring issues discussed in this thesis.

From TABLE 4-6, the following description emerges as a summary of standard practice for constructing and implementing monitoring in development interventions:

1. Ensure clarity about the hierarchy of objectives at different time scales (long term goal, interim results or outcomes, short term activities), with each scale or level linked to a higher level in a causal relationship.
2. For each scale/level, determine what information is needed in order to check that achievements are commensurate with intentions.
3. Convert this information into indicators (quantitative indicators are usually encouraged but increasingly qualitative indicators are accepted).
4. Identify clear responsibilities, methods, frequencies for collecting this information.
5. Go out and collect the data for the indicators.
6. Channel this information to the responsible people.
7. Make decisions on the basis of analysis.
8. Share the findings with interested parties.
9. Do the above with stakeholders, as this will lead to better information and more shared learning.

This set of generic steps leads me to the Presupposition 9. This presupposition leads to a series of sub-presuppositions, such as that stakeholders are able to articulate their objectives clearly at different levels (step 1); that goals and impacts can be identified that are attributable (step 2); that there are enough incentives in place for each of these steps, etc. Presupposition 9 could be considered the 'killer assumption in the prevailing theory of M&E, in that if this is not fulfilled, the core intention of M&E to facilitate decision-making will fail.

Presupposition 9

That stakeholders have sufficient time, expertise, clarity and willingness to follow the basic steps in sufficient detail for effective results (in quality of information and/or in learning impact).

How are issues such as culture, context and participation of stakeholders dealt with in this sequence? The way in which this is treated varies greatly. For example, Casley and Kumar (1987:3, 7) tend to focus on people as information sources rather than as participants in design, and see managers as responsible for identifying information needs while technical staff should focus on indicators and methodologies. They stress the importance of knowing who is to use the results and for what purposes but see monitoring as a management process and, therefore, necessary only for the manager. This is not surprising

TABLE 4-6 Constructing and implementing monitoring and evaluation (M&E)

Casley and Kumar 1987

- Identifying priority of users' needs
- Analyse hierarchy of project objectives: target populations, critical activities, tasks to be monitored against agreed targets
- Review existing information systems
- Identify information gaps (sources)
- Allocate budget and staff plus integrate them into project structure
- Detail physical and financial monitoring
- Detail beneficiary contact monitoring: indicators of initial outcomes (who has access to services/inputs, how do they react to this, how this affects behaviour/performance)
- Conduct follow-up diagnostic studies when problems emerge
- Communicate findings to managers/others

IFAD Guide 2002

- Analyse problems and develop vision for the future
- Create a plan to improve the situation, using the logical framework matrix
- Establish the purpose and scope of the M&E system
- Identify performance questions, information needs and indicators
- Plan for information gathering and organising (who, when, how)
- Plan critical reflection processes and events (purpose, who, when, how)
- Plan for quality communication and reporting (who, what, when, how)
- Plan for the necessary conditions and capacities to make M&E possible (who, when, how)

AusAid 2002

Based on Logframe matrix:

- problem analysis
- stakeholder analysis
- developing a hierarchy of objectives
- selecting a preferred implementation strategy

Plus, when implementing:

Establish management information system with local partners to collect, record, report information on physical and financial progress (within AusAID's information requirements)

Ensure reporting is carried out by contractors, conduct regular meetings of project coordinating committee.

- Identify and correct problems and conduct reviews to modify project if required.
-

as in the mid 1980s, the general understanding and practice of participatory development was less strategic and more functional. Despite being of a later date, AusAid (2000) identify four groups of stakeholders as relevant to M&E, without including direct beneficiaries in this. The IFAD guide (2002:2-26) goes the furthest in stressing the need for 'joint M&E as part of good governance'.

The diversity of organisation-specific M&E guides and guidelines suggests there is considerable differentiation in how culture and context are accommodated. Why else would so many guides be needed, each with their own nuances? However, most guides are, by and large, based on the same generic understanding of programme-logic M&E as set out in these presuppositions. Three notable exceptions are: 'Most Significant Change (Davies and Dart 2005), on Outcome Mapping (Earl *et al.* 2001), and to some extent, the ALPS guidelines (ActionAid International 2006).

This leads to the following presupposition:

Presupposition 10

That the steps have a generic validity, irrespective of the context, such as varying degrees of participation, cultural difference, and/or different combinations of stakeholders.

There are inequalities in all relationships – between funding agencies and those involved in implementation, between paid professional staff and beneficiaries, between different groups of beneficiaries, and so forth. These inequalities lead to unbalanced influence on the design and implementation of all types of processes in rural resource management, including M&E processes. Even in participatory M&E, with its empowerment intentions and eye for people processes, it has proven difficult to eliminate the embedded biases (see Chapters 5 and 6). The persistence of power differentials echoes much of what has been written and debated in the development literature on how power affects participatory processes (*cf.* Nelson and Wright 1995; Cooke and Kothari 2001; Hickey and Mohan 2004).

None of the guides refer to power relations as influencing the quality and process of monitoring, nor influencing the actual design of the M&E system. The IFAD guide explains the need for context-specific design of stakeholder participation based on clarity about the purpose and degree of desired participation, the type of participants and the link between participatory and non-participatory M&E. However, the guide does not deal in detail with power inequalities inherent in development partnerships. Stakeholders' objectives may well be conflicting and inconsistent, hence the need to not only be explicit about the importance of negotiation, but also of guidance on how con-

Box 4-3 When learning is not a central concern

Do stakeholders seek to improve the management of the project/programme or want to learn to improve the development process concerned? This might not be the case or might other concerns might override. Röling and van de Fliert (1994) report on the principle '*asal bapak senang*' in Indonesia, which means that everything is ok as long as father feels happy. So reporting the destruction of the rice fields caused by the brown plant hopper in the 1980s was a real problem – your boss does not want to hear bad news. Information about the destruction was distorted and by the time it reached Suharto, there was no problem at all. It was only after his own village people came to plead with him because their rice harvest had been destroyed that he learned what was happening.

Another similar example is that of the audit committee imposed as part of introducing cooperatives in Benin. Vodouhé (1996) reports that, given the existing multiple strands of patrimonial relationships by which everyone in the community is subservient to the local rulers, the idea that one can impose an 'independent' committee to oversee the finances of the cooperative is totally ridiculous.

flicting perspectives might be reconciled or accommodated. Furthermore, stakeholders may not wish to share information in order to learn and improve performance. While acknowledging the need to negotiate and communicate, the IFAD guide appears to presume this is feasible and that inequalities and conflicts can be resolved. Finally, the context of power relations among participants might render the very idea of an independent M&E function that is able to report 'accurate' information totally alien (see Box 4-3) (Guijt et al. 2005).

This leads me to suggest the following presupposition:

Presupposition 11

That power relations between those involved in monitoring (and the context of these relations) are not noteworthy or do not influence the quality of the design or implementation process or its outcome sufficiently to merit special methodological attention – or that power is too difficult to deal with or falls outside the remit of monitoring methodology.

Both the AusAid and IFAD Guides point out the importance of informal monitoring processes and contacts as being critical for providing important and timely information that helps management. However, while the construction of the formal monitoring process is given much attention, the informal side is not explained in practice and thus, arguably, will not be pursued with as much attention as formal systems. The connection between the informal and for-

mal systems and protocols, including what evidence is allowed to influence decision-making, is not discussed. Therefore, a related presupposition is:

Presupposition 12

That people will know how to deal with and effectively use informal monitoring outside the prescribed formal processes and channels.

Critical when thinking about monitoring over larger time frames is the issue of whether a monitoring system should evolve or not. Despite recognition by the development sector of unpredictable futures, dynamic contexts, rapid change, great uncertainty, evolving partnerships and so forth, no guidance is provided on updating and adjusting existing learning systems, of which monitoring is a part, based on articulated needs or being clear about why current systems are functioning well. This means that M&E practices, themselves, are not considered theories that need testing and improving. This will inhibit learning about learning. The final presupposition I offer here is:

Presupposition 13

That it is either not necessary for monitoring processes to learn from, and adapt to, the environment in which they are being implemented – or that this happens automatically.

4.3 Examining the Validity of the Presuppositions via IFAD's Theory-in-Use

The formal protocols as set down in the three guidelines have led me to suggest 13 presuppositions that mark the beginning of an explicit espoused theory of monitoring. In this section, I compare the identified presuppositions with some of the M&E practice of the International Fund for Agricultural Development (IFAD). If practice contradicts the (espoused) theory, then the theory would seem to have a poor fit with operational realities. In comparing the espoused theory and theory-in-use (Argyris and Schön 1978), I suggest where mainstream understanding about monitoring might need revision.

As I have explained earlier, I was involved as team leader for developing IFAD's M&E guidelines. Having learned more about M&E since then, I have included these guidelines as one of the sources to articulate the 'espoused theory'. Below, I use the field experiences to which I was exposed during the IFAD work, to tease out some of the differences between this espoused theory and the theory that was actually in use in various IFAD projects. I thus use, with the benefit of hindsight, a unique immersion in the M&E practice of an important development organisation to explore and identify the between espoused theory and theory in use with respect to M&E. This device sensitised

me to the problems with participatory monitoring, also problematic presuppositions, to which I turn in later chapters.

Let me stress that my intention is not to critique IFAD, its development practice or its monitoring processes. I am simply using the detailed work undertaken to develop the IFAD M&E guide to help explain why monitoring in the development sector – and not just in IFAD – does not meet expectations. In so doing, IFAD is making a very useful methodological contribution to advancing pro-poor development.

I first briefly introduce IFAD and its work on M&E before proceeding with the examples from practice.

4.3.1 M&E in IFAD

The International Fund for Agricultural Development (IFAD) funds development initiatives for the 900 million people living in extreme poverty in rural areas. It is a United Nations agency with the mandate to enable the rural poor to overcome poverty by extending development loans to governments.

IFAD-supported rural development efforts are multi-sectoral and thus deal with diverse themes, such as agricultural development, financial services, rural infrastructure, livestock, fisheries, off-farm activities, food storage, and marketing. Activities range from infrastructural to capacity building, research and extension. Each project involves between about US\$8 and 14 million of IFAD funding during their life span of six to ten years, with some projects operating with a 16 year timeframe. IFAD-supported initiatives operate in widely different contexts, in terms of the sectoral focus, degree of in-built participation and flexibility, geographic scope, national policy context, and implementation partnership.

Most IFAD-supported projects deal with eight stakeholder groups: local people, people's organisations, project management, implementing partners, cooperating institutions, responsible government departments, consultants and IFAD staff. National responsibility for the loan and its implementation lies with a designated government ministry, while supervision during implementation is sub-contracted to a cooperating institution. Project operations are managed by a management or coordination unit, which is often housed in a government ministry but can have a relatively independent status. Implementation usually involves several and diverse partners, including line agencies, NGOs, CBOS, private enterprises, and research institutes. As the term 'IFAD-supported' suggests, many projects are co-funded by other development investment banks, such as the World Bank or the regional banks.

As IFAD is not directly involved in project implementation, it has no direct

control over the quality of M&E, which has, by and large, been poor. In 1999, problems with M&E were sufficiently acknowledged by the organisation as seriously affecting impact to warrant a stocktaking exercise in each of IFAD's five regions (Ocampo 2000; Rahojarison-Busson 2000; Ravnborg 2000; Vela Mantilla 2000; Zaki 2000). The results showed that few IFAD-supported projects have monitoring systems that are able to provide timely, relevant and good quality information on project reach and impact. Impact assessment, in particular, had not been institutionalised at either the project or corporate level in IFAD. Government departments frequently had no systematic evaluation system, but instead investigated projects attracting official concern. Project staff knew that when questions are asked about the impact of specific activities, the reports presented were a summary of general impressions rather than systematic and thorough analysis.

In 2000, a range of common M&E problems in IFAD-supported projects were identified (Munk Ravnborg 2000b; Ocampo 2000; Rahojarison-Busson 2000; Vela Mantilla 2000; Zaki 2000). TABLE 4-9 summarises the problems identified and my understanding of the underlying causes. The lack of positive evidence is striking. Different causes were identified by the consultants. Some problems have external causes that lie beyond the control of the project and restrict project activities, such as disasters or the wider institutional environment (*e.g.* systemic governance problems that lead to low remuneration of government staff). Others have conceptual causes, which relate to diverging and unclear perceptions of M&E, methodology and analysis. This would point to problems with the espoused theory of monitoring (see 4.4). Others still are related to operational causes, for instance, to insufficient personnel or the lack of integration of M&E responsibilities by project staff and other stakeholders. In all cases, there is a mismatch between expectations of achievements and M&E.

IFAD took these insights seriously. It decided that its role was to provide clearer methodological guidance that, while not mandatory, would provide a benchmark of definitions, processes and standards with which practice could be compared. Thus, in 2000, the stocktaking exercise led to a request for an M&E guide that could help orient four key groups: project managers and M&E staff; consultants providing external assistance on project design, M&E and information management; and IFAD and cooperating institution staff.

To prepare the guide, eight consultants of which I was the team leader²⁸,

²⁸ Rekha Dayal (India), Irene Guijt (Mali), Cheick Kamaté (Benin), Deb Johnson (Ghana, Morocco, Tanzania, Uganda), Britha Mikkelsen (Bangladesh, India), Claus Rebien (Indonesia), Gloria Vela (Brazil, Colombia, Ecuador, Guatemala, Nicaragua, Peru, Venezuela), Jim Woodhill (Armenia), Elsayed Zaki (Yemen)

visited a total of 33 IFAD-supported projects in 19 countries (see ANNEX 3), which had been selected by IFAD as being likely to provide the most interesting and innovative stories on M&E. Several other projects funded by other development agencies were also visited. A set of 14 key issues were identified for the fieldwork, ranging from relationships and roles in M&E, reporting processes, to capacities and incentives (see ANNEX 4). The purpose of the project consultations was to gather information on current M&E practices, collect 'best practice' examples, and solicit project staff and project managers views on needs in terms of receiving guidance on how to conduct M&E.

TABLE 4-9 Common problems with M&E in IFAD-supported projects and the underlying causes

-
- 1. inadequate understanding of and attention to M&E in project design and therefore inadequate resource allocation and hierarchical organisation of decision-making and analysis**
 - Poor M&E theory – does not articulate the basic requirements for M&E in sufficient detail
 - Poor implementation of the little theory that does exist on this
 - 2. lack of commitment to monitoring by project staff and implementing partners, leading to delays in implementing monitoring systems and limited information used by project management**
 - Poor M&E theory – insufficient articulation of benefits for management and insufficient linkage to management responsibilities and information use (not just collection and storage)
 - 3. monitoring seen as an obligation imposed from outside, with project staff mechanically filling in forms for managers and the project managers seeing monitoring only as a form of data collection in the process of writing reports for donors**
 - Poor M&E theory – insufficient articulation of benefits for ensuring impact plus inadequate attention to the sense-making processes
 - Poor implementation – managers do not invest enough in understanding M&E and how to make it work for them
 - 4. irrelevant and poor quality information produced through monitoring that focused on physical and financial aspects and ignores project outreach, effect and impact**
 - Poor implementation – enough room and guidance is available to strive towards comprehensive and relevant information sets
 - 5. almost no attention to M&E needs and potential of other stakeholders, such as beneficiaries, community-based organisations, and other local cooperating institutions**
 - Poor M&E theory – bulk of literature speaks about participatory aspects and considerations in generic terms, PM&E literature is generally simplistic about challenges
 - Poor implementation – some interesting experiences on this exist and have been documented

Table 4-9 *continued*

6. very few internal project reviews or ongoing evaluations, with adjustments triggered mainly by external evaluations or supervisions

- Poor implementation – M&E theory does, in principle, encourage internal processes (self-evaluations, self-reviews); managers do not invest enough in understanding M&E and how to make it work for them

7. widespread lack of integration and cooperation between project M&E and project management (e.g. via annual work plans and budgets and logframe), with no clear, mutually agreed-upon guidelines

- Poor M&E theory – insufficient articulation of benefits for management and insufficient linkage to management responsibilities
- Poor implementation – managers do not invest enough in understanding M&E and how to make it work for them

8. M&E documentation that does not address or resolve identified problems

- Poor M&E theory – insufficient articulation of how to analyse data and translate this to options for corrective action
- Poor implementation – those facing problems are not linked to evidence sources or use other, informal channels; insufficient investment in ensuring that M&E documentation answers ‘so what do we do better?’

9. over-ambitious monitoring systems, with too much being asked in terms of information and methods

- Poor M&E theory – is internally contradictory as it stresses the need for information at all levels on all key issues yet urges simplicity
- Poor implementation – M&E theory stresses the need to limit to the minimum (although the advice given remains generic)

10. poor use of participatory and qualitative M&E methods due to limited capacity and inability to see the need for qualitative information or the value of participatory processes

- Poor implementation – various manuals exist on participatory processes and qualitative methods

11. M&E staff with insufficient relevant skills and experiences and few efforts to fill the capacity gap

- Poor M&E theory – capacity building not dealt with well in the literature
- Poor implementation – M&E assumed to be a relatively easy task and not treated on par with management skills and responsibilities

12. separating monitoring from evaluation activities, with evaluation contracted out hence leading to a disconnected feedback system that does not foster corrective action

- Poor M&E theory – ambiguous, diverse definitions lead to many different versions of ‘M’ versus ‘E’, often with overlapping functions and gaps
 - Poor implementation – even where some tasks are contracted out, management can ensure the integrated use of information from monitoring and from evaluation
-

Once on the ground, however, the consultants found it difficult to find good practice examples and found many more dilemmas and problems. Both types of experiences found their way into the M&E guide (IFAD 2002).

4.3.2 Challenging the Presuppositions with IFAD Experiences

In this section, each of the presuppositions identified in 4.2 above is compared with some experiences from IFAD-supported projects. The experiences are not themselves harbingers of new theories or practices. But they are useful to show how espoused theory does not always tally with theory-in-use. By providing a commentary on each presupposition and illustrating it with an example from practice, I question the validity of the presupposition, suggesting that mainstream monitoring is in need of revising its foundations. In section 4.4, I suggest alternative ideas for those presuppositions that appear misaligned.

First, however, I will explain why IFAD is not a special case of M&E practice and is a relevant illustration of current practice in development. First, it is noteworthy that the 33 IFAD projects selected for consultation were considered by IFAD staff to provide the most interesting and innovative stories on M&E. If the inconsistencies between espoused theory and theory in use were evident in these 'good' cases, then it is not unlikely that the state of M&E in other IFAD projects are unlikely to provide more successful examples. Although all these projects were conceived prior to the IFAD Guide, those involved in developing the guide sought to take lessons from good practice and provide more detailed guidance within IFAD's prevailing M&E paradigm.

Second, IFAD is illustrative of a type of development mode, with related M&E efforts to which much funding is allocated that could benefit from effective management through monitoring. IFAD is the world's largest lending facility devoted solely to rural development and agriculture – in 2005 it disbursed 530 US\$ million worth of new loans and grants (IFAD 2007), and has many more hundreds of millions already loaned. Many of its projects and programmes are implemented with the World Bank and regional banks, which often provide additional funding. The World Bank and regional banks also represent many billions of dollars of additional funding focused on similar types of development initiatives. These agencies operate with a programme-logic based understanding of M&E, although some methodological exceptions can be found in work they fund (cf. van Wijk-Sijbesma 2001). Hence IFAD examples represent a set of experiences that can be considered illustrative of many more such initiatives. The amount of money that is dedicated to rural resource management is only set to grow, given the strongly renewed interest and prioritisation of agriculture and related rural development worldwide by such agencies (Thompson 2006).

4.3.3 Aspect 1. Definitional Boundaries of Monitoring

Presupposition 1

It is necessary and/or useful to define ‘monitoring’ as distinct from ‘evaluation’ and this can be made on the basis of a range of different aspects (the people involved, information used, validity of findings, information and feedback systems needed, etc.)

In practice, many IFAD projects show a continuum of activities that could all be grouped under the header ‘the learning and improvement system’. The Tamil Nadu Women in Agriculture (TANWA) project was funded by IFAD as an experiment in the late 1990s, after which other funders stepped in, notably DANIDA (Danish International Development Agency). A range of M&E activities form the backbone of internal learning (Dayal 2001c; Dayal 2001d):

- the Directorate of Evaluation and Applied Research conducts external evaluations based on the annual work plan at the request of the Department of Agriculture, for example on measuring the impact of the project target group;
- an internal M&E system supported by a data handling system;
- periodic reviews and studies initiated by DANIDA (the Danish funding agency), via external review teams or the DANIDA Adviser’s Office;
- regular feedback to the field staff;
- monthly progress reports;
- benchmark surveys covering all trained farm women which were carried out both at the selection stage and the follow up training stage and was to measure project impact;
- a high level committee, under the chairmanship of the State Minister of Agriculture, that periodically reviews the status of the project implementation.

TANWA is not a unique case – all IFAD-supported projects included in the 2001 study had systems with a similar diversity of elements.

In Colombia’s PADEMER project (Vela 2001), the formal recognition of different responsibilities initially led to official separation of monitoring responsibilities: MCMD (the coordinating group) for financial monitoring and PADEMER for technical monitoring. This is a very common distinction in M&E practice that is rarely referred to, which tends to focus on progress/technical monitoring.²⁹ But in reality, PADEMER’s project management is also undertaking financial monitoring of the implemented sub-projects and there is participation by the MCMD in technical monitoring. Although the management unit is not official-

²⁹ It would be interesting to compare the amount of capacity and money devoted to financial monitoring (often large teams, skilled staff and many resources) versus technical monitoring. This hints at another presupposition not explored in this thesis, the implicit endorsement of the relative importance of financial transparency (financial accountability) compared to implementation quality (strategic accountability).

ly supposed to undertake evaluation activities, management staff see that the national planning department has problems with this – ‘they have only done one field visit in all the time of project execution’ (ibid). Hence the line between what is evaluation and what is monitoring, and where respective key responsibilities lie, becomes fuzzy in practice. Finances, in the form of budgets, are theories (about how many and which resources are needed to achieve certain kinds of change). Monitoring activity implementation could provide interim evidence about progress and, therefore, validity of these theories³⁰.

These examples show the difficulty of consigning something to the category ‘evaluation’ and something else to ‘monitoring’, when they jointly offer a set of complementary activities that are needed to fulfil a range of management functions (see TABLES 4-1, 4-3 and 4-4). Hence talking about a set of specific ‘learning purposes’ (see 1.5 and 4.4) – which includes learning in order to be financially accountable – is perhaps a more interesting entry point for design and implementation than developing distinct monitoring and evaluation elements. It is perhaps risky to take a word widely used in one manner, as in the increasingly common reference to ‘learning and accountability’, and use it differently within the same sector. However, I will argue in this thesis that taking ‘learning’ as the central concern and subsuming financial accountability as one learning purpose allows for purpose-built design of monitoring processes (see Chapter 8).

Presupposition 2

That because monitoring is intended principally to serve management, this will automatically happen, *i.e.* those involved will know how to make monitoring serve management.

The work on the IFAD guide started in 2001 out of a concern that monitoring and management often remain worlds apart in IFAD-supported initiatives. However, while the intention of monitoring to serve management was collectively confirmed, during the field research for the guide, it proved difficult to obtain concrete insights on this from IFAD higher-level managers themselves. Various problems presented themselves. For example, by stressing ‘information for decision-making’, by implication information needed to be channelled into decision-making moments and spaces. Yet this issue is not commonly included in the construction of M&E systems and has only found its way to a limited extent into the IFAD M&E guide³¹.

³⁰ With thanks to Dr. Rick Davies for this insight.

³¹ As I explain in 4.2, as lead author of the IFAD M&E guide (IFAD 2002), I was blinded by this problematic presupposition at the time of writing it. I now realise the problem of excluding the link between information and its use in decision-making from monitoring

Second, in many IFAD-supported projects, project managers are political appointees with no proven management skills. Project staff in Ghana and Morocco (Johnson 2001b; Johnson 2001a) stressed the importance of skilled managers to lay the foundation for an effective dynamic monitoring and evaluation system. Yet in two projects in Morocco, the absence of basic management prohibited the use of monitoring information to inform next steps. For example, provincial level coordinators did not meet. Hence there was no forum for the consolidation of project experiences or even simple co-ordination of activities. Coordinators did not call joint meetings with the staff (many of whom worked in both Moroccan projects). This denied staff the opportunity to discuss the project and provide feedback to managers and other staff, as well as ensure joint collaboration on project activities. Project staff were frustrated due to a lack of direction, prioritisation, and linkages in and between the projects, leaving them to sort out their own work schedules between the two projects and other agricultural duties. The project managers showed limited appreciation of M&E needs and benefits, and thus project M&E activities simply were not funded.

Designing the M&E system is seen as an obligation rather than a management imperative. In Yemen's IFAD-supported Tihama Environmental Protection Project (TEPP) (Zaki 2001), the M&E system was viewed and designed as a reporting system (rather than a system that should trigger improvements) by an external consultant well before implementation had started. Management did not use the reporting system as the data it was producing was inappropriate for day-to-day management decisions. Instead, management relied on informal direct contacts with field staff, although these contacts were not identified as forming part of the M&E system. In this case, designing the M&E system conveyed an intention to be accountable, which may be sufficient from a contractual perspective in some settings. However, it is not, as I argue in this thesis, sufficient to lead to the diversity of learning processes needed to guide development interventions towards their intended impact.

Simple linkages between management tasks and monitoring processes are often overlooked. For example, in Colombia's PADEMER project (Vela 2001), the revision of monitoring indicators from an initial list of 100 down to 18 key change indicators was not reflected by a revision of the logical framework that guided planning of project activities. Similarly, in Indonesia (Rebien 2001), one of the projects had no systematic links between the logical framework, indicators and the monitoring system. Although the project monitoring system was quite well developed, reporting by staff did not follow the items listed in

the logframe. Thus action (guided by management), data and reporting (remit of monitoring) remained separate. This problem made it difficult to hold people accountable to identified changes, which is critical if monitoring is to serve management. In TEPP, Yemen (Zaki 2001), M&E reports were not used for accountability purpose. Neither implementation departments nor service providers nor top management were held accountable on the basis of the M&E reports, even if these reports identified the responsibilities of the various departments and officers in terms of specific shortcomings.

Munk Ravnborg (2000a) stresses that IFAD does not stand alone with this experience: 'In consequence, M and E units often become self-perpetuating information producing systems marginalized and isolated by management, which makes its decisions on the basis of short field reports and supervisory visits.'

Unless project managers explicitly ask for and consciously use regular flows of information, improvement via management decisions will be driven by personal impressions and guesses. Therefore, seeing M&E as a reporting cycle, as was the case in ADIP, Bangladesh (Mikkelsen 2001), can help. Their information cycle flowed from group to municipal to district to headquarter level, alongside a series of feedback loops in the form of workshops and review meetings: bi-monthly review meeting with NGOs; bi-monthly project management coordination committee meetings; half-yearly inter-ministerial project Steering Committee Meetings; annual special reviews on extension activities, annually; and supervision missions by IFAD for reviewing, including mid-term review, the project performance with recommendations approved through wrap-up meetings, and follow up at consecutive supervision meeting. This sequence, however, comprehensive and linked and thus able to feed each other and reiterate, does not, however, guarantee that monitoring processes are effective. This brings me to look at the third presupposition.

Presupposition 3

That strategic analysis and sense-making do not need to be explicitly designed for in monitoring.

Most monitoring within the IFAD projects focused on data collection and reporting. In the PIDRA project in Indonesia (Rebien 2001), village self-help groups used six different formats (loan books, minutes book, overall accounts for the group and its loans, etc.) to track progress with local development activities. Project facilitators extracted information from these books on a monthly basis and forwarded the information to the sub-district level, where data are compiled from all groups. These were then forwarded to the district level where data was entered into a computer and transferred to the provincial and

eventually the national level. A similar upward flow of quantitative data characterised M&E in the EISCD project, Indonesia (ibid). Meanwhile, in Uganda's District Development Support Programme, the M&E system was not considered an effective management information tool (Johnson 2001d). Rather, it largely produced a record of physical progress of planned work and a summary of expenditure accounting. Existing reports generally contained much detail of minor relevance and lacked analysis and interpretation useful to identify corrective actions or understand impact. In short, much data and little learning.

Monitoring information transcends formats as set down in the formal protocols. In Morocco, one staff member explained how the rating method used for assessing the performance of cooperatives kept analysis superficial: 'I keep a good deal of the information in my head, but without this extended analysis shared and documented, the tool can often give the impression that the cooperative is more advanced than it really is, i.e. that the cooperative could operate independently even though in reality it probably could not. ... If I was to include [this information], then far fewer cooperatives would reach the classification of 'satisfactory' or 'very satisfactory.' (Johnson 2001b).

Many projects experience data collection problems, such as serious delays and invalid data. However, the need for a vision on how the monitoring data needs to be analysed, understood and then used to enable evidence-based constructive feedback and corrective actions. For example, in India (Dayal 2001a), reviews were carried out monthly or bi-monthly but the attitude was often one of criticism. As one officer said: 'We are monitoring activities regularly through reviews and we point out the mistakes, and then chastise them [staff] to make the corrections.'

A contrasting perspective emerged from self-help groups in Andhra Pradesh (Dayal 2001b), which assess their own maturity, cohesiveness and credit-worthiness. These groups take the potential of monitoring to have greater impact seriously and were consistent in trying to educate themselves and improve their performance, as assessed by the self-evaluation criteria.

That outcomes and their use are strongly influenced by human qualities can be seen from the differences in the quality of the outputs and appropriate use of information by the project staff (Dayal 2001b). For example, one of the project officers has a habit of extensive touring. Since he himself came from a disadvantaged background and had faced the problems related to development, he was able to identify with the situations and also motivate people to perform better. This approach to on-the-ground tracking and correcting could well change with a change in leadership.

4.3.4 Aspect 2. Focus on Information

Presupposition 4

That absence of sufficient information is critical and requires most of the investment, rather than developing appropriate processes to make sense of and use the information.

In the EISFLD project, Indonesia, thirteen locally-collected M&E logbooks were used to report progress, on monthly, quarterly and annual bases, concerning livestock, farm inputs, group details (*e.g.* savings, loans, training completed and technical progress made) and on finance and administration. Field workers collect information from groups via these different group record books (Rebien 2001). While this level of zeal in data collection is not common, it does highlight the perhaps unnecessary emphasis on 'getting the data' rather than making sense of it. In India's Andhra Pradesh Tribal Development Project, the MIS (management information system) was driving much data collection. Staff there were quite motivated and maintained the MIS efficiently (Dayal 2001b). However, they themselves felt they were collecting too much information that was of little use.

Similarly, in Indonesia (Rebien 2001), staff complained regularly about the wasteful use of resources for data collection and reporting: 'I don't want to consume all my time only for making monitoring reports' (interview with a field consultant who wished to spend more staff resources on dialogue with and training of farmers' groups, rather than on collecting data from them). 'We want to help the farmers. We don't want them to help us complete our reports' (interview with a project manager frustrated with the investment of time that staff and farmers need to make in order to meet monitoring requirements) (*ibid.*). The Indonesian projects started by defining what they wanted to know, to discover later that this was not feasible, either financially or in terms of staff time.

In the P4K project, field workers filled in and submitted six different forms, with the most essential data (on savings and loans) being a duplicated effort. Farmer groups were trained by the field worker, who also recommended who should receive loans. Once recommended for a loan, the farmer group would obtain the loan directly from a commercial bank. The bank kept a computerized record of the loan and savings of each group. The group also kept its own hand-written record on its savings and loans to ensure transparency among group members. This information was collected by the project from every group (a total of 55,000 groups are active) every month, then processed, typed, aggregated with previous months figures and sent from

sub-district to district to Province to the Ministry in Jakarta. At the same time, computer print-outs with the same data were also received from the bank every month.

Despite such efforts, the system did not collect data on a critical aspect that would have given insight about the livelihood impact of the IFAD project, namely the purposes for which savings and loans were used. Was the money spent on liquor or was it invested in children's education, improved sanitary facilities, agricultural equipment, *etc.*? Collecting much detailed data does not necessarily constitute 'good quality monitoring'. It may be the opposite: delays can increase, non-fulfilment of requirements can rise and validity problems expand with the level of detail and the multitude of data.

Many monitoring guidelines urge focusing on what one 'needs to know' rather than what is 'nice to collect' (Rebien 2001). However, it is far easier said than done (see 3.2) and knowing what is useful sometimes only emerges after testing it in practice (see Chapters 6 and 8). In theory, an approach focused on hypothesis testing (such as advocated in adaptive management and potentially possible with the logical framework approach) should provide guidance on what information is needed and what is extraneous. However, as mentioned in Chapter 3, excess information is not uncommon and there is rarely provision in an M&E process to revise and adapt information needs. The problem of excessive data is very widespread and not unique to IFAD-supported projects (Munk Ravnborg 2000a). Learning what information is most relevant brings into question the validity of the next presupposition.

Presupposition 5

That it is possible for stakeholders to anticipate their information needs adequately, at the onset, in terms of a comprehensive and fairly stable set of indicators (with related data collection methods and processes), irrespective of the diversity or development of actors or issues at stake.

Every M&E handbook, guide or manual insists that the M&E system should be designed before implementation starts. It sounds logical – figure out ahead of time what one needs to know and start tracking it from the word 'go'. However, this sequence assumes many things, not least that all key stakeholders (or groups) understand and are committed to the development intervention and that they are clear about the information they will need for the lifetime of the collaboration. This can be carried to extremes. In Segou's (Mali) IFAD project, a consultant hired to develop the computerised database system was building the system to last for the next ten years, which was the anticipated timeframe

of the project, and therefore was essentially asking people what data they would want to have available in 2011 (Guijt 2001). This is an extreme example, with more workable approaches in existence. More recently, for example, some recognition is emerging that planning information needs and a related monitoring system might best occur once implementation has been initiated (cf. Mahanty *et al.* 2007). However, by and large in IFAD-supported projects, M&E plans and systems are expected to be detailed at the start of implementation.

While anticipating the future is essential for planning, a clear and comprehensive anticipation of information needs at the onset is a problematic expectation, especially if no revision of information needs is anticipated. In practice, several difficulties exist in clear identification of information needs at the onset, including merging divergent stakeholder agendas, definitional ambiguities, implementation delays and evolution, and capacity limitations.

Differing stakeholder agendas will affect the ability to agree on information needs. For example, in Morocco, the IFAD-supported PDRRT experienced a dilemma between the local government mandate and project aims (Johnson 2001b). Local government, the main project implementer, focuses on general service delivery for most citizens while the project specifically targeted poor citizens. The president of one *Commune Rurale*, who was a key mediator between project staff and local people, expressed difficulty in investing limited project resources in poor families when he could have been using the resources to help as many people as possible, especially those with sufficient motivation and capacity to implement the project: 'We have the resources to remove one hectare of stones from each person, so we choose people with more than one hectare who will be able to remove the stones from the rest of their land with their own resources.' Different agendas shape people's perception of key information needs. The project team wanted to know the number of poor families benefiting from the land improvement activities, while the implementing partner was concerned about maximising areas of improved land. This experience is not unique. In Yemen's TEP project, small holder rural credit is implemented and monitored by the Cooperative Agricultural Credit Bank (CACB) (Zaki 2001). While CACB defines eligibility as 'all small farmers in the project area whether affected by environmental hazards of desert encroachment or not', the project defines as eligible 'those within the project shelter belt activities in 47 villages named in the project design documents'. The monitoring of the credit activities was thus disputed.

Even if there is agreement on the target group, other definitional ambiguities may exist and require time to clarify. During discussions with staff

from various IFAD-supported projects, it became clear that some of the challenges of evaluating project impact are directly caused by inadequate or lacking definitions for key terms, including 'poverty', 'poor persons', 'improved' living conditions, 'participation', 'preserved natural resources', and so forth. Hence coming to such definitions is necessary if these form the basis for identifying information needs.

Another challenge to the notion of predetermining information needs comes from changes made to initial plans, such as in project logframes. In many projects, not just those supported by IFAD, a time lag of several years between the original project formulation and the moment of implementation is not uncommon. As a result, members of the project formulation team are almost never involved in implementation. Hence, the set of indicators proposed in the project document that guides the initial strategy are invariably inadequate – dated, incomplete, irrelevant, and certainly not mutually agreed. IFAD now recognises the need to redesign projects at implementation (IFAD 2002), thus providing an opportunity to update indicators at project onset. Even so, information needs change over time. In Ghana, project team members used the logframe matrix and related indicators quite flexibly (Johnson 2001a). They did not tie themselves down to the predetermined indicators listed in the matrix. What was key was measuring progress, so if the original indicators did not or no longer made sense, then other information was sought.

The notion of fixed information sets at the onset sits uneasily with the increasingly participatory rhetoric of many projects. If projects are to be participatory partnerships, then time is needed to identify the partners. In Benin (Kamate 2001), newly appointed IFAD project managers and potential NGO partners met to revise impact indicators at project start-up. However, the final selection of NGO partners came at a later stage, and in the end, only two of the 14 NGOs finally chosen had participated in the initial workshop. This sequence caused subsequent problems in terms of clarity about what was needed for monitoring, when time was needed to come to a new shared understanding. Allowing the understanding of goals and prioritisation of activities to develop over time happens at the level of a partnership, but also with individual partners (also see Chapters 6 and 8).

Insights into development strategies also emerge from implementation. In Bangladesh, the ADIP team tested a participatory impact assessment process just before the Mid-Term Review (Mikkelsen 2001). Based on the survey findings and discussions held with target groups, the core team developed a proposal for an improved project logframe, to bring more clarity to

the logic and develop missing indicators and reach final agreement on targets. This took place three years into the project, thus the initial set of information needs had become quite inadequate. Furthermore, in ADIP, four years after project start-up, a methodology was tested for participatory impact monitoring (Berg 2001). Five major impact areas were selected for the assessment that were not derived from the logframe, nor from any other project document, but simply arose at that later stage. Cause-effect relationships between these impacts and internal and external factors were studied, and led to identifying improvements to enhance project impact.

As the implementation strategy evolved, so did the development aspirations of beneficiaries. The self-evaluation of self-help groups in the APPTD project (Dayal 2001b) had to be revised as capacities and performance grew. After initially focusing on basic indicators of group maturity and stability, such as 'group member attendance' and 'deposit of shares', these made way for more pertinent issues, such as 'increase in loans from banks rather than restricting to internal borrowing'.

Hence, there are a range of dynamic factors that make it difficult to see how identification of information needs at project onset can be an effective use of time and resources, unless this is accompanied by ongoing revision and updating of information needs. IFAD projects operate with formal contractual obligations that stipulate the provision of certain kinds of information, hence arguably some information needs can be determined at the onset. However, these dynamic factors are all the more influential in the context of 'messy partnerships' discussed in Chapter 1.

Presupposition 6

That certain processes (notably analysis, critical reflection, interpretation, communication), needed to transform information into learning to fulfil different purposes, do not need to be described in M&E methodology as they are too obvious or simple, and/or will occur automatically.

Good choice of information needs can lead to corrective actions. In the APPTD project in India (Dayal 2001b), which aimed to raise household income and community self-reliance, all strata of the community were included in the identification of resources and village programmes. However, over a period of time, data showed that the all male and mixed self-help groups (SHGs) were less successful and sustainable, in contrast to women's SHGs which worked well: 90% loan repayment compliance, regular meetings, fewer internal conflicts, greater enthusiasm and willingness to learn and use opportunity for growth. Now the project operates exclusively through female SHGs.

What made this strategic adjustment possible? Identifying relevant data was one step but the data was also analysed, discussed, and fed back in terms of concrete improvements. Many monitoring efforts end up just as 'data'. To avoid the 'data-fication' of monitoring, what else is necessary? ADIP's M&E system and unit performs a wide range of critical tasks besides collecting and recording data in order to ensure information flow and action (Mikkelsen 2001):

- develop monitoring instruments and modifying these after field testing;
- develop guidelines and providing training to staff of the project implementing agencies;
- process and analyse data to provide information for reviews and reports;
- prepare Annual Plans and Budgets of the components/activities;
- prepare and submit reports, both routine and special;
- organise formal and informal discussions, meetings, workshops for reviewing and implementation for reflection, for each district; and
- establish a feedback loop by providing and receiving feedback to and from all stakeholders concerned, and a follow up.

These tasks recognise a range of sense-making and communication processes that are crucial for data to become actionable, yet are rarely mentioned as important in M&E frameworks and guidelines.

Presupposition 7

That indicators are an appropriate form in which to express and convey all key information and which enables learning that supports management decisions.

Bangladesh's ADIP staff learned about mismanagement by one of their NGO implementing partners from reports about lack of transparency about credit information by the implementing NGO (Mikkelsen 2001). Project staff took action and the NGO rectified its practice. This learning was made possible more due to information sharing that resulted from regular contact between project partners than due to information from the formal M&E system. A similar example comes from Uganda's District Development Support Project (DDSP), where the District Technical Planning Committee looks at all quarterly work plans on a monthly basis to judge the progress made (reporting) to address specific issues arising (financial, conflict, scheduling, etc.) (Johnson 2001d). In addition, some department heads hold monthly departmental meetings and undertake the same scanning and discussions. In both examples, while progress made against plans is assessed in the form of indicators, other critical information such as conflicts, problems, and programming issues that are crucial for impact are not reported via indicators but emerge in discussions.

Three aspects of indicators are often considered difficult in programme logic models:

- *Information related to longer term results, that tends to be more abstract and often relates to composite effects.* For example, in Uganda, indicators were easy to identify as long as they related to annual progress targets (Johnson 2001d). However, the responsible coordinators found it too difficult to develop longer term impact indicators. Many project logframe matrices have poorly formulated impact indicators at higher levels, either limiting them to simplistic statistics about part of the projects goals or hardly any at all.
- *Qualitative information.* The more development interventions pursue goals such as empowerment, equity, social capital, capacity building, or composite ones such as 'quality of life', the more adept they will need to become at assessing qualitative changes. Uganda's DDSP staff found it difficult to come up with a global statement based on all the contributions of different project components to 'quality of life' (Johnson 2001d). Each component makes a qualitative contribution, *e.g.*, agricultural development that increases household incomes, health that reduces morbidity/mortality, functional literacy for building self-esteem, and so on. However, the capacity to bring all these elements together in a measurable statement about the project's impact on poverty was limited. In Bangladesh, the ADIP team found that indicators, such as 'number of groups formed', did not capture the maturity of credit groups, which was indispensable to identify needs for support including training needs (Mikkelsen 2001). Meanwhile, staff in Tanzania experimented with semi-structured interviews to understand local perceptions of wellbeing changes, but did not know how to analyse the rich information (Johnson 2001c).
- *Focus on the known, lack of appreciation of surprise.* By definition, tracking of progress does not deal with the unexpected, as all progress is identified in terms of anticipated targets. M&E procedures encourage being open to the unexpected by advocating in the inclusion of unintended impacts as part of regular monitoring and similar generic statements of encouragements to assess the unexpected (IFAD 2002). However, no practical guidance is provided on how that could be undertaken effectively.

Such problems can sometimes be resolved by a focus on questions rather than outputs, and then asking for evidence of changes rather than asking 'What indicators are needed?' But even if these three problems could be resolved, many people have difficulty with other critical information – notably assumptions and explanations. IFAD projects operate with the logframe and, therefore, with an assumptions column that is fundamental to the project strategy as it explains what else is expected to occur – outside the project's sphere of influence – that will affect outcomes. In practice, assumptions are usually hastily included, viewed as a bureaucratic requirement rather than as an opportunity for strategic reassessment. Many institutional

aspects, such as ‘partners will uphold their part of the deal’ are included, which means projects fail to take responsibility for working on the quality of partnerships, for example, resulting in sub-optimal results. Just as in collaborative resource management (see 3.2), hypothesis testing only occurs to a limited extent, despite good intentions, making assumptions an underutilised aspect of the programme logic model.

Of the 33 IFAD-supported projects studied, none appeared to have procedures for tracking significant changes related to project strategy (the assumptions, risks and external factors). In Indonesia (Rebien 2001), staff said: ‘We need to understand the link between physical progress monitoring, and the actual benefit that the physical output has given the farmers/poor end-users. For example, we do not know which effect it has on the poor when the monitoring data shows that 50 of the 100 km of feeder roads have now been built. Hence, we do not know the benefits of our investments. We do not see the link between investment, activity, progress and benefit with current physical indicators.’

For basic information to lead to identified improvements, analysis and interpretation of information is crucial. In Uganda’s DDSF, performance reporting starts with a look at what was achieved (outputs in relation to inputs and to plans), after which the degree of achievement was explained and interpreted before corrective action could be proposed (Johnson 2001d). At the moment of explanation and interpretation, non-indicator information was also considered. Colombia’s PADEMER project also explicitly includes ‘difficulties encountered and solutions found’ in reporting (Vela 2001). Yet such elements that enable sense-making rarely figure in formal descriptions of how to construct monitoring processes.

Analysis is difficult and requires the capacity and willingness to reflect with a critical mind. Reflection relies strongly on the ability (and the opportunity) to challenge the assumptions that have informed actions, and to be conscious of a difference between expectations and what actually happened (Guijt 2007d). This requires a certain level of curiosity. In Indonesia, staff feel comfortable with tracking physical progress. They also feel confident that NGO partners working as implementing agencies know enough about participatory methods to use them for monitoring purposes. They are unsure, however, on how to report on information solicited through such methods and how to integrate this with physical progress monitoring. Reversing the tendency to opt for predefined forms asking for precise data means not only building capacity but also putting in place effective incentives for critical reflection, and not just statistical analy-

sis. In many development initiatives, certainly not only IFAD, critical reflection is difficult to encourage when it means engaging with unintended or poor results (Guijt et al. 2005; Guijt 2007d). This issue also relates to the next presupposition.

Presupposition 8

That a balanced picture of information is produced from the chosen set of indicators.

In Indonesia, EISCDP staff collect and compare data on physical and financial progress (Rebien 2001). The financial targets and actual expenditure are relatively straightforward. However, physical progress is a different matter. A review of data examples shows that ‘targets and achievements are always the same, every month, for every parameter. For example, if the target at the beginning of the month is to reach 16.47% of the physical goal (numbers of ha planted, or training sessions held) the actual achievement by the end of the month is 16.47%’ (ibid). It was unclear how figures have been calculated but it seems they merit some scrutiny. For whatever reason – and one could think of the *asal bapak senang* phenomenon (see Box 4-3), these indicators in this context appear not to provide balanced and useful information. In India (Dayal 2001d), target-oriented approaches encouraged inaccurate reporting of implementation rate and staff performance, both of which are measured by how far targets have been met. This phenomenon relates to power and informal processes, see Presuppositions 11 and 12 below.

A similar bias towards positive reporting was noted in various IFAD-supported projects, which impairs recognition, discussion and resolution of strategic and implementation problems. Pressures to report success are widespread in development, not only from project managers towards implementing staff but also from headquarters to project. This relates back to the disincentives for critical reflection mentioned under Presupposition 7.

Excess monitoring workload can cause inaccurate information to emerge. The NGOs involved in implementing the TANWA Project (India) expressed a strong need to review the extent of information gathered. The overload was likely to lead to false reporting and errors would just be multiplied (Dayal 2001), which could compound the problem of creating a false picture of the progress and impact. For example, in Indonesia, officials involved in the P4K project said: ‘In central Jakarta, we only get data on a monthly basis from 30% of the groups. In the two provinces that perform the best, we receive data from 80% of the groups’ (Rebien 2001). Perhaps if requirements were reduced (frequency, number of parameters and level of detail), the project might have a better response rate and more representative information.

A different issue relates to contextual information vital for interpreting the relevance of data and that is often not collected as part of monitoring systems. Yet it can be and is often a by-product of interacting in a partnership. This information is essential to explain (shifts in) behaviour, signal problem areas, and interpret surprising phenomena (see 'cognitive dissonance, Chapter 7).

4.3.5 Aspect 3. Constructing and Implementing Monitoring Processes

Presupposition 9

That stakeholders have sufficient time, expertise, clarity and willingness to follow the basic monitoring steps in sufficient detail for effective results (in quality of information and/or in learning impact).

Those involved in a development intervention do not necessarily have a shared vision about project or M&E objectives. Nor is there generally clarity about the specific benefits of M&E, or the strategy needed to ensure those benefits. In an IFAD-supported project in Morocco (Johnson 2001b), top management was not convinced of the benefits of M&E other than for satisfying donor demands. They perceived M&E staff as a threat to their authority and blocked M&E functions and activities by not organising reflective meetings with project staff to capture feedback. They did not oversee staff activities or providing feedback and support and did not invest time or providing money for impact assessments or other key M&E activities. In this case, people officially responsible for learning from monitoring had no incentives or even basic conditions to invest in setting up an effective M&E system.

Another issue that negatively affects people's willingness and capacity to invest in developing effective monitoring is the frequent moving of government staff to different posts that significantly disrupts continuity, prioritisation of activities, and team spirit. Staff are unlikely to reap rewards during their posting and thus limit what they invest in each new assignment. In both Morocco and Uganda (Johnson 2001b; Johnson 2001d), this has meant that staff tended to invest in the project or allocate resources based on their own interests rather than those of the project.

Capacity limitations appear in various forms and at all levels. In India, staff of the implementing NGOs for a project considered data gathering a cumbersome burden, partly due to the lack of capacity of local groups to accurately fill in the lengthy formats (Dayal 2001d). Another example relates to the limited and diverse understanding of what participation means, so limitations are conceptual. Dayal (2001b) offers an example of different staff members in India who, over time, held differing perceptions of participation.

This resulted in a lack of continuity in approaches and initiatives for project implementation and resulting problems for M&E.

Willingness and capacity can occur in parallel and reinforce each other. In the ADIP project in Bangladesh (Mikkelsen 2001), M&E was considered a requirement rather than useful and more participatory forms of M&E were initially imposed (see Chapter 5 for more on participatory M&E). Without appreciating the potential use of M&E, mobilising enthusiasm for developing a good system was difficult. The most important constraint, as seen by the M&E team, was the dilemma of being expected to introduce innovative forms of M&E while nobody felt on top of the methodology, and at a time also when the pre-existing 'input-output' M&E system was still in the process of being perfected.

The above issues relate to the incentive structure within which monitoring occurs. M&E methodology does not, in general, acknowledge or discuss such incentive systems within which stakeholders are expected to construct and implement monitoring. The IFAD Guide is an exception in its explicit discussion of this topic, albeit not in depth (see section 7.3 in IFAD 2002). TABLE 4-8 summarises a series of disincentives for learning-oriented M&E from 16 IFAD projects in 11 countries of Latin America.

Presupposition 10

That the steps have a generic validity, irrespective of the context, such as varying degrees of participation, cultural difference, and/or different combinations of stakeholders.

Many projects acknowledge the importance of diversity of approach. This is closely related to diversity of stakeholder groups – each with its own information needs and approach to sharing and sense-making. For example, for impact assessment alone, the IFAD-supported ADIP in Bangladesh identified three key groups that would require different impact assessment processes (Mikkelsen 2001):

'1) Target groups should be encouraged to observe and document changes in self employment, production and income as well as improvements of their living conditions in terms of food security, child education, water and sanitation, assets and housing; 2) the NGO group facilitators should be enabled to monitor group development, gender relations, and the advancement of group members' individual capacities (literacy, book-keeping, etc); 3) Field extension officers should be trained in the application of simple tools to monitor changes in knowledge and skills, the adoption of new agricultural and horticultural management techniques, and the diversification and intensification of production.'

Where projects have tried to be more participatory, little seemed to change in terms of how M&E was approached. In Indonesia (Rebien 2001), project staff still see that information generation is dictated from the top and collected below, while analysed at the top again. This jarred with staff understanding of participatory M&E as bottom-up. Others, too, experience the chal-

TABLE 4-8 Disincentives for Effective Learning in IFAD Projects in Latin America (Guijt *et al.* 2005)

Conditions in the project context

- contexts with repressive cultures that inhibit critical spirit of staff and dissuade dissent and frank exchange of ideas
- rigid administrative and legal regulations that paralyse innovation, as changes require long and complex bureaucratic manoeuvring
- frequent relocation that negatively influences relationships – the longer together, the better knowledge of the context and each other
- pressure from donors or government departments for quick results, inhibiting people from reflecting and modifying plans

Project design

- learning not included as core activity or strategy – most projects are designed to implement an agreed set of activities rather than for learning
- fixed outputs inhibit seeing process of co-creating the direction, strategy and approach
- no resources, no staff responsible for learning when viewed as optional add-on

Dealing with small implementation units

- few staff to disburse large sums of money and much work channelled through sub-contractors, leading to distance from direct experience and more time needed for basic communication and understanding
- less time for activities not considered core business
- sub-contractors or co-implementers operate under narrow terms of reference for specific outputs within a tight timeframe – few incentives to engage in reflection

Project culture and skills

- internal project culture strongly influenced by characteristics and disposition of senior management – the less risk-taking and innovative, the less likely to be open for critical reflection
- the absence of skills in reflective practice

Stage in project life

- younger projects/collaborations more focused on starting activities, assembling teams and creating alliances
 - middle-aged projects can become static and rigidly compartmentalized teams of activity
 - older projects focus less on learning to improve than learning to prove
-

lence of integrating participatory thinking into the already difficult task of standard M&E (also see 5.1).

In ADIP (Bangladesh), M&E staff found it difficult to introduce more innovative monitoring that engaged stakeholders. They were aware of the significant departure this meant from the pre-existing 'input-output' M&E system and needed additional expertise (Mikkelsen 2001). ADIP staff found that although some of the participating NGOs were undertaking more participatory forms of monitoring, the NGOs had not been selected based on experience with either M&E or participatory M&E and had no vision on participatory monitoring. The project itself was not in a position to give the necessary guidance, as the project had no specific policy or strategy on participation, let alone in relation to M&E. Project staff had neither the necessary experience and capacity nor financial resources, and neither did the participating local government departments. The known M&E steps failed to provide guidance on how to deal with the shift to more interactive forms of M&E.

Presupposition 11

That power relations between those involved in monitoring (and the context of these relations) are not noteworthy or do not influence the quality of the design or implementation process or its outcome sufficiently to merit special methodological attention – or that power is too difficult to deal with or falls outside the remit of M&E methodology.

Three observations about core problems from Indian IFAD projects illustrate the diversity of issues around power that affect monitoring (Dayal 2001a:2-4). Dayal noted that emphasising physical progress, meant officers were keen to show their performance: 'As one officer said 'we become kangaroos and want to take big leaps without taking one step at a time because we want to impress our superiors with achievement of physical targets.' She also noted that a target-orientation encouraged inaccurate reporting, highlighting the power staff wielded to distort figures. Another issue related to the treatment of partner organisations 'One major issue that influences the monitoring of the software/community mobilization is the relationship of the project management with the participating partners, be it NGOs, or other CBOS. A condescending attitude treating them like contractors interferes with the motivation and transparent reporting.'

Managers exert power over field staff through performance assessment, field staff exert power over CBOS and community members as they are the channel to sustained project funding. In the Moroccan context, much pressure was reported to provide positive reports on project progress and impact at the expense of recognising, discussing and improving problems within project management and implementation (Johnson 2001b). But cultural norms also

exert their power on what is accepted practice (see Box 4-3). In El Salvador, definitions wielded power in that data on women could not be registered if their husbands were registered as project beneficiaries. The same happened with the credit database as the banks asked for land ownership titles to guarantee credits. Hence loans given to women were registered under the male name, leading to a loss of gender-related impact information. Power relations affect the quality of information and its use in diverse ways, and either distort or impoverish the evidence base or hinder learning. Yet M&E guidelines do not talk of power.

Presupposition 12

That people will know how to deal with and effectively use informal monitoring outside the prescribed formal processes and channels.

Not all monitoring happens through formally agreed processes, protocols and channels. In the TEP project in Yemen (Zaki 2001), local youths participated voluntarily in certain environmental protection activities, lending a hand with seedling protection, community health and water supplies. These individuals were then incorporated in M&E events to strengthen informal feedback about field situations. Bangladesh's ADIP team supplemented the regular reporting of progress, with on-site/spot verification/monitoring, specifically field visits with feedback and follow-up (Mikkelsen 2001). NGO staff collected on-farm and field trials data, which was then verified through a lengthy screening process by the Ministry Department of Agricultural Extension, and then indirectly fed back to beneficiaries through extension staff. Informal discussions at all levels were part of the project's overall learning systems. In contexts where other considerations than those of frank and timely reporting of specified information override, such as the *asal bapak senang* culture (see Box 4-3), alternative channels of information are needed and operate in which issues are discussed openly, though perhaps not as systematically as formal monitoring protocols like to specify.

But not all projects have ways to incorporate rich experiences at the field level into decision-making. The NGOs involved in the TANWA Project (India) felt that rich experiences at field level that should have been able to influence policies and strategies were not always captured by the formal M&E systems (Dayal 2001d). One way they tried to deal with this was through local level 'get-togethers' that at least provided an opportunity to learn from each other.

Presupposition 13

That it is either not necessary for monitoring processes to learn from, and adapt to, the environment in which they are being implemented – or that this happens automatically.

IFAD-supported projects usually rely heavily on short-term consultants to design the detailed M&E system at the onset of the project. These consultants often arrive before the full implementation team has been hired, and before all the implementing organisational partners are known. They design, for better or for worse, the information system that is supposed to fill the reports written by the implementation team and trigger learning among all implementing organisations. These consultants rarely return and so cannot support project staff once the M&E system is operational and needing the inevitable adjustments (Guijt 2001; Kamate 2001).

The lack of updating of monitoring systems can take extreme forms. In one project in India, a second phase project, there had been no change in data collection formats since the inception of the first phase project when formats had been prepared by the then Director (Dayal 2001b). The second project had taken over the same computerisation system for recording monitoring data. It had been more convenient to continue with existing system that provided 'adequate' information for reporting, than to create a more appropriate one based on a thorough review.

Many projects felt the need for updating their monitoring systems, although they did not always know how to undertake this. In the same project in India (*ibid*), a review of the M&E processes led management to identify the need for continual reviewing and modifying formats being used for monitoring progress to provide room for recording qualitative information, in addition to quantitative information. Also, reporting formats were revised to remove information fields that had not been useful for the past decade of implementation. Additional learning needs were identified, including: a continuous process to be able to document changes from village to village and the availability of resources to be able to meet changing priorities, plus support in synthesising lessons and documenting project impacts. In Benin, a project M&E manual developed to guide project M&E was considered to be an evolving process, influenced by the experiences of people using it (Kamate 2001). Even with such intentions, however, it also requires an explicit design and appropriate levels of resources – it will not happen automatically.

Improving is not just about updating information needs (see Presupposition 5). Bangladesh's ADIP project management regularly reviewed and evaluated the performance of different monitoring methods and tried to rectify loopholes and remove bottlenecks, and with that continually updated M&E plans (Mikkelsen 2001). For example, four years after project start-up, they resolved to further computerise routine monitoring activities, increase

field level monitoring after deploying new M&E staff, and increase their work on participatory types of M&E. In Colombia, PADEMER staff saw that the reports sent by the MCMD (an implementing organisation) were only quantitative and centred on activity achievement, and showed 'nothing about what is happening in the field with the beneficiaries, so we changed and started to go to the field, to make monitoring visits accompanied by the MCMD and now we have structured the form of doing these visits, we know to who we go and how we do it.' Reports then focused on results instead of activities (Vela 2001).

4.4 Comparing Espoused Theory and Theory-in-Use

In this chapter, I have suggested a set of presuppositions that underpin the espoused theory of mainstream (programme logic-based) M&E guidelines to which many rural resource management projects turn. Billions of dollars of investment in rural development and resource management³² rely on these or similar guidelines to enable strategic readjustment and operational improvement. If mainstream understanding is not able to provide such guidance, what alternatives exist?

Evidence from 33 IFAD projects indicates that the presuppositions of mainstream M&E guidelines do not necessarily fit well with operational realities. In some cases, practice on the ground is richer and more 'naturalistic' than the idealised version as articulated in the guide. In some cases, practice is weaker. What this suggests is that gaps exist between monitoring theory and the surrounding realities in which the theory is put to work, as well as between theory and its practice. Hence, there is arguably an inconsistency between the espoused theory and the theory-in-use, indicating areas where theory seems to need more definition or alternatives. I offer the following interim conclusions.

First, monitoring efforts are expected to provide a solid internal logic that facilitates the search for data to prove progress. This is the essence of programme logic models. The diverse elements that constitute 'progress' are linked by consistent and orderly relationships and data are summarised as 'indicators' in relation to a hierarchy of objectives. This focus relates to what is known as 'coherence' (Gigerenzer and Todd 1999) (see 7.2). The comparison with the operating environments and realities of IFAD show that the 'correspondence' suffers, that is the degree of fit with the reality in which it is expected to operate. This chapter suggests that correspondence with the context in which monitoring is expected to work is lacking on two critical fronts:

³² Recent new player is the Bill and Melinda Gates Foundation that will be spending \$3 billion each year (three times the GNP of Burundi and the same as Albania, 1998 statistics), and who have just established a new Impact Planning and Improvement Unit.

- The monitoring logic follows the planned intervention to which it aligns point-by-point via indicators for each level of the hierarchy of objectives and, therefore, fails to include information that might fall outside this hierarchy that could provide critical warning signals about the robustness of the logic and the likelihood of impact. Mainstream monitoring logic focuses on the known and the expected (Davies and Dart 2005; Snowden 2005). (See Presuppositions 5, 7 and 8.)
- The procedures for constructing monitoring that contributes to collective learning are posited in general terms. How specific circumstances or context-specific features, such as solid or fragile partnerships, more or less conflict, cultural factors, might affect these procedures is not addressed. (See Presuppositions 10).

A second reflection concerns the linear cause-effect perspective and procedural focus on how to construct and implement monitoring that does not recognise the messy reality of evolving partnerships that have to come to grips with an initial idea of what the development intervention intends to achieve (see Presuppositions 9, 10, and 11). The guidance provided by prevailing M&E thinking is naïve about how organisations, partnerships and power relations function. It requires considerable sophistication, political astuteness, and flexibility to build monitoring into an existing complex socio-institutional context and to identify where, in the local culture and through existing norms and incentives, the opportunities for sharing, stock-taking and sense-making arise.

Third, monitoring practice is not informed by clarity about ‘learning’, how it can be designed and how it occurs in relation to monitoring (see Presuppositions 2, 3, 4, 6, and 12). By focusing on the construction of information, or rather data systems, the reflection and sense-making activities that make possible effective learning based on a reading of data are ignored. Mainstream monitoring tends to focus on identifying what is happening, and pays relatively little attention to ensuring analysis and the link to decision-making. The questions ‘why?’, ‘so what?’ and ‘now what?’ that are critical for learning receive scant methodological attention. Furthermore, there is no consideration of the incentives and disincentives that stakeholders perceive and which influence their willingness to invest in learning processes (see Box 4-3 and TABLE 4-6).

These observations lead me to suggest that mainstream understanding of monitoring might benefit from a more detailed definition and from alternative ideas. In TABLE 4-7 I suggest possible alternatives to the 13 presuppositions. These alternatives constitute an initial start at an agenda for change that is consolidated in Chapters 8 and 9.

TABLE 4-7 Presuppositions of mainstream M&E and an alternative assumption

1. It is necessary and/or useful to define ‘monitoring’ as distinct from ‘evaluation’ and this can be made on the basis of a range of different aspects (the people involved, information used, validity of findings, information and feedback systems needed, etc.).

An alternative distinction to the phrase M&E or speaking in terms of either ‘monitoring’ or ‘evaluation’ that could lead to more precise definition of tasks, protocols and responsibilities would entail identifying specific learning purposes and articulating how each of these is best designed and implemented, and then interlinked. (See Design Principle 3, Chapter 8)

2. That because monitoring is intended principally to serve management, this will automatically happen, i.e. those involved will know how to make monitoring serve management.

When designing monitoring processes, organisational contexts – governance structures, responsibilities, power relations, etc. – need to be analysed to ensure a good fit with existing processes, but also to identify where capacity building of management is needed. If monitoring is to serve learning among stakeholders and enable shared management of the development intervention, then it must be participatory (see Chapters 5 and 6, and Design Principle 2, Chapter 8)

3. That strategic analysis and sense-making do not need to be explicitly designed for in monitoring.

Monitoring efforts must invest in data collection as well as sense-making processes, if decision-making based on pondered evidence and learning is to occur. (See Design Principle 4, Chapter 8)

4. That absence of sufficient information is critical and requires most of the investment, rather than developing appropriate processes to make sense of and use the information.

See under 3

5. That it is possible for stakeholders to anticipate their information needs adequately, at the onset, in terms of a comprehensive and fairly stable set of indicators (with related data collection methods and processes), irrespective of the diversity or development of actors or issues at stake.

Monitoring must be viewed as an evolving process, and subjected to regular critical reviews and adaptations as changes occur in understanding and context. (See Design Principle 8, Chapter 8)

6. That certain processes (notably analysis, critical reflection, interpretation, communication), needed to transform information into learning to fulfill different purposes, do not need to be described in monitoring methodology as they are too obvious or simple, and/or will occur automatically.

Specific guidance is needed for critical reflection to be possible and how insights are best communicated, capacities must be built to make this possible, processes created and therefore resources allocated to this end. (See Design Principles 3 and 4, Chapter 8)

TABLE 4-7 *Continued*

7. That indicators are an appropriate form in which to express and convey all key information and which enables learning that supports management decisions.

Alternative forms of conveying information are needed that allow other data than of the known/expected type to inform decisions – and processes are needed to ensure such information can be shared and debated. (See Design Principles 1, 3, and 6, Chapter 8)

8. That a balanced picture of information is produced from the chosen set of indicators.

See under 7

9. That stakeholders have sufficient time, expertise, clarity and willingness to follow the basic steps in sufficient detail for effective results (in quality of information and/or in learning impact).

Monitoring processes need to consider the incentive structures in which they operate in order to have realistic expectations of the learning that might be possible, and, where possible, offer stimuli that can help those involved to perceive the usefulness of such processes. (See Design Principle 7, Chapter 8)

10. That the steps have a generic validity, irrespective of the context, notably with varying degrees of participation, cultural difference, and/or different combinations of stakeholders.

More clarity is needed about how differences in partnerships, (socio-cultural) history, capacities, and other institutional factors influence how monitoring processes are to be constructed. (See Design Principles 1, 2 and 3, Chapter 8)

11. That power relations between those involved in monitoring (and the context of these relations) are not noteworthy or do not influence the quality of the design or implementation process or its outcome sufficiently to merit special methodological attention – or that power is too difficult to deal with or falls outside the remit of M&E methodology.

Pay attention to power relations when seeking to involve different groups in constructing and implementing monitoring processes – recognize where power inequalities are being aggravated or ignored and act to reduce this effect. (See Design Principle 2, Chapter 8)

12. That people will know how to deal with and effectively use informal monitoring outside the prescribed formal processes and channels.

Incorporate the identification of informal processes of interaction, sharing and debate as part of the monitoring design process, and link the informal sphere to formal processes and channels. (See Design Principle 5, Chapter 8)

13. That it is either not necessary for monitoring processes to learn from, and adapt to, the environment in which they are being implemented – or that this happens automatically.

See under 5

My interest in looking at the underlying theory of monitoring came from a frustration with implementing ideas that drew on mainstream thinking, experiences that I describe in Chapters 5 and 6. In this chapter, I delved deeply into mainstream thinking to understand my own conundrums. My unease persists. Comparing the IFAD projects to the messy partnerships and their challenge lead me to two observations that strengthens my conviction of the need to fundamentally rethink monitoring.

First, IFAD projects are only partial examples of ‘messy partnerships’ as discussed in Chapter 1. They certainly involve diverse organisations or groups with different mandates and governance structures, which converge around a shared interest in realising the project goals, and are facilitated in implementing activities by the project team. However, the partnership in IFAD projects is based, first and foremost, on legal commitments with fixed deliverables that are not expected to change once contracts are signed. Each party is allocated part of the work rather than all parties interacting on different elements. Furthermore, IFAD projects represent a hierarchical form of governance. Therefore, monitoring serves decision-making by management. There is little evidence of a need to establish a process of collective learning for which a participatory process of monitoring would be required. If the tensions between mainstream monitoring theory and practice is already evident in contexts in which hierarchical, contractual obligations shape relationships, then messy partnerships and their focus on concerted action will be even more challenging.

Second, IFAD projects are generally couched in terms of concrete deliverables, rather than institutional change. Roads must be built, veterinary clinics set up, farmers trained, market places constructed, micro-credit lines set up, and so forth. These initiatives are not principally focused on changing citizen mindsets, shifting governance structures, developing pro-poor farmer social innovations, challenging policies and policymakers, although this pattern is shifting. Yet this is the work of the messy partnerships in Brazil to which I turn in the next chapters. What methodological guidance can they turn to for monitoring their concerted action as the basis for learning? Mainstream theory and practice of monitoring, already stumped for workable options when monitoring concrete deliverables, will be severely tested when applied to institutional transformation as described in Chapter 1.

The next two chapters discuss experiences by messy partnerships in Brazil that sought an alternative to mainstream monitoring.

PARTICIPATORY M&E AND RURAL PARTNERSHIPS IN BRAZIL

5

Given that mainstream M&E approaches appear to provide limited guidance on what is needed for monitoring to contribute to learning (see Chapter 4), can more be expected from approaches that are participatory? Chapters 5 and 6 describe a three-year action research process with participatory monitoring and evaluation (PM&E) in Brazil in which I will argue that the answer is ‘in part, yes’. However, as PM&E leans considerably on the conceptual ideas of mainstream M&E, critical problems remain.

This chapter starts with an overview of participatory M&E as an alternative to mainstream M&E. I briefly discuss its emergence and intended contribution. I then describe the two Brazilian contexts in which participatory monitoring processes were undertaken between 1996 and 1999 by a municipal-level collaboration of civil society entities. The cases revolve around two local NGOs working in partnership with rural trade unions and other groups, all committed to developing economic, social and technological alternatives for smallholders. They serve as examples of ‘messy partnerships’ working on institutional transformation (Chapter 1).

I will refer to the term M&E in section 5.1 as the literature on PM&E refers to the joint concept. In section 5.2 I will refer more specifically to participatory monitoring or to PMVE depending on what term is most accurate. Where I refer to ‘mainstream M&E’ in this chapter, this relates to programme logic-inspired practice (see Chapter 4).

5.1 Participatory M&E as an Alternative Approach

In the early 1990s, discussions emerged about how to take on board the potential benefits of participatory development into the realm of M&E. Practical experiences also grew. Four trends in rural development and resource management appear to have stimulated this interest in PM&E since about 1990, with a fifth trend gaining ground in the development sector in general (see FIGURE 5-1). The diverse sources of inspiration have spawned diverse expectations about what participation in M&E can deliver (see 5.1.1) and different interpretations of how PM&E is expected to operate differently than mainstream M&E (see 5.1.2).

5.1.1 Reasons for Interest in Participatory M&E

The first, and arguably most significant trend that spawned PM&E has been the enormous interest in participatory appraisal and planning, in general, and in the natural resource sector, in particular (IIED 1987-; Chambers 1994; Chambers 1997; Hinchcliffe *et al.* 1999; Pimbert 2004; Chambers 2007). As mentioned in Chapter 3, participatory resource management has now become an accepted perspective and practice in many Northern and Southern development initiatives, with a rapid growth of innovative methods that are being used worldwide. A logical extension of the interest in appraisal and planning was the subsequent interest in ensuring wider participation in monitoring and evaluating locally planned development projects (Kaul Shah 1995; Estrella and Gaventa 1997; Hogger *et al.* 1997; Guijt 1998a; IIED 1998; Kumar Rai 1998; Woodhill and Robins 1998; Estrella *et al.* 2000; Lawrence 2002). The main intention of PM&E arising from this trend is one of encouraging internal learning to further the objectives of empowerment and locally-defined change, both notions central to participatory development.

A second trend relates to the desire to understand the impact of funding for participatory approaches to resource management and participatory

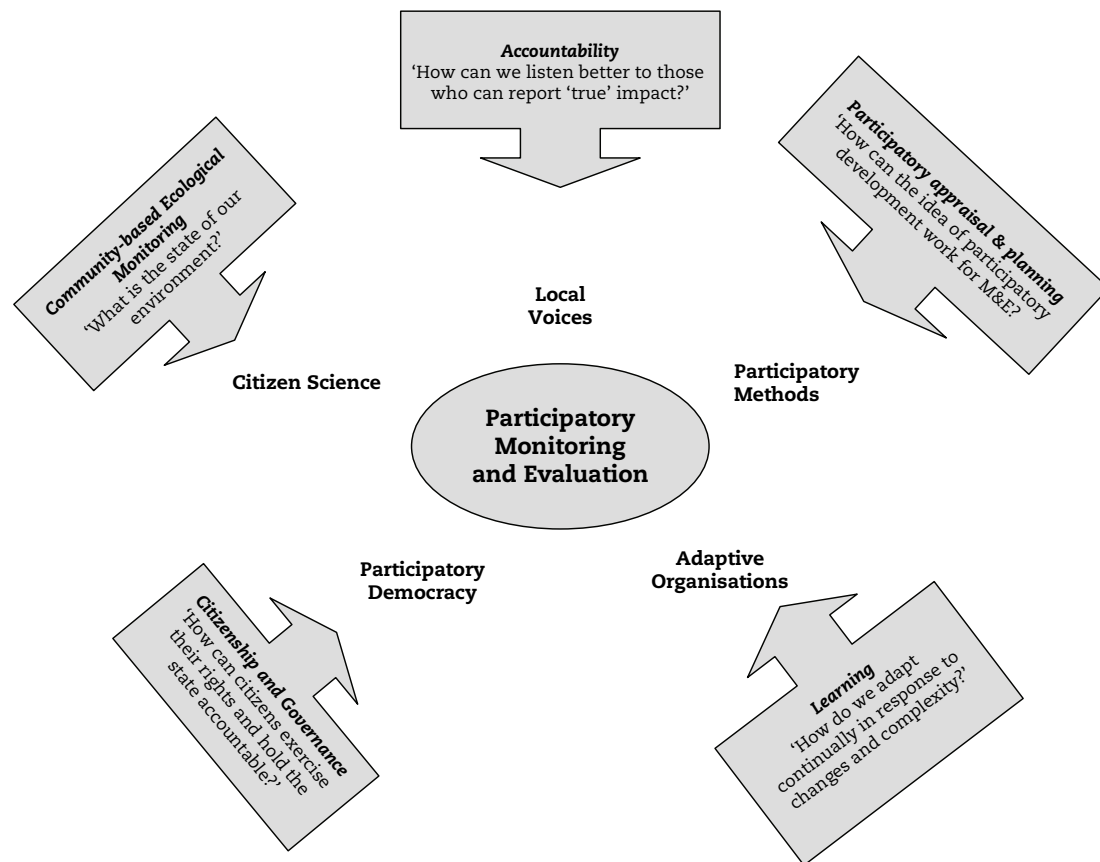


FIGURE 5-1 Convergence of trends around interest in participatory M&E

research (Hinchcliffe *et al.* 1999; Lilja *et al.* 2001; Colfer 2005a). This interest is part of a general tendency in development to seek greater financial accountability (see Chapter 1). Those footing the bill want to know whether their money has been spent as promised – and say that local stakeholders are best placed to express this. The main purpose of PM&E related to this trend is externally driven (financial) accountability.

A third trend relates to a global call for community involvement to help provide more information to provide answers to environmental challenges. This was highlighted during the 1992 Rio conference, for example, in Chapter 40 of Agenda 21: ‘Indicators of sustainable development need to be developed to provide solid bases for decision-making at all levels and to contribute to a self-regulating sustaining of integrated environment and development systems’ (UNCED 1992). People want to know what is happening in their environment and if their efforts to improve it are effective. Yet the information that natural scientists provide is not always sufficient or appropriate, and their methods can be too costly and time-consuming. Many organisations consider local monitoring processes, with community members collecting local environmental information, as an important addition. This indicates a third key purpose of PM&E – that of providing relevant and specific local ecological information for better strategic environmental planning and action.

A fourth and more recent trend relates to growing interest in ‘the learning organisation’. Rural development organisations have been urged towards greater effectiveness by incorporating concepts such as gender equality, participatory modes of operating, transparency and stakeholder accountability, privatisation of delivery, and competitive funding. The ‘institutionalisation’ of change (Levy 1996) often requires a significant transition in protocols, policies, behaviours and attitudes, and interest is growing in how to embed such concepts in practice and learn as an organisation. This has been strengthened by the recognition of the complexity and uncertainties inherent in operating contexts, which require organisations to be critical thinkers and to develop conscious learning trajectories as a strategy for increasing their resilience and capacity to deal with the unexpected. The expectation is that by making learning explicit in organisations, lessons can be translated into concrete actions for better impact.

The fifth trend is most recent and has potential to infuse the PM&E discourse and practice with a more politicised perspective, in which power relations are recognised and addressed (see Presupposition 11, Chapter 4). This trend relates to work over the past decade on participatory democracy, strengthening citizenship, new societal ‘spaces’ for debate between and

among civil society, the state and business. Critical ideas in this debate include the need for civil society to learn how to hold the state accountable (Cornwall and Coelho 2007), for the state itself to innovate with knowing citizens' needs are being met (Waglé 2003; Ackerman 2005), participatory budgeting (Booth and Lucas 2002; Schneider and Goldfrank 2002; Salmen *et al.* 2006), and in general making government more effective and relevant (Hilhorst and Guijt 2006). PM&E is expected to strengthen primary stakeholders' involvement as active participants in interventions by letting them take the lead in tracking and analysing progress towards jointly agreed results and deciding on corrective action. More demand-led planning and decision-making and improved accountability is expected to ensure. Monitoring in this context essentially means holding the state accountable.

The discussion on PM&E below and in the empirical work stems from the first four trends rather than the more recent participatory democracy discourse. It will be exciting to see how more fundamental debates on governance and citizenship will expand the understanding of PM&E, which has, as I will discuss, been more method-oriented than inspired by critical debates from political economics.

5.1.2 How PM&E (Theoretically) Differs from Mainstream M&E

The core intention of PM&E is, as the name implies, to increase the involvement of primary stakeholders – those who are to be affected by the intervention being examined – in the process of M&E. In general, PM&E has focused on increasing participation of community members as a critical stakeholder group, rather than other types of stakeholders. Increasing local community involvement in M&E is assumed to bring advantages (Abbot and Guijt 1998) such as 'more local action', 'cost-effectiveness', 'more accuracy', and 'more relevant information'. These promises are similar to expectations of participatory appraisal and planning in its early days. They are now proving to require adjustment in the face of a reality of slow and difficult social change (White 1996; Guijt and Kaul Shah 1998; Cornwall 2000; Cooke and Kothari 2001; Cornwall and Pratt 2002; Hickey and Mohan 2004).

An important distinction can be made between two key forms of community involvement in monitoring, each with different methodological and institutional implications: community ecological monitoring that assesses quality and quantity of ecological phenomena; and community initiative monitoring that assesses progress with rural resource management initiatives. This thesis focuses more on the second type as it relates to the rural

resource management initiatives and ‘messy partnerships’ that are of central concern. However, ecological monitoring is also included in the framework of learning purposes proposed in Chapter 8 (see Design Principle 3).

One recent publication on PM&E (Parks 2005) summarises the core steps as distilled from diverse sources:

1. Deciding to use PM&E;
2. Assembling the core PM&E team;
3. Making a PM&E plan: a) orient stakeholders to PM&E and set the agenda; b) clarify the question: who wants to know what and why?; c) identify indicators that will provide the information needed; d) choose and adapt data collection methods;
4. Collecting data;
5. Synthesizing, analysing and verifying the data;
6. Using PM&E results and developing Action Plans for the future.

As these generic steps do not differ from mainstream M&E, it is the guiding principles that provide the difference. In practice, PM&E seeks to operate based on four principles (Guijt and Gaventa 1998):

- ‘Participation’, so opening up the design of the process to include those most directly affected, and agreeing to analyse data together with them;
- Requiring ‘negotiation’ to reach agreement about what will be monitored or evaluated, how and when data will be collected and analysed, what the data actually means, and how findings will be shared, and action taken;
- This is supposed to lead to ‘learning’ which becomes the basis for subsequent improvement and corrective action; and
- Since the number, role, and skills of stakeholders, the external environment, and other factors change over time, ‘flexibility’ is essential.

TABLE 5-1 summarises in more detail how PM&E, in theory, differs from mainstream M&E. The main differences relate to the main audience and active stakeholders in designing and implementing the process, with other issues resulting from this core shift. Four key issues that emerge from this analysis are summarised below.

First, the PM&E discourse marks a return to recognising the influence of power relationships. While Chambers noted the importance of asking ‘whose reality counts?’ Estrella and Gaventa relate this to M&E in 1998 by asking ‘who counts reality?’ (Chambers 1997; Estrella and Gaventa 1997). PM&E stresses inclusion of the opinions of intended beneficiaries living with the intended development impacts; by implication also saying that so-called objective, external M&E processes are inadequate. Those involved are urged to be clear about two questions not considered in mainstream M&E – ‘information for

TABLE 5-1 How PM&E differs from mainstream M&E (Guijt and Gaventa 1998; Probst 2002)

<i>Mainstream M&E</i>	<i>Participatory M&E</i>
<i>Main audience of the system</i>	
Mainly donors and policymakers related to the development intervention	Focus is on ensuring local relevance and benefits of the system but external use also possible
<i>Core purpose</i>	
Upward financial accountability and management support for senior staff, in theory also to generate new knowledge but this is rare	Same as mainstream M&E, plus strengthening capacity and organisations for self-directed development, sharing of perspectives, increase motivation
<i>Who controls the process</i>	
Project management, external facilitators and/or donors	Local people, civil society organisation staff & project staff, often helped by a facilitator
<i>Role of beneficiaries</i>	
Provide information only	Various degrees of involvement in design and adaptation of methodology, collection and analysis of data, sharing findings and translating these to actions
<i>What data are collected</i>	
Externally-defined indicators related to project objectives	No specific focus, this emerges based on purpose and stakeholder information needs
<i>Perspective on flexibility</i>	
Initial M&E system is considered valid for the duration of the development intervention; rarely explicit revision	Recognise that stakeholders come and go, contexts change, information needs change, strategies shift and therefore the M&E focus and process needs adaptation
<i>Perspective on information quality</i>	
Focus on seeking objective data, in development often related to assessing relevance, effectiveness, efficiency, sustainability, impact	What counts is locally relevant information, hence explicit about the need for it to be co-constructed and negotiated, and being subjective in nature

whose local benefit?’ and ‘whose information?’. This perspective means respecting what different stakeholders are already monitoring and evaluating, and ensuring that they are involved in methodology design and data analysis, not just in data collection. However, while representing a comparative change with respect to mainstream monitoring, the PM&E discourse is still vague about how to deal with power inequalities between and within stake-

holder groups, and often speaks in generic terms of 'local involvement'. In practice, many cases still show a dominant role of project/NGO staff and/or external facilitators, as in our Brazilian case (see Chapter 6).

A second related feature is the need to agree on the nature and degree of involvement of different stakeholder groups. Experiences indicate considerable diversity in interpretation: identifying indicators (Blauert and Quintanar 2000; Walker *et al.* 2000; Probst 2002), to designing methods (Espinoza 2000) or adapting suggested methods/indicators (Hamilton *et al.* 2000; Torres 2000), and designing and implementing the entire process (Abes 2000; Chapter 6, this thesis). This challenges the simplicity of Presupposition 9 (Chapter 4) in which stakeholders are assumed 'to have sufficient time, expertise, clarity and willingness to follow the basic steps in sufficient detail for effective results'. The PM&E literature suggests that this cannot be assumed and must be negotiated with the people involved.

A third issue is the recognition that changes will be inevitable and that design is an iterative process. Early understandings of PM&E steps were strongly based on a linear model (see Chapter 4) and advocated a specific set of steps (*e.g.* Guijt and Gaventa 1998). However, during the first global conference on PM&E in December 1997 (IIRR 1998), participants shared experiences to derive an empirically-based sequence of steps needed to develop and implement participatory modes of M&E (see FIGURE 5-2). The main difference with previous understanding was that, in this version, iteration was made explicit by urging continually revisiting questions such as 'who's involved' and 'what is and isn't working' in terms of methods, indicators and roles. Continual revision during implementation marks a departure from Presupposition 13 (Chapter 4) that articulates a more static perspective in mainstream M&E systems.

The fourth issue stems from the previous three and concerns negotiation of information needs. The most obvious area where this is different from mainstream M&E lies in the perception of indicators as resulting from negotiated processes, rather than as representing objective measures. Considerable work has been undertaken on local actors identifying their information needs (Roberts 1991; Campilan 1996; Guijt and Sidersky 1996; ILEIA Newsletter 1996; Rennie and Singh 1996; Lawrence *et al.* 2000; Walker *et al.* 2000).

Negotiations are inevitable in this process. 'Monitoring everything is impossible ... in theory because we do not know enough about natural systems to know all the aspects we could record ...[and] in practice because there will never be enough resources – time, money, equipment, expertise, to record everything. Therefore, data selection is necessarily selective. This means that

an assemblage of data is not objective fact: rather it is a particular view of objective fact' Roberts (1991). Ricafort supports this perspective (1996), suggesting that if multiple actors and views of reality are recognised, as in PM&E, then pre-defined and 'objective indicators must be replaced by negotiated indicators that serve as channels to bridge realities and meanings. The negotiation should be an on-going process and should result in indicators that stay relevant and meaningful. MacGillivray and Zadek (1995) also suggest that while indicators must measure something, their crucial role is in communicating information that is 'not only accurate but also resonant for the intended audience'. The view that information is the result of negotiations and a convergence of standards about what is valid challenges some aspects of Presuppositions 7 and 8 (Chapter 4) on indicators as an objective summary of vital information.

5.1.3 A Brief Word on Participatory M&E since 2000

Thus PM&E differs in several respects from several Presuppositions that underpin programme logic-based M&E as described in Chapter 4. In practice,

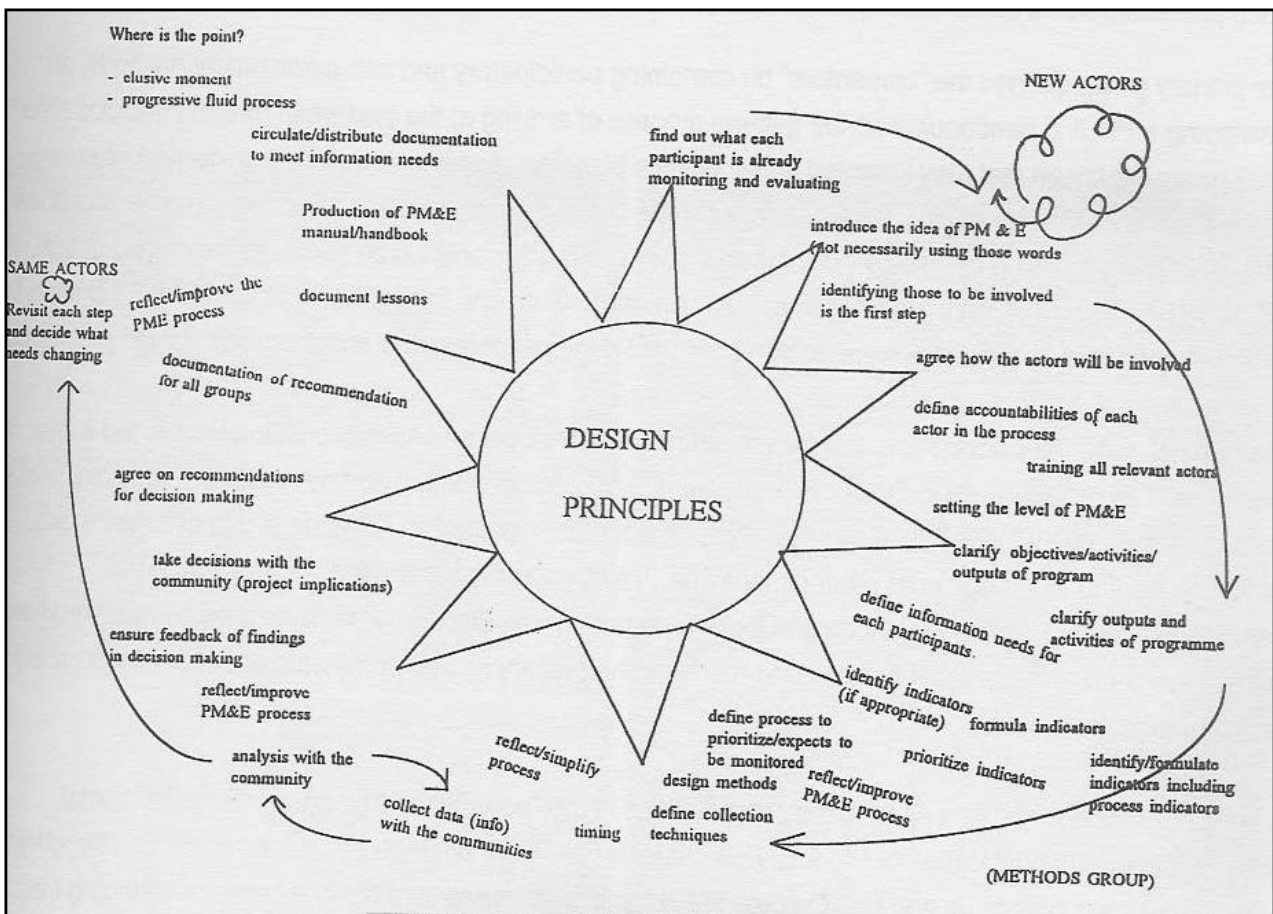


FIGURE 5-2 The PM&E cycle (IIRR 1998) (note references to 'reflect/simplify' and 'reflect/improve')

however, there is no sharp divide between mainstream M&E and PM&E, as both practices are marked by much diversity. They take on elements from the other discourse and practice depending on how those designing the process perceive what is needed. The IFAD Guide (2002), for example, lists many methods that are associated with the participatory 'toolkit' and yet are being advocated within IFAD's mainstream programme logic based M&E framework. PM&E itself is not a homogenous practice, with much diversity particularly in relation to how different actors are involved in the process.

Striking is the relative standstill in the debate on PM&E since early 2000, with few debates and innovations emerging despite the spread and growth of applications. Chambers, in a recent review of all things participatory (2007), for example, refers to an experience with 'Internal Learning Systems', which are essentially pictorial diaries of change. This method was pioneered in 1997 (Noponen 1997) and, while being applied more widely, has neither altered in practice nor shifted the debate. Probst (2002) and Vernooij and colleagues (2003) discuss experiences in Central America and China with PM&E in the context of participatory research but do not add new dimensions. Probst does broach one issue that will be discussed in more detail in this thesis which is the conditions under which PM&E can work (see Chapters 6 and 9). Another recent addition to the PM&E literature 'Who Measures Change?' (Parks 2005) is a useful summary of past thinking and several different applications. While providing some thoughts on how to look at PM&E as a social communication process, it does not detail this perspective.

In the most recent addition (Guijt 2007e), several new issues are raised based on detailed empirical reflections that highlight the difficulties of locally embedding and sustaining joint monitoring processes that seek to further learning. In that publication, the shift is away from the term PM&E, and towards 'learning' based on the notion that M&E is simply a means and learning is the prime concern. Over the past two years, other issues have been broached that focus on critical reflection in strategic alliances with unlikely partners, articulating theories of change, and the role of stories to clarify and convey the complexity of transformation are part of a new emerging discourse and practice (Guijt 2007a; Guijt 2007c). The received wisdoms of M&E are slowly being challenged in more fundamental ways based on an understanding of development as complex, emergent, and transformative. But practice lags far behind.

The next section introduces the Brazilian context in which and actors with whom three years of work on participatory monitoring was undertaken.

5.2 Background to the Research Project

PM&E was the core concern of the fieldwork in Brazil, which was first conceived in 1994 (see 2.3.3). When the work started two years later, 'the state of understanding on participatory M&E was limited ...[and] had focused largely on new methods, rather than understanding the influence of institutional relationships and historicity, existing planning systems, the dynamics of activities in participatory project settings, and so forth. A new mythology was in danger of emerging about the pros, cons and potentials of PM&E. Therefore, the project sought to overcome methodological constraints imposed by lack of understanding of the complexity of participatory M&E in a context of NGO-CBO partnerships' (Guijt 2000:7).

The idea for joint research took root in 1994 when I asked a Brazilian NGO, AS-PTA (*Assessoria e Serviços a Projetos em Agricultura Alternativa*) to contribute a case study on the impact of participatory watershed development for an international research project (Hinchcliffe *et al.* 1999). Though keen, AS-PTA declined, saying that M&E was a critical weakness in their work. Despite many years of work it was unable to indicate its impact. It had insufficient information with which to improve strategic planning and effectiveness, ensure downward accountability to farmers, facilitate upward accountability to donors, and influence national debates on alternative agriculture. From this, the idea of a joint initiative on participatory M&E, and in particular participatory monitoring, was conceived. AS-PTA's recently started Projeto Paraíba³³ came on board and was joined by a second NGO, CTA-ZM (Centro de Tecnologias Alternativas of Zona da Mata).

Neither of these NGOs had an in-depth M&E system but both were keen to develop this with their partners. As they were already advancing with participatory evaluation processes, the focus of our action research³⁴ was participatory monitoring of collaborative agricultural initiatives (Guijt and Sidersky 1996; Guijt 1998a; Sidersky and Guijt 2000). By testing out PM&E in two similar but distinct contexts, we aimed to understand which issues require attention for organisations, like these local NGOs, who play a pivotal role in 'messy partnerships' (see Chapter 1) to enhance local capacities for learning and adaptation, particularly of their farmer-based research initiatives.

The research objectives were threefold:

³³ Projeto Geração Participativa de Tecnologia para o Desenvolvimento Local Sustentável do Agreste Paraibano (Project for Participatory Technology Generation for Sustainable Local Development in the Agreste of Paraíba)

³⁴ Research funding (1996-1999) was provided by the Department for International Development through the Natural Resources Systems Programme (grant no R6547)

- to develop and implement a systematic approach to monitor and evaluate the impacts of sustainable agricultural interventions;
- to collect quantitative and qualitative data about the impacts of these interventions that are carried by AS-PTA and CTA-ZM, smallholder farmers, and rural worker unions (see 5.3.2 below); and
- to generate discussion amongst other Brazilian NGOs of the PTA Network³⁵ working with sustainable agriculture about the prospects of monitoring their efforts.

In January 1996, a workshop in Paraíba marked the beginning of the research with the partners (see section 5.3.2) in two locations: the dry northeast of Paraíba and the higher coffee-growing areas of Minas Gerais (see FIGURE 5-3). In addition, workshops with the main players in both sites, two exchanges between the sites and regional workshops with other Brazilian NGOs at the end helped share the ideas and broaden the debate. My role, as facilitator/

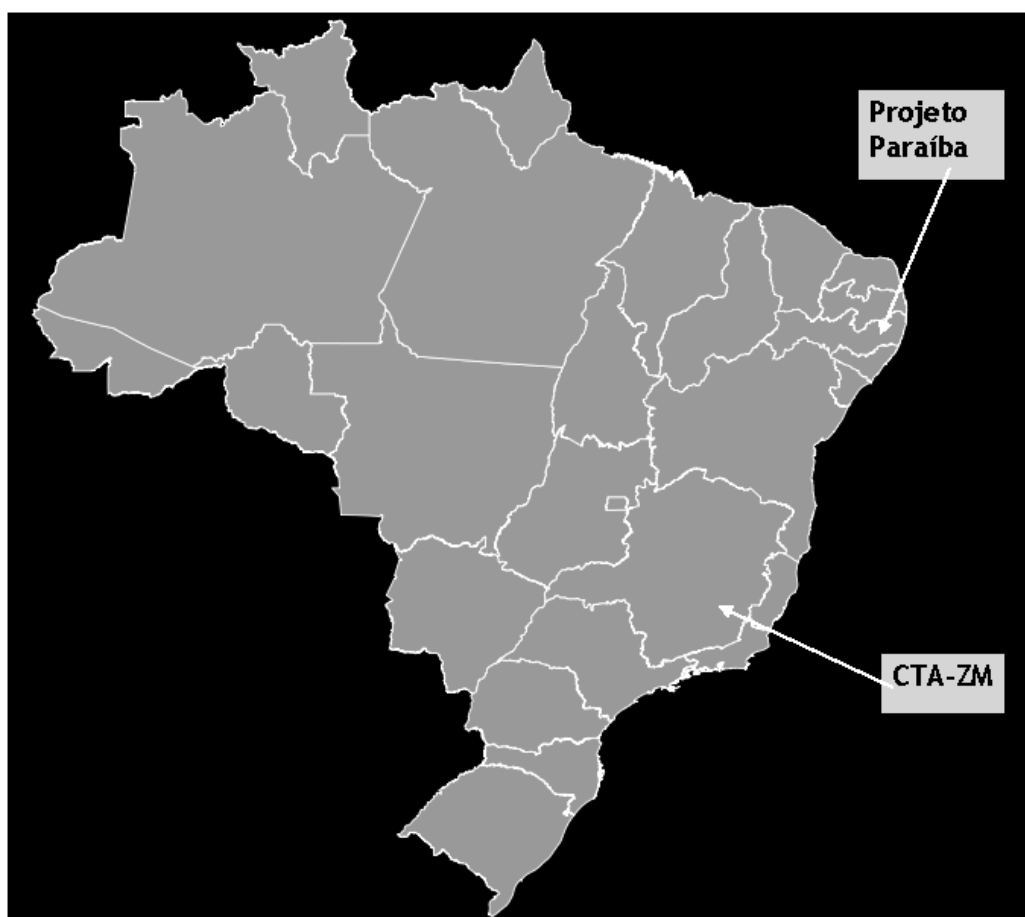


FIGURE 5-3 Location of two research sites in Brazil

³⁵ The two NGOs were part of a what was then a national network of organisations engaged in sustainable rural development, Rede PTA that had 33 NGO members in the mid 1990s. This network was dissolved in 2001 and reborn as 'Articulação Nacional de Agroecologia', which is a network of regional networks that includes NGOs and a wide range of other civil society organisations (www.agroecologia.org.br)

researcher³⁶, was to guide and document the process. Various publications resulted from this research, which form the basis of Chapter 6 (see ANNEX 2).

5.2.1 The NGOs and their Partnerships: Projeto Paraíba and CTA-ZM

The Resource Management Problems and NGO Strategies

Brazil's rural population is estimated to range between 16% and 30% of its total population of around 190 million (IBGE 2001). National statistics place the active rural population at around 26 million, with about 3.8 million family-based agricultural units (ibid). A long term rural exodus trend seems to be reversing due to declining urban opportunities, refocusing attention on ongoing rural poverty (Veiga 2000). World Bank statistics (Bank 2001:36) indicate that 43% of the poor are rural, in particular farmers and agricultural workers, with the largest concentration in the northeast (Romano 2001).

Over the past 50 years, agricultural development in Brazil has been dominated by a high-technology Green Revolution model that has not benefited smallholders who are unable to invest in inputs or access financing options, and must use their small plots to meeting subsistence needs before focusing on cash crops. Small farms continue to be pervasive in Brazil. In 1996, almost 50% of agricultural enterprises were smaller than 10 hectares yet only comprised about 2.25% of the total area farmed in Brazil. By contrast, less than 11% of farms were larger than 100 hectares, but this group accounted for 80% of the total area farmed (Bank 2001:42).

Brazilian agriculture is widely acknowledged to be characterised historically by skewed concentration of land ownership and, therefore, of wealth. This phenomenon has been compounded by the predominance of a commoditisation logic, which has been accompanied by a technological focus and unfavourable world market prices (Bank 2001:42). The logic on which high-tech agricultural development has been based favours production for global markets, in contrast to a local logic that would seek to reproduce social and environmental conditions favouring agroecosystem sustainability (Petersen *et al.* nd:1). The commoditisation of agricultural has been paralleled by a commoditisation of agricultural knowledge, transferring the innovation process from farmers to scientists and extensions, thus disqualifying farmers from being valued as a source and channel of valuable knowledge (ibid). The World Bank study concludes that 'both the market and, to some extent, government policy appear to have reinforced the Brazilian agricultural sec-

³⁶ At the time, I was research associate in the Sustainable Agriculture and Rural Livelihoods Programme of the International Institute for Environment and Development (IIED), London

tor's disposition towards technologically advanced producers and against low technology, small and semi-subsistence farmers' (Bank 2001:43-44).

In this general context, the states of Paraíba in the northeast and Minas Gerais in the southeast offer two distinct environmental contexts and natural resource challenges. Nevertheless, the socio-economic realities and priorities of smallholders in both parts show similarities. Although the northeast is the largest poverty area in all of Latin America with 50% of rural people being poor, rural poverty in the south continues with almost 30% of rural residents being poor (Veiga 2000). One study (Alves 1999, cited in Bank 2001) estimates that the monthly pay of family labour for farms under 10 hectares dropped to only about R\$15³⁷ in the northeast and, that for all regions of Brazil, the income per employed family member on farms smaller than 50 hectares (thus over 80% of all farms) was less than the minimum salary. Both states are still prone to out-migration, both belonging to the category with the highest number of declining municipal populations (Veiga 2001:12).

The difficult living conditions and poverty of many farming households means there is little economic space to take risks and invest in developing agricultural (technological) alternatives. Survival is a full-time task for many. Government alternatives are few and inadequate, although the situation is improving slightly. In 1995, the creation of PRONAF (National Programme to Strengthen Smallholder Agriculture) became more than just 'credit for poor farmers' through an attempt at developing new partnerships between smallholder organisations, governments at all three levels (municipal, state and federal) and the private sector (Veiga 2000:3). PRONAF emerged in part, from social pressure and earlier examples set by a growing number of NGOs, such as AS-PTA and CTA-ZM. It is to these examples that I now turn.

The Environmental Context of Projeto Paraíba

While AS-PTA in general has been active in the field of agroecology, family agriculture and sustainable development since 1989, 'Projeto Paraíba', started in 1993 as one of its local agricultural development programmes. The Agreste region of Paraíba where the project operates is part of Brazil's drought triangle or 'Brazil's Eritrea' as it is known. Commonly, rains bring rapid vegetation cover only to stop short of the levels required for harvest, giving rise to the local term 'green deserts'. Extreme variation of annual rainfalls (Petersen *et al.* 2002) means that farmers face recurring but unpredictable drought aggravated by woefully inadequate public policies, and thus must cope with the resulting production limitations, food shortages, and poverty (*ibid.*).

³⁷ R\$15 was worth around 8 US\$ in 1999

Great environmental variations across short distances call for distinct technical solutions to otherwise similar types of problems (Sidersky and Silveira 1998; Petersen and Silveira 2002). These variations are caused by the Serra de Borborema – a low range of hills – that interfere sufficiently in atmospheric circulation (Petersen *et al.* 2002:21) to create small wet pockets where the thirsty banana can easily thrive alongside dry patches fit only for cacti and extensive grazing. Soil variations reinforce the micro-climatic differentiation, leading to considerable variation in moisture retention capacities and erosion-sensitivity. Thus micro-regional variation in natural vegetative cover and productive potential create a visual image of great environmental diversity (*ibid.*). In 1994, AS-PTA's environmental survey with farmers identified 10 environmental micro-zones (Petersen 1995). Six production sub-systems were also identified: annual cropping, permanent cropping, livestock, home garden, extractivism³⁸, and small-scale irrigated agriculture. Each micro-zone, therefore, contains several types of smallholder farms, each facing specific problems that hinder economic viability and agricultural sustainability.

In these diverse niches, farmers grow maize, common beans, and cassava, often adding a patch of sweet potato, lima beans, banana, or potato. A very short rotation cycle is common, sometimes giving way to permanent cultivation, with only occasional use of organic fertilisers and even less use of other agro-industrial inputs. Small-scale livestock is an important supplement to diets and incomes.

Amidst the enormous diversity, virtually all smallholders face the same two basic problems: (1) intense pressure on scarce natural resources (particularly soil, vegetation and genetic diversity); and (2) a large drop in agricultural income with the disappearance of cash crops. Addressing the latter is the first priority of local farmers (Sidersky and Guijt 2000:69) but derives from environmental degradation.

Projeto Paraíba's Working Approach in the mid to late 1990s

It is in this environment that Projeto Paraíba developed an approach based on local smallholders' experiences. From the onset, NGO staff were clear about the large conceptual, methodological and epistemological gulf between the economic and environmental realities of smallholders and the state research system (EMBRAPA), which had produced few useful research results for the project's smallholder, subsistence-oriented target groups (Petersen and Silveira 2002). Hence the initial focus was on deriving technological, social and economic

³⁸ Gathering or collecting in areas with natural vegetation, for construction and fuel wood, fodder, fruit

options by facilitating the joint creation of understanding (of context, problems and visions) and local experimentation of possible solutions. This approach consisted of participatory research and extension of appropriate innovations (social and technical) for small-scale producers, guided by an agroecological perspective and supported by networking and advocacy. In concrete terms, this was implemented through various activities (Sidersky 2001:3-4):

- diverse and ongoing participatory rural appraisals (initially general appraisals, followed by topic specific ones such as local bean varieties (Xelofonte *et al.* 2002), animal husbandry sub-systems (Melo and Lima 2001), role of native plants in local systems (Lima and Sidersky 2002);
- a series of annual participatory planning, monitoring and evaluation events with specific thematic groups and partners;
- farmer experimentation groups (field visits, training courses, group meetings);
- capacity building of local organisations through on-the-job training, short courses, exchange visits, *etc.*; and
- enhancing local forms of community cohesion (notably community seed banks and more recently revolving funds).

Projeto Paraíba started working in the municipalities of Solânea and Remígio, and during the participatory monitoring work, expanded to include the municipality of Lagoa Seca and participation in state level forums. The municipal-level rural trade unions (*Sindicato dos Trabalhadores Rurais* or STRS, see 5.3.2) were originally viewed as the most sustainable conduit and amplifier due to their potential to mobilise and disseminate relevant outputs with their hundreds of members. When the action research project started in 1996, activities were carried out by a small team of agricultural professionals, together with ‘animadores’ (community mobilisers and extension agents) who were then also members of the STRS in Solânea and Remígio (see 5.3.2 for more on the partners).

When the participatory monitoring work started in 1996, the team was still finding its feet. Activities and their relative priority changed rapidly, and strategies and methodologies were evolving to fit emerging needs. The team’s economic, social and environmental understanding accumulated, while relationships shaped and strengthened. TABLE 5-2 illustrates the shift over only a four year period in how the team perceived and structured its activities. From a focus on a limited selection of ‘best bet’ technologies, the team shifted to a broader agenda of conversion of agroecological systems. There was also a move from organisational support to partners, to capacity building for policy influencing, while sensitisation and networking, considered so important in the early days, were no longer perceived to be core business later on. As I will explain below, this dynamism was not insignificant for our monitoring work. It is also

a characteristic of much of the international development effort, thus how we did (and did not) deal with this issue will have wider relevance (see 5.4).

The Environmental Context of CTA-ZM

The Zona da Mata is situated in the south east of the Brazilian state of Minas Gerais, in the Atlantic Coastal rainforest domain (Ab'Saber 1969). It consists of around 36,000 km² of hilly and mountainous areas, deep and well-drained but eroded soils of low fertility. The landscape is steep, with slopes ranging from 20 to 45% and average altitudes ranging from 200 to 1800 m (Golfari 1975). Minas Gerais encompasses 143 municipalities, 142 of which have less than 20,000 inhabitants, totalling approximately 18 million inhabitants of whom just over 30% reside in the rural areas (BDMG 1989 cited in CTA-ZM 2001:16).

The climate in Zona da Mata is that of tropical highlands, with an average temperature of 18°C, and average precipitation of 1500 mm, with two to four dry months per year (Cardoso et al. 2001:240). This makes it ideal for the coffee cultivation that occupied the land from the 1800s onward. The Atlantic Rainforest ceded most of its area to coffee slopes, which ceded to pastures and staple food crops, such as maize, beans and sugar, as coffee farmers searched for fertile land and cleared forests (ibid). The region is marked by severe environmental degradation due to deforestation, and subsequent poor soil management and application of agricultural chemicals in coffee and horticulture.

Agricultural production in the Zona da Mata today has three main features: long-term land use, small-scale production systems, and traditional agricultural practices. The most important crops are pasture and coffee, often inter-cropped with maize and/or beans. Other crops are sugar cane, cassava and rice. Most agroecosystems in the region today have low productivity due to a history of (increasingly) intensive soil use, with practices not well adapted to the environment, for instance, coffee crops without soil conservation (Ferrari 1996).

CTA-ZM's Working Approach in the mid 1990s

Trade union leaders, smallholder farmers, and technical professionals from the agricultural sciences founded CTA-ZM in November 1987 (CTA-ZM 2002b:3). Legally, a non-profit civil association, it has a three-fold mission (see Box 5-1). Since inception, CTA-ZM has seen four distinct phases in its work and role in Zona da Mata (CTA-ZM 2002b:5; Marcondes de Moraes 2002:3):

- *Phase 1 (1987-1990)* – gaining more knowledge of Zona da Mata, sensitising farmers and their groups, and undertaking fragmented and disperse activities, e.g. recuperation of traditional maize varieties by setting up 30 seed plots with 300 farmers (and which continues independent of CTA input);

TABLE 5-2 Activities at the onset of the M&E work in 1996 and 2002

Activities in 1996 (AS-PTA 1997)

1. Dissemination

- Contour planting, banana weevil control, community seed banks

2. Experimentation Groups

- Fruit trees, potato, yam (*Dioscorea sp.*), ant control, productive tree cover, animal production, soil and water conservation, experimentation at the Centro São Miguel

3. Organisational Support to Partners

- Exchange visits, micro-credit debate, Municipal Councils for Agricultural Development, communication, Municipal Development Plan

4. Permanent Planning

- Participatory appraisal on genetic resources, M&E, planning events with partners

5. Sensitisation and Networking

- Support to STR Lagoa Seca, participation in Semi-Arid Forum, participation in State Committee on Seeds

Activities in 2001 (AS-PTA 2001)

1. Programme of Smallholder Training in:

- a. Converting to agroecological systems
 - genetic resources
 - ecological management of annual crops
 - water resource management
 - animal husbandry
 - agroforestry
 - health/food
- b. Sustainable development and public policies

2. Programme in Social Communication (via farmer-to-farmer extension and via mass media)

3. Programme of Appraisal, Planning, Evaluation and Monitoring (with partners)

- *Phase 2 (1990-1997)* – thematic programmes to reduce fragmentation and discontinuity of activities, to increase the number of collaborating farmers and thus have greater impact. Also a more consolidated partnership with STRs and a wider commitment to a collective regional development vision;
- *Phase 3 (1997-2001)* – without abandoning thematic programmes, more focus on the municipal level to create Local Development Plans with formal structures and powers. CTA takes on a more political and facilitating role, seeking to establish more diverse networks of civil society-government partnerships at municipal level to increase participation of local rural communities in designing rural development public policies.

Box 5-1 The mission of CTA-ZM (CTA-ZM 2001)

- Strengthen small farmer organisations, contributing towards their consolidation as actors in constructing an alternative society in which they encounter genuine opportunities to realise and satisfy their aspirations and needs
- Promote equity of social relations (gender and generation) within these organisations and in related development processes, so that youth and women farmers can participate effectively in decision-making processes in the family and public domains
- Promote public debate about conserving natural resources, sustainable agriculture and local development, in ways that influence public policy formulation and implementation, by developing and disseminating experiences (processes, methods, technologies)

- *Phase 4 (2001-2006)* – continued focus on municipal development plans but with a methodological shift to concentrate only on a limited number, in order to understand, document and disseminate different possible trajectories that inspire other municipalities in the region and other NGOs in Brazil (Florisbelo and Guijt 2003). Furthermore, this phase has seen more focus on access of coffee growers to the organic market.

At the time of the research (1996-1999), CTA-ZM was solidly in its third phase. It was active in 16 municipalities (Cavalet and Pacheco 1997:6). Core activities were similar to Projeto Paraíba's, namely: participatory research (starting with general or thematic participatory appraisal, solution identification, farmer-based experimentation and adaptation of proposals), capacity building of farmers and their organisation's leaders, technical/organisational support to farmers' groups, and documentation and dissemination of critical experiences (production, processing, marketing). But CTA-ZM's work is organised slightly differently than Projeto Paraíba's (see TABLE 5-3).

While the basic structure did not change much during our action research process, the logic and activities did. For example, rather than focusing on development activities for small communities or neighbourhoods within municipalities, the focus shifted to that of municipalities and municipal level planning processes. The work in the national park (see activity 2, TABLE 5-3) shifted from advocating for smallholders' voice to implementing the agreed buffer zone. Support for the Regional Association shifted to fewer and more discrete activities, as the Association became more independent of CTA-ZM's guidance. A focus on networking shifted to a programme on public policy advocacy.

TABLE 5-3 CTA-ZM's core activities in 1996 and 2002

Activities in 1996 (*Cavalet and Pacheco 1997*)

1. Programme of Local Development (community-focused support and some municipal level work)
2. Programme to Conserve Atlantic Forest in Serra do Brigadeiro (support in maintaining farmers' voice within the process of creating a new national park)
3. Programme of Associations and Cooperatives (support to regional association)
4. Training and Capacity-building Programme (training union and community leaders, general training programme, practical training for university students)
5. Networking Programme
6. Organisational Development Programme (M&E, communication, administrative and financial management, fundraising activities, experimentation and demonstration at CTA-ZM Centre)

Activities in 2002 (*CTA-ZM 2002a*)

1. Programme of Local Municipal Development Plans (in three municipalities)
 2. Programme of Serra de Brigadeiro (buffer zone around a newly created national park)
 3. Programme of Associations and Cooperatives (rotating micro-credit fund and organic coffee growers)
 4. Programme of Capacity Building (rural trade union activists and farmer-to-farmer extensionists)
 5. Programme of Public Policy Advocacy (regional debates and actions, national conference, advocacy and networking activities)
 6. Programme of Organisational Development (administration improvement, capacity building, ensuring financial viability)
-

5.2.2 Summarising Similarities and Differences

Both NGOs focus on the realities of poor smallholders, albeit in diverse environmental contexts. The Paraíba work must deal with great micro-diversity under generally dry conditions and attempts to stimulate some cash crop production again, while CTA-ZM deals with the eroded hills on which coffee is grown and dairy cattle are kept, two enterprises that imply heavier market incorporation than in Paraíba. Projeto Paraíba has invested heavily in developing understanding and innovations via farmer participatory research as a vital precursor to scaling up impact via farmer-to-farmer dissemination and policy advocacy efforts. CTA-ZM has had more time to play the role of regional catalyst, pioneer and advocate for smallholder agroecological development. For both NGOs, agroecological principles are central, and natural resource manage-

ment within that, in addition to prioritising a strategy based on strengthening smallholder organisations and pro-poor political processes. Both organisations have devoted much time to their partnerships with the farmers' unions, as these represent the most permanent of local farmer institutions, thus potentially enhancing local relevance of their work and providing easier access to a larger group of rural households.

5.2.3 The Nature of the Partnership and Level of Participation

At the onset of the research, the partnerships seemed quite straightforward. The main drivers were – and remained throughout – the local NGOs, working with community-based organisations and individuals. Thus we were dealing with a higher order of organisational complexity than just one group. Over time, the partnership was challenged and changed, with implications for the joint monitoring work. In this section, I will describe each of the partners and their interrelationships in some detail as their identity, role and organisation influenced our work.

In both cases, rural trade unions were the main partner. I will briefly describe the STRS here in general and refer in Chapter 6 to specific unions that functioned as partners in the different municipalities where the empirical work took place. STRS are membership organisations, operate at the municipal level (and are federated at state/national levels), and are the most local, democratically elected body that represents smallholder agriculture and thus, the poor(er) farming households. Traditionally, the STRS are not involved in practical aspects of smallholder production, focusing instead on legal rights, health issues and political struggles. Therefore, a crucial element of the work of Projeto Paraíba and CTA-ZM entailed expanding the unions' activities and mandate and building capacities to include an agroecological interest and perspective.

The Main Players in Projeto Paraíba

NGO Staff

In 1996, the NGO team was small and relatively new to the region. The team changed significantly in composition during the three years of the research, moving from a three-person³⁹ team with administrative support, to include an additional four technical staff with different areas of expertise from the region and additional administrative support. While initially a project of AS-PTA, Projeto Paraíba operated largely as an autonomous organisation but without its own Board, General Assembly or Council. The NGO team members actively sought practical and strategic input from their partners (including

³⁹ Two agronomists, neither familiar with the northeast of Brazil, and one sociologist, with extensive knowledge of the northeast but who lived in Recife, over four hours drive away

farmers), researchers, consultants, and particularly colleagues from AS-PTA's Recife and Rio de Janeiro offices. Their accountability worked in two ways – towards their partners and farmers and towards donors.

Three features about the team struck me at the time. First was the technical agronomic focus of staff alongside a well-developed sensitivity to organisational relationships and politics. This shaped their joint focus on participatory methodology and technical improvements and made it effective in terms of generating promising 'best bet' technologies (Silveira *et al.* 2002). The second feature was the intensity with which the team sought to gain insight into local political, social and organisational relationships, ecology and production systems, coupled with a clear drive for identifying feasible innovations. Their focus on developing technical and social alternatives in Paraíba hit fertile ground as formal research had proven fairly barren when it came to options for smallholder needs (Sabourin 1998:37-38; Sidersky and Silveira 1998). The third related feature was their evolving programme of work. As understanding grew, so did clarity about what would and could be fruitful areas of work. The activities they started with in 1993 changed quickly and radically.

The STR

The second key player in this work was the rural trade union, the STR – or in this case, one STR in Remígio and another in Solânea. Both municipalities are roughly the same size (Solânea with 266 km² and Remígio with 178 km²) but differ in inhabitants with, respectively, 30,700 inhabitants of which about 42% are rural and 14,900 inhabitants of which about 32% are rural (IBGE 2001).

The partnership with both STRs proved vulnerable at times. It meant investing much time in building STR capacity organisationally, technically and methodologically, and putting up with the delays caused by power disputes, limited accountability to members, and a centralised and weak administration (Guijt 1996a:7). However, the investment paid off:

'The STR used to focus on political, credit, and legal rights issues in its contact with the communities. The biggest challenge for us now is to find ways to work more with the economic side of agricultural production. We had already been discussing this within the Board of the union and then got in touch with AS-PTA when we heard what they were planning Projeto Paraíba. We used to have only 52 members and no structure, and now have 800 members. We won the elections from the previous president who had been in power for 19 years. And although most of us had no prior experience with union work, I think that the type of activities we offered in our election campaigns, with production, was positive, as it is unique for STR to work on those themes' (*animador* and former member of the Remígio Board) (Guijt 1996a:13).

'Animadores' from both unions played a key role, working with Projeto Paraíba specifically on sustainable agriculture activities. They formed a fuzzy bridge between STR and Projeto Paraíba, forming the political and social link to farmers and their associations. They organised farmer meetings and learning trips, visited experimenting farmers, conducted training, helped develop didactic materials, etc. For this, they received a small salary from the STR (with the help of Project Paraíba's budget). Keen to learn, committed to smallholders, and understanding the daily rural challenges, the *animadores* identified strongly with the partnership with Projeto Paraíba. They stopped by at the office at all hours, read new material, helped with reporting, conducted most dissemination events independently, used didactic materials they had often helped make, and discussed progress and problems with the team (Guijt 1996a:14). The *animadores* were effectively an informal extension of Projeto Paraíba, not just through their financial remuneration but also due to their participation in all practical and strategic activities and the considerable responsibility they carried. One of the *animadores* was taken on as a full-time staff member, leaving his day job as high school teacher.

During the research period, the two unions experienced various ups and downs. Originally STR-Remígio appeared stronger – more organised, analytical and focused. The three core Remígio *animadores* were skilled communicators, helping to develop excellent visual material, design workshops, etc. The Board saw the need for smallholder agriculture as a new dimension of their work. However, links to local communities were not as strong, with a more distant and formal relationship between the Board and the union members. Furthermore, in 1998, about halfway through our action research process, union elections (which happen on a triennial basis) changed the composition of the Executive Committee. As election opponents of the *animadores*, the new president and other committee members distanced themselves from Projeto Paraíba's work in general, and thus our participatory monitoring work, and from the *animadores* who were the main link. This situation eased with time as new parameters for the relationship were established.

STR-Solânea, on the other hand, had been more traditional, focused on classical trade union issues such as ensuring pension rights, sorting out documentation, legal support, etc. There were first two, then three committed but less literate and analytically weaker *animadores* from Solânea, who dedicated themselves to practical activities. Despite having closer relations with communities due to prior church-based community work, the Board was not interested in the potential of adding an agricultural dimension to the union's

mandate. The Board was not sufficiently interested in the first years to provide strong guidance to the *animadores*: 'We generally leave the *animadores* alone – they report to us every Monday and just do what they have planned' (Maurizio and Zé Rosa, Board of Solânea STR, 1996). As one of the *animadores* explained at the time (Guijt 1996a:15-16): '...It's not that we don't have the power, in fact, we have 'carte blanche' to do what we want. But I am too scared of the repercussions in case I make a wrong decision to be able to take much independent initiative. I wish they [the Board] would be more actively involved in planning the work with us.' With Solânea, too, the elections in 1997 disrupted the work. One of the *animadores* ran against the sitting president and lost, making him unpopular within the STR. It became impossible for him to continue as the STR bridging person with Projeto Paraíba.

Both STR Boards expressed few problems with the partnership with Projeto Paraíba. However, during our action research process, specific features of the two trade unions caused difficulties: full focus on pension rights and, therefore, limited moral support for agricultural work; lack of financial accountability; and strong deference to the union president and, therefore, a largely disinterested board. The frustrated *animadores* started identifying more strongly with Projeto Paraíba than with STR. During one of the PM&E review sessions, when referred to as STR representatives, they protested strongly, instead asking to be called '*animadores da parceria*', members of the partnership (ibid).

Just as our action research work was ending, the STR of Lagoa Seca came in as a powerful and more strategically capable third municipal partner, opening up the route for expansion of Projeto Paraíba's work due to their strong leadership capacity. This STR has since taken up the task of promoting agroecology as part of the union activities (AS-PTA 2001:6).

Farmer Experimentation (or Interest) Groups

Third on the list of partners in our action research were the so-called 'interest groups' or farmer experimentation groups. At the onset of our work, I understood that these were formal groups with a clear identity, clear responsibilities and tasks, and, therefore, could be approached as having an explicit and agreed identity. However, it soon became clear that only the NGO staff saw them as 'groups', with the farmers themselves initially not aware that they were being 'trained' or 'organised' (Sabourin 1998:39-40).

During the research period, the groups were just starting, had no structure as yet but met irregularly to discuss specific agricultural innovations with which they are involved, such as integrated pest management in banana stands or pigeon pea inter-cropping. The *animadores* or project staff facilitated the

group discussions. The idea was that the group would set objectives, plan the experiments, divide the resources required, and assess progress using pre-determined indicators. However, the novelty of the innovations, and the novelty of group-based experimentation in general for the farmers, represented a critical challenge for the indicator identification part of our work on monitoring experimentation (see Chapter 6). In 1996, experimentation groups were starting on combating ants, reintroduction of traditional cultivation of yam (*Dioscorea sp.*) and aniseed, organic fertiliser strategies for potatoes and bananas, agro-forestry trials, pigeon pea production, and fodder storage alternatives.

Research on these groups showed that they suffered from a lack of group identity, with their purpose, structure and membership existing mainly in the minds of project staff (Sabourin 1998:40). As far as the farmers were considered, they are simply testing similar innovations. Subsequently, the farmers remained individualistic and showed little interest in collective action. For us, this meant that rather than representing a group that could undertake joint monitoring, the farmers did not sufficiently share collective objectives to enable them to act as such. The farmers were more interested in sharing their different on-farm experiences in an open-ended discussion than through structured M&E around concerted action.

Community Associations

A fourth and smaller partner were the community associations that sometimes overlap with a *sítio*, the smallest rural settlement that is a cluster of homes that form a type of neighbourhood. It may join from two up to more than 100 houses, covering from a few hectares to even more than 500 ha⁴⁰. Although *sítios* include people with leadership qualities, they are not a structure for representation, power, or decision-making. Communities are usually larger than *sítios* and were mainly established through externally induced interaction. For example, in the 1980s the Catholic Church carried out grass-roots work in the region, formally establishing 'Comunidades Eclesiais de Base' (grassroots church communities) in the process. Government extension services have made a less extensive attempt to promote community-level meetings to facilitate their extension efforts. These artificially created 'communities' have facilitated some reasonably regular social interaction with an informal discussion forum but without giving it any decision-making power. Of the estimated 200 settlements in the municipalities of Remígio and Solânea, only about 20% call themselves a community (Guijt and Sidersky 1999:280).

⁴⁰ These estimated areas give an idea of the order of magnitude of *sítio* size. As *sítios* are not official units and, therefore, have no formal boundaries, it is difficult to know their exact area

Box 5-2 Keeping participation levels appropriate in Projeto Paraíba (Guijt and Sidersky 1999)

As farmers are managers of ongoing innovation and change, they needed to be involved in the whole process of technological development and implementation. Yet the NGO team recognised that not all farmers are equally interested and/or able to participate in all aspects of agricultural innovation. So Projeto Paraíba had identified three levels of local participation that shaped the roles of different individuals in the work in 1996:

- A core of about ten *animadores*, some of whom were both smallholder and union members. They were involved in strategic planning, farmer-based experimentation data analysis, and designing/implementing the monitoring and evaluation process.
- Around 80 farmers, men and women, including community association leaders and individual farmers engaged in nine different interest groups for joint experimentation. Almost all of the farmers were also involved in key moments of monitoring, evaluation and planning.
- Activity-specific collaboration with the general farming ‘public’ and community associations, covering 32 communities and about 430 families, who were keen to adopt particular measures and with whom the monitoring/evaluation findings would be shared.

Thus, in our PM&E work, this group was not a ‘unit’ that could be included easily as a stakeholder. After the participatory monitoring work ended, work with community associations in Projeto Paraíba increased (AS-PTA 2001) as numbers rose and effectiveness improved.

Varying Degrees of Participation

From the start, the project team was clear about the need for varying degrees of participation (see Box 5-2) due to the nature of group identity and cohesiveness as explained above. We opted not to work with individual farmers in the workshops that took place during our research process (see TABLES 6-1 and 6-2) to avoid wasting their time. After the first, larger plenary workshop, it was clear that farmers were more focused on the immediacy of their property and found it difficult to think at the generic level of Projeto Paraíba. Much of the practical monitoring of farmer-based research was, however, undertaken with them in thematic sub-groups (*e.g.* monitoring of collective yam banks with the members, seed bank monitoring with seed bank committees/members, etc.) (see 6.3).

The Main Players in CTA-ZM

NGO Staff

When the action research started, six professionals had been working at the local NGO, CTA-ZM, for some years. Most had studied at the nearby Federal University of Viçosa, from where their political commitment to smallholder issues led them to found the NGO. Their knowledge about local and regional politics, and environmental and agricultural issues was detailed as they had been active for ten years prior to our participatory monitoring work. Compared to Projeto Paraíba, CTA-ZM was a more established group of professionals in terms of their local knowledge, working structures, relationships with partners and strategy. This did not mean, however, that stability and clarity could be assumed, as became evident in subsequent work (see Chapter 6).

CTA-ZM as a whole was governed by a series of meetings: quarterly Executive meetings, an (annual) Council meeting, advisory group meetings, and the annual General Assembly. These meetings were heavily populated by smallholders, representing their different organisations and other actors. Notwithstanding this external guidance, in 1996, the technical and administrative staff had relative freedom to decide on their work focus.

The STR of Araponga

Our work focused on one municipality, Araponga, and the STR there. Araponga has around 8000 inhabitants, of which 68% rural and spread over 304 km² (IBGE 2001). Smallholders, with up to 50 hectares but most owning no more than 10 ha, account for 85% of the properties yet occupy only 27% of farming land. Many cannot meet their subsistence needs and thus work as day labourers on other farmers' land. Much of CTA-ZM's work with the STR focused on two communities (Praia d'Anta and São Joaquim) where most of the trade union leaders at the time and their affiliates live and much of the agroecological work had started. Nevertheless, their joint perspective was to work throughout the entire municipality, despite resistance from other communities and difficulties with physical accessibility.

The STR of Araponga had, unlike those of Remígio and Solânea, been set up with the support of CTA-ZM (Ferrari 1997). Before either the NGO or the STR were created, individuals who were to play a lead role in both organisations met in 1987 during a grassroots church group meeting. Two farmers, later to become union leaders, then participated in the creation of CTA in 1987. CTA-ZM started with small-scale activities in Araponga, such as training in soil conservation and leguminous crops. CTA-ZM linked the participating farmers with other STRs and the CPT (Pastoral Land Commission), which helped to create the STR in

Araponga in 1989. When CTA-ZM facilitated the first Participatory Rural Appraisal (PRA) in Araponga in 1993 with the new STR, the partnership was firmly consolidated. The relationship has been long and close, often with blurred boundaries between the responsibilities of the two entities, at times leading to unclear divisions of responsibilities during our monitoring work (see Chapter 6).

As a result of the PRA, 28 activities were prioritised for the STR as their 'plan of action'. This list was the starting point for our participatory monitoring work and was later used as the basis for the Local Municipal Development Plan that the municipal council implements in partnership with other civil society organisations (Florisbelo and Guijt 2003). However, the initial plan of action was clearly a STR-only plan and did not involve other municipal actors.

The STR of Araponga has remained relatively politically stable, and had grown considerably from 29 members in 1993 to 277 in 1996 and 805 in 2001. There were no opposing factions or power plays to upset the work. As with all rural trade unions, the main problem that affected the participatory monitoring work was that of insufficient capacity, with few dedicated unionists taking on the bulk of the work. Furthermore, physical access influenced our work, with low funds not permitting mobility other than by foot and the occasional random lift by car or motorbike.

Federal University of Viçosa (UFV), Department of Soils

As ex-students of the local university UFV, CTA-ZM staff has maintained close ties with two departments in particular, Soil Science and Education. Individual lecturers in those departments share a commitment towards working with marginalised smallholders and participatory research and have served in various formal and informal capacities for CTA-ZM over the past decades. There are always various research efforts taking place, with undergraduate and graduates students accompanying specific aspects of CTA-ZM's or the STR's work. Furthermore, representation on the Board is formalised in a convention between CTA-ZM and UFV.

This group proved to have a red herring effect on our work. Despite only collaborating with CTA-ZM and the STR on land quality issues, UFV lecturers participated in all steps of the participatory monitoring that included four other themes unrelated to their soil focus (see Chapter 6). This complicated the work as we unnecessarily had to include their views in work in which they were not actively involved. This anomaly, so obvious in hindsight, was not noted by myself, the NGO team members or the lecturers at the onset. Issues surrounding the notion of 'partnership' are discussed in more detail in Chapter 6.

Farmer Groups

In CTA-ZM's work, farmer groups were also important. However, these were not solely focused on experimentation nor did they consist solely of farmers. Instead these groups of farmers, students and NGO staff members were created around key themes that had emerged in the 1994 PRA (Fária 1994). In 1996, farmer groups were working on six themes: soil conservation and rehabilitation, animal production, seed production, health/sanitation, education, marketing, and establishing a conservation unit (National Forest Park). These groups had prioritised a total of 28 activities. For many of these activities, informal sub-groups of interested farmers were created, for example, testing traditional maize varieties on collective seed production plots, working with medicinal plants, and testing agroforestry practices.

5.3 Generalising the Brazilian Partnerships to Other Contexts

To what extent is the Brazilian work as introduced in this chapter so unique that it obviates any generalisations to other areas? In closing this chapter, I highlight four aspects that have relevance for other situations in which 'messy partnerships' are engaged in a long-term development trajectory.

The first feature is the nature of poverty. The two Brazilian cases share key characteristics with other areas of rural poverty in rain-dependent, hilly, resource-poor, risk-prone, low external input agricultures, such as West Africa, the Deccan Plateau, Southern China, etc. These areas represent perhaps the most intransigent challenge with which global endeavours, such as the International Assessment of Agricultural Science and Technology for Development (IAASTD⁴¹), try to deal. Given small farm size and degraded soils, farmers in those areas are struggling to maintain subsistence for their families on a dwindling and deteriorating resource base. Their production leaves few surpluses with which to finance inputs. They must compete in their own urban markets with farmers in developed market economies who have over the past 50 or more years received public support to realise economies of scale and who increasingly capture urban (super) markets. In many of these areas, young people are no longer able to replicate the cultural repertoire and have to emigrate, become available for war lords, etc. Given the uncertainties induced by climate change, the end of oil, and the need to feed to a growing world population on a deteriorating natural resource base, the fact that the

⁴¹ The IAASTD Report, the Summary for Decision Makers and the Synthesis Report are due for publication early 2008

logic of the market condemns these agricultures to remain unproductive might not be such a good idea. Hence insight in how 'messy partnerships' active on these issues can be helped to improve their performance, the subject of this thesis, is an issue of global relevance.

A second feature is that of ongoing change on many fronts. The organisational, political, social and technological dynamism significantly influenced our work. Dealing with change is a challenge for all development organisations and initiatives, hence the growing interest in organisational learning within the sector. Therefore, how our process managed to cope or not to cope with change will be of wider interest. A specific aspect of this dynamism with relevance beyond Minas Gerais and Paraíba is the fluid composition of the partnership and changing perceptions by partners of their own and each others' roles. In multi-organisational settings such as these, that are so very different from the single, hierarchical organisational structure assumed in mainstream monitoring, alignment of objectives becomes an ongoing task in itself that requires monitoring (see 7.2.1).

The third feature is the continual need to review who participates, with what legitimacy, and how at different moments of a participatory monitoring (or evaluation) process, bringing in questions of power and allegiance to the partnership. The participation of the university department posed some dilemmas in this respect as mentioned above. But so did the question of which farmers to invite and on which basis – were they 'representative' of a group or simply part of the 'in-crowd'? And to what extent did any of those involved genuinely feel they had the power and capacity to dissent with the participatory monitoring process on which we embarked? Chapter 6 reveals one example where data gave farmers the confidence to challenge the NGO and university staff and shifted power relationships.

These and other features that give the specific example of Brazil more generalisable value will emerge more clearly in Chapter 6, which details the participatory monitoring activities and results from 1996 to 1999. There I also discuss the extent to which these activities helped to assess progress, given the long-term change agenda of the partnerships.

This chapter has described the 'messy partnerships' that took on the idea of PM&E in order to understand their work better and improve it. They seek institution innovations that can enable pro-poor growth as a counterforce to the growth policies that drive government efforts (North 2005). But they are, themselves, a strategy for fostering institutional development and transformation. Projeto Paraíba and CTA-ZM are explicitly in the business of

innovation. Socially, they seek new ways of engaging with old adversaries – (municipal) government, large landholders, other actors in the market chain, the education sector. Technically, they are searching for agroecological practices that work for each locality – enhancing incomes and respecting the resource base. Conceptually, they seek to develop modes of citizen engagement and conscientisation that strengthen endogenous capacities and values, strengthening the ‘power within’ (Just Associates 2007). Methodologically, citizen science, municipal-level participatory planning, and rural-based university courses are only part of the innovations they offer. Impact will be evident when the terms of debate shift and innovations are taken up. The partnerships need to know what is working but the development sector also needs to know if such partnerships work. Are such messy partnerships likely to deliver the institutional transformation needed? In this thesis I do not seek to evaluate the effectiveness of the Minas Gerais and the Paraíba partnerships. I have looked instead at how they learn from what they do. But in the process, I have seen that the capacity to learn is critical in enabling institutional transformation. And it is a different form of learning and monitoring than mainstream monitoring offers.

PARTICIPATORY MONITORING IN PRACTICE: INSIGHTS FROM BRAZIL

6

At the start of this chapter, it is good to pause a moment to take stock of where I am in the line of the argument. In Chapter 3, I looked at the role of monitoring in some dominant rural resource management discourses and found them to be wanting in terms of providing guidance to those seeking to create information feedback loops. This led me to identify mainstream monitoring as the default methodological option. I then turned, in Chapter 4, to tease out the presuppositions on which mainstream monitoring is based (espoused theory) and looked at what is occurs in practice (theory-in-use). I conclude that most monitoring practice is embedded in a programme logic-based paradigm, is problematic and may find messy partnerships active in institutional transformation a somewhat challenging arena of application. Hence in Chapter 5, I turn to discuss the potential of participatory M&E as an alternative to mainstream monitoring. That chapter describes two such contexts and messy partnerships in Brazil.

In this chapter, I describe the action research process in which I acted as facilitator of two partnerships to design and implement a participatory monitoring practice. Chapter 6, therefore, represents another take on monitoring, a field-based experiential effort. Note that the IFAD work and the Brazil work were not chronological experiences. They are parallel processes from two different paradigms with different presuppositions, as I will show in this chapter. Both paradigms are all we have as building blocks for the learning challenges outlined in Chapter 1

After this, in Chapter 7, I confront the incipient ideas of an extended view on learning-oriented monitoring with a set of innovative ideas from other scientific discourses. Therefore, Chapters 6 and 7 build on observations from Chapter 4, to provide the basis for a set of design principles for monitoring that should, I will argue, be more supportive of learning among messy partnerships involved in institutional transformation (see Chapter 8).

The current chapter focuses on practice and on the experiential learning that emerged from it. Did our work on participatory monitoring satisfy some of the information needs of the different partners? Was it more effective at fostering collective learning than mainstream M&E would have been? I describe the two processes in Minas Gerais and in Paraíba as they evolved chronologically between 1996 and 1999, as well as the main lessons about

participatory monitoring for those involved. These lessons can be found in the publications produced during the course of our work (see ANNEX 2).

After a short summary of our process, I describe in detail the steps we followed to design the monitoring process and why we chose these steps, reflecting critically on the usefulness of each. Next I discuss ten separate experiences with monitoring, ranging from agroforestry to fodder technology innovation, and the insights we gained from these about the potential of participatory monitoring. I identify the presuppositions and assumptions that we made and how these were challenged during our process, thus enabling us to learn about how to learn via participatory monitoring. The fourth section discusses the five main conclusions that were reached at the end of the three year process. This chapter concludes with lessons related to mainstream and participatory M&E.

6.1 Overview of the Participatory Monitoring Processes

Over the course of about four years, Projeto Paraíba and CTA-ZM held a series of local workshops to clarify concepts, design the process, build capacity, and review experiences and data. These workshops were interspersed with periods of group-based work to fill in the details of the monitoring approach(es) identified and undertake data collection. Each site had its own pace and timeline of events (see TABLES 6-1 and 6-2).

The workshops were attended by the partners involved as described in Chapter 5. The workshops were critical for our continual learning about participatory monitoring. We reviewed progress with constructing the monitoring system, identified new obstacles with each round of reflection, incorporated new developments in the partnerships and individual partners, and finally drew some conclusions (Guijt 2000:7).

As TABLES 6-1 and 6-2 show, in both Paraíba and Minas Gerais, the timeframe that it took to establish and refine the monitoring system was a surprise. This aspect of a lengthy process is not emphasised in the PM&E literature, which largely treats 'setting up the system' much as in programme logic-based M&E systems, as a one-off moment after which implementation follows. Considerable time must be scheduled for establishing the system, given that each partner has, in and of itself, a busy schedule of activities, irrespective of implementing agreed activities in the context of the partnership. Add to this the time needed to think through, test and refine participatory monitoring, and it is clear that this must occur in the little time that is left. Since our experience I have become cautious about other experiences that claim success after operating for anything less than a couple of years or

TABLE 6-1 Timeline of the process in Paraíba (Guijt 2000:8)

<i>Event, activities and participants</i>	<i>Outputs</i>
Jan 1996 First workshop: staff from Projeto Paraíba, representatives from two STRS, farmers, myself	<ul style="list-style-type: none"> • Discuss what monitoring involves • Agree on the basic process to design and implement a system • Prioritise activities on which to focus PM&E – four selected
Feb – Jun 1996 Individual meetings of partners	<ul style="list-style-type: none"> • Each partner clarified which objectives were to be monitored for each of the four prioritised activities
Jul 1996 Second workshop: two STRS, Projeto Paraíba staff, myself	<ul style="list-style-type: none"> • Design first practical steps – final choice of indicators, choosing data gathering methods, training on use of methods, frequency and timing of data collection
Aug 1996 – Feb 1997 The STRS, with Projeto Paraíba support	<ul style="list-style-type: none"> • First stage of data collection and analysis
Feb 1997 Third workshop: two STRS, Projeto Paraíba staff, myself	<ul style="list-style-type: none"> • First review of work done, revision of indicators, frequency and methods.
Mar – Oct 1997 The STRS, with Projeto Paraíba support	<ul style="list-style-type: none"> • Second stage of data gathering and analysis
Oct 1997 Fourth workshop: two STRS, Projeto Paraíba, myself	<ul style="list-style-type: none"> • Second review of strategy, process, methods, results plus expansion of domains that are being monitored by inclusion of the ‘significant change’ method
Oct 1997 – Oct 1998 The STRS, with Projeto Paraíba support	<ul style="list-style-type: none"> • Third stage of data gathering and analysis
Oct 1998 Fifth workshop: two STRS, Projeto Paraíba, myself	<ul style="list-style-type: none"> • Third review of strategy particularly assessing how expansion with significant change method was proceeding
Jun 1999 Final review: two STRS, Projeto Paraíba, myself	<ul style="list-style-type: none"> • Review in small groups, with individuals, larger plenary of progress made and next steps
Oct 1999 Regional workshop: Projeto Paraíba, CTA-ZM, 17 NGOs from northeast Brazil, myself	<ul style="list-style-type: none"> • To share methodological insights and provoke debate about PM&E amongst other NGOs/CBOS working in northeast Brazil

TABLE 6-2 Research activities in Viçosa (Guijt 2000:9)

<i>Event, activities and participants</i>	<i>Outputs</i>
Aug 1996 First workshop: CTA, UFV, STR and myself	<ul style="list-style-type: none"> • Sensitise group to what monitoring is • Select priority activities of Action Plan to be monitored
Oct 1996 Meeting with STR, UFV and CTA	<ul style="list-style-type: none"> • Elaborate objective trees– important step to clarify the aims of the selected activities
Nov 1996 Subgroup meeting of STR, UFV & CTA	<ul style="list-style-type: none"> • Elaborate remaining tree and merge tree to obtain a shared vision of the purpose of 5 selected activities
Mar 1997 Second workshop of STR, UFV, CTA, myself	Select which objective are priorities for monitoring, identify indicators, methods, and moments of collection and analysis
Apr 1997 Meeting of STR, UFV, CTA	Finish off step above for apiculture activity
Apr-Oct 1997 Fieldwork in Araponga	Data collection, capacity-building of monitors (learning by doing)
Oct 1997 Meeting CTA, farmer monitors, myself	Initial evaluation about the progress of the monitoring work –identifying difficulties and intangible benefits
Oct 1997 – May 1998 Fieldwork in Araponga by farmer monitors	Data collection, some initial analysis of data collection
May – Jun 1998 Work in thematic groups	Initial analysis of data by groups and methodological adjustments
Jun 1998 Third workshop for general review: STR, farmers, UFV, CTA, myself	<ul style="list-style-type: none"> • Modifications in monitoring plan-changes in indicators, methods, frequency and roles, expansion of monitoring work with method of significant changes to capture that which disappears with indicators
Jul 1998 – Mar 1999 Application of methods, with modifications plus use of method of significant changes	Discussion in health group and with STR Council about significant changes – increase motivation despite some initial methodological difficulties

TABLE 6-2 *Continued*

<i>Event, activities and participants</i>	<i>Outputs</i>
<i>Mar – May 1999</i>	
Collation and analysis of data per thematic group	Use of data for reflection about strategies for activities, the activities themselves, and the total of the activities as the basis for the Local Action Plan.
<i>May 1999</i>	
Final review: STR, CTA staff, farmer monitors, UFV staff, myself	Lessons learned about participatory monitoring – the advantages and limitations, key steps, value and limitations of indicators
<i>Sep 1999</i>	
Regional seminar on PM&E: CTA-ZM, Projeto Paraíba, 7 NGOs from south(east) Brazil, myself	Sharing of approach with other NGOs working in central-southern Brazil

so, as it is only after some time that the underlying problems become evident and early successes appear to stagnate or go off the rails.

My own role as facilitator of this process merits some comments at this stage. I spent several weeks every six months in Brazil to accompany the process. I speak fluent Portuguese hence was able to operate without a translator. I use the term ‘we’ and ‘I’ intentionally. In this chapter, it will mostly be ‘we’ as virtually all observations – unless otherwise stated – are the direct result of the joint design and process analysis that occurred en route, many of which were documented in workshop reports. In this process, I was not an active participant with my own information needs. I acted as a facilitator with an interest in seeing how participatory monitoring would fare. I brought to the process my own blindness, biases and presuppositions about participation and monitoring. These influenced the process as I will seek to make explicit in this chapter. I also brought with me money to fund the action research, which played a role in the limited sustainability of efforts (see 6.4.5).

6.2 Year 1 – Mapping Out Our Route and Laying the Basis

In the first year, the local stakeholders clarified their expectations of the process, potential benefits, and started constructing and implementing the agreed monitoring approach. Establishing the monitoring systems involved six basic steps. Two other steps, implementation and continual review, are

discussed in section 6.3. The six steps we⁴² followed were:

1. clarify expectations of the different parties regarding the joint monitoring work;
2. prioritise key activities to be monitored;
3. develop clearer objectives for each activity;
4. prioritise, per activity, which of the many objectives would be monitored;
5. identify indicators for these prioritised objectives;
6. develop a calendar that outlined: the method for collecting and registering information; frequency/month; place; roles of different stakeholders.

Of these steps, the most standard within PM&E practice are steps 5 and 6. PM&E methodology⁴³, in general, does not refer to steps as precisely formulated as those above (see 5.1.2). It does not recommend clarifying expectations, prioritisation of activities, redefining of objectives or prioritising of objectives per activity – steps 1 to 4 above. Instead it assumes that all activities will be monitored and that during the planning phase, objectives are clearly formulated enough to be monitorable.

As I will discuss in 6.5, it was already at this initial stage that we had unconsciously taken on board some of the same presuppositions of programme logic-based M&E (Chapter 4), either fully, partially or temporarily. During the course of our monitoring process, it became evident that we had been guided by some of these presuppositions, with sub-optimal consequences. I will now discuss each of the six steps and comment on the insights for monitoring practice.

6.2.1 Step 1. Clarifying Expectations

We started by identifying the range of expectations that the different partners involved in the participatory monitoring work had (see TABLE 6-3), which revealed great diversity and high expectations. This step was partly motivated by a need to understand people's commitment to the local development work. But more significantly, we hoped that articulating expectations could motivate the stakeholders to invest in the process.

Insights

What we failed to understand at the time is that different information needs might require different monitoring processes. For example, the desire for information to motivate other farmers to adopt sustainable agriculture prac-

⁴² As explained in 6.1, where I use the term 'we' rather than 'I', this is intentional and is a direct result of the joint design and process analysis that occurred en route

⁴³ FIGURE 5.2 of the PM&E cycle deviates from PM&E methodology in this sense and was heavily influenced by the early lessons from the Brazil work as I helped develop the diagram

TABLE 6-3 Expectations of PM&E (CTA-ZM and IIED 1996; Projeto Paraíba AS-PTA and IIED 1996a)

<u>Projeto Paraíba</u>	<u>CTA-ZM</u>
<p><u>Farmers</u></p> <ul style="list-style-type: none"> • Increase interest of other farmers not involved in sustainable agriculture • Ensure proper management of their own farming enterprises • Be able to show the impact of their efforts to neighbours and others <p><u>STR</u></p> <ul style="list-style-type: none"> • Avoid having to resort to opinions and to evaluate with more certainty • Convince other farmers with more and better proof that sustainable agriculture practices can also benefit them • Convince other organisations that sustainable agriculture is worth supporting • Evaluate other aspects of STR's work better • Help plan by knowing what does/ does not work <p><u>Projeto Paraíba staff</u></p> <ul style="list-style-type: none"> • Report to funding agencies the extent to which efforts are meeting the intended objectives • Help in planning and prioritising of activities • Have proof for advocacy at regional, state, and perhaps even national level • Enhance the capacity of farmers and unions for autonomous planning and implementation of sustainable agriculture activities • Strengthen the cohesion and interaction of newly forming farmer experimentation groups 	<p><u>Farmers</u></p> <ul style="list-style-type: none"> • Learn about innovations • Improve environment • Higher income • Compare each other's activities as they develop <p><u>STR</u></p> <ul style="list-style-type: none"> • Show advantages to other farmers, policy makers and society in general, of alternative agriculture with concrete data • Build capacity of farmers to understand this new agriculture • Find out if we're on the right track • Evaluate and correct errors • Compare types of agriculture • Accompany the work with more confidence • Strengthen the STR <p><u>CTA-ZM staff</u></p> <ul style="list-style-type: none"> • To know if innovations are benefiting farmers • Evaluate our own work together with farmers • Evaluate and propose new strategies • Show conventional research/education a new way of working • Show the viability of alternative agriculture in general • Increase our field presence <p><u>UFV lecturers</u></p> <ul style="list-style-type: none"> • Prove to the sceptics with concrete data that sustainable agriculture works • Assess weak points to improve these • Change the way we teach agriculture • Develop a different way to do M&E • Personal satisfaction • Create a new science

tices (see under 'Farmers', first column), calls for an extension approach to monitoring. It places different trustworthiness demands on the data than 'report to funding agencies' (see under 'Projeto Paraíba', first column). Differentiating monitoring processes based on different purposes that the information is expected to serve is discussed in Chapter 8 as an important design principle.

Furthermore, in subsequent reviews during the three years, we did not return to these expectations and adjust our process (or expectations) accordingly. Hence while we did approach monitoring as an evolving information and communication process (see design principle 8, Chapter 8), the changes in the monitoring were guided more by practical observations en route than by reflection on whether overarching expectations were being met.

6.2.2 Step 2. Prioritising Activities to Monitor

Standard M&E practice does not usually include the selection of what to monitor. Neither does participatory monitoring practice. All activities to which a development initiative commits itself – and for which funding is allocated – need to be tracked. However, in these 'messy partnerships', we were not bound by the conventions of donor funding. Furthermore, as our process constituted an experiment for all involved, we did not need to include all aspects of the work but could be selective. To allow time to build insight and capacities, we agreed to make a selection from among existing activities and then slowly expand the monitoring until all aspects of the municipal-level work were included.

During the first workshop in Paraíba, the influence of the relative youth of the partnership between the two STRS and Projeto Paraíba became clear. The STRS had little clarity about what they considered as their joint activities under the umbrella of 'Projeto Paraíba' (Projeto Paraíba AS-PTA and IED 1996a). For example, the unions were keen to monitor pension rights but this was not related in any way to their collaboration with Projeto Paraíba. Even the NGO team members found it difficult to articulate their own project goals. Therefore, the first event did not result in priorities but instead agreement to reach consensus on Projeto Paraíba's goals. This process took six months of intensive discussions and negotiations and led to prioritisation of technology dissemination for monitoring, as technologies affect farmers' lives directly and immediately.

In Paraíba, three 'off-the-shelf' technologies that were already being disseminated among farmers were selected for the initial monitoring focus: contour planting, banana weevil control, and community seed banks (see TABLE 6-4). One technology still being developed was also prioritised: cattle

TABLE 6-4 Initial prioritisation of activities to be monitored

<i>CTA-ZM/STR Araponga</i>	<i>Projeto Paraíba/STRS Remígio and Solânea</i>
<ul style="list-style-type: none">• agroforestry• green manure• traditional maize varieties• apiculture• alternative health provision with medicinal plants• mineral salt supplement for livestock	<ul style="list-style-type: none">• contour line planting• banana weevil control• community seed banks• farmer experimentation: fodder production and storage

fodder alternatives. The rationale for this choice (see TABLE 6-4) was that the dissemination activities seemed to be the clearest and most advanced (in terms of widespread applicability) and would provide the most useful data soonest, while animal fodder was selected as it was the least understood of the technological innovations (Projeto Paraíba AS-PTA and IIED 1996b).

With CTA-ZM the situation was clearer, as the STR of Araponga had a plan of action with the NGO. We used a list of 28 existing activities for prioritising a manageable number for monitoring. All agreed that six would be manageable (see TABLE 6-4).

To reach consensus about which six activities to select for the initial monitoring focus, we followed a two-tiered process (CTA-ZM and IIED 1996). First, nine criteria were agreed on which basis to prioritise, including, for example, if an activity was new or not, the number of people involved, if no data had been collected, and if all groups were included. Then each stakeholder group ranked the activities it wanted to monitor. With the trimmed down list of ten activities, new heterogeneous groups were formed and prioritised again to find the top six to start monitoring.

Iterating between respective stakeholder groups and allowing for discussion in mixed groups would, we thought, create enough safe space for specific group priorities to emerge and reduce the domination by NGO staff and the university lecturers that sometimes tended to occur. However, we concluded in 1999 that the assumption that consensus is the best outcome in a participatory process was very problematic. See 6.4.2 for more details on this aspect.

Insight

The inclusion of a step to prioritise activities for monitoring was based on a fundamentally different assumption than presupposition 13 of programme logic-based M&E (Chapter 4), which does not accommodate an evolution in the system. Instead, we were explicit that monitoring had to be learned and, therefore, that monitoring processes needed to evolve. Starting small was

part of our 'learning how to learn' strategy. This aspect returns in design principle 8, Chapter 8.

6.2.3 Step 3. Clarifying Objectives

One of our main lessons from the first workshops had been not to assume that partners were clear about joint objectives, even if they have been working together for many years, as was the case for CTA-ZM and STR Araponga. The partners were pursuing the same activity but with a different idea of the main purpose and its overall importance, which would make it difficult to know what precisely to track. Therefore, we had to include a step that would normally be considered part of a planning phase. To operationalise the monitoring, the next step involved clarifying the objectives.

We agreed that each of the stakeholder groups would elaborate an 'objective tree' for each of the prioritised activities. These would then be merged through consensus to form one set of objectives per activity to guide the identification of indicators (see next step). The objective trees were not bound by any specific structure but should simply represent the groups' views on short, mid- and long-term objectives.

From January to July 1996, the partners of Projeto Paraíba met no less than nine times on their own to clarify objectives⁴⁴. These meetings took place separately, partly for ease and partly to ensure that the partners would feel free to articulate their own objectives and not be influenced by each other. The merging of the objectives was completed as part of the preparation for the second joint workshop.

The inputs for the second workshop in both sites were sets of objective trees. In Projeto Paraíba, we had a total of 12 such trees – three stakeholder groups had each produced a tree for the four prioritised activities. In CTA-ZM, we worked with 24 objective trees – four stakeholder groups and six activities. Our next task was to merge the trees into a single 'objectives tree' per activity. This happened by eliminating duplicate objectives (written on cards) and identifying the links between the groups' different objectives. During the merging process in CTA-ZM, discussions concluded that the 'green manure' objective tree was a sub-set of the agroforestry work. Therefore it was incorporated in the agroforestry 'tree'.

The 'trees' were detailed, having up to 31 objectives. As everyone realised that it would be impossible to monitor all the objectives, we then decided to prioritise the most objectives (see Step 4).

⁴⁴ In most cases, the STR meetings in Paraíba were facilitated by Roberval, a teacher with good facilitation skills and methodological insights, who had become closely involved in the Projeto Paraíba work and subsequently joined the NGO. In Minas Gerais, the meetings were self-facilitated

Insights

Neither CTA-ZM nor Projeto Paraíba was using a programme logic model (see Chapter 4, section 4.2.1) to structure their work at the time, although some funding agencies were requiring these for part of the grants that the two NGOs received. The NGOs considered the logframe structure an administrative chore and did not want to impose it on the partner organisations. This can be considered another feature of ‘messy partnerships’, which does not tie partners into a single mandatory system for financial accountability. However, since then, LFA has been used by the NGOs to bring more structure to the diversity of work and in the case of CTA-ZM, the staff members have found it useful to have a single structure to which to relate activities and emerging opportunities.

During the final evaluation in 1999, constructing the objective trees was identified as the most tedious and time-consuming part of the monitoring process (see 6.4). An alternative strategy for clarifying objectives would have been better, although it is (still) unclear what that would have been. Nevertheless, the process of thinking systematically about short, mid and long-term outcomes – and sharing these perspectives among the partners – was considered an important process for clarifying the partnership (see 6.4.1).

6.2.4 Step 4. Prioritise objectives to be monitored

As the trees were detailed, even the smallest containing seven objectives, we agreed that it would be impossible to track all objectives. Prioritisation of objectives was necessary. In the interests of our learning process, we decided to start monitoring only some objectives, if possible only two objectives per activity. How to select the most critical ones was the next question.

To facilitate selection of objectives, we took the simplest example of an objective tree and prioritised objectives in a plenary session. After this, each stakeholder group prioritised objectives for the remaining trees in sub-groups. The priorities of each group were presented in plenary and discussed until consensus was reached.

The tendency of the groups was to select medium-term objectives, as the short-term objectives were considered to be interesting only for a limited period of time while the long-term objectives (impact level) were considered too difficult as they would be influenced by many other external factors, thus making causality of changes difficult to establish.

Insight

The step of prioritising which objective to monitor is not considered optional in mainstream M&E (Chapter 4) or PM&E. All objectives are assumed equally important to track with equal accuracy, although there is a trend for funding

agencies to increasingly ask for reports on intermediate results or outcomes. We viewed providing a temporary focus for initial monitoring work as part of a felt need to ease everyone into the practice of monitoring (see design principle 8, Chapter 8), thus hopefully increasing the likelihood that sustained capacities would be built (see 6.4 for more on sustainability). While denting the internal coherence an objective hierarchy, it enhanced the ‘correspondence’ (see Chapter 7) with the context in which the work was occurring.

6.2.5 Step 5. Identify indicators

At the same workshop in both sites, the partners identified indicators. In Projeto Paraíba, indicator identification had been initiated by the two STRS and the NGO when constructing their objective trees prior to the merging process (Steps 3 and 4). Asking the groups to start identifying indicators beforehand wasted some time, yet it meant the participants had already struggled with the notion of indicators and were better prepared when they undertook joint indicator selection (Projeto Paraíba AS-PTA and IIED 1996b).

Keeping in mind the workload that each indicator implied, we aimed to select only two indicators per activity. While this helped limit the total number of indicators, we still ended up with 24 indicators for only four activities instead of our target of 16 in the case of Projeto Paraíba. With CTA-ZM, we ended up with 23 instead of the target of 20. This arose partly out of different perceptions of information needs but also the need for complementary data. Some indicators would only make sense if accompanied by others, thus leading to more indicators.

Indicator identification was carried out in several stages. First, as in Step 3, a plenary trial run was conducted with the activity with the simplest objective tree, during which we selected indicators. This helped everyone understand the process. We then divided into groups of mixed composition. Each group took one of the remaining activities under its wing. Various questions were used to focus on useful (rather than interesting) indicators:

- ‘What information would you need to be convinced that you are making progress in achieving that objective?’
- ‘What will we measure to know if we are reaching our objectives?’
- ‘Once collected, how will the information be used?’
- ‘With the information from these indicators, will we really be able to know if we are realising our objectives?’

The groups debated and questioned much until agreement was reached on one or more indicators per objective. These were then presented in plenary again and refined, adjusted, and clarified until everyone understood and

agreed what information would be useful.

While formulating indicators, we opted for indicators that would resonate more with farmers than with scientists. For example, instead of ‘% organic matter, % soil moisture, % of soil loss’ (which is also far too expensive to undertake), we selected ‘the frequency of effects listed by farmers as a result of contour planting’. Thus we chose for an indicator that allowed us to categorise (and count) the subjective assessments by farmers of the kinds of changes they noted in their fields after starting with contour planting.

Indicator selection proved to be an iterative process as field testing of methods determined which methods were feasible and whether indicators needed adjusting to fit more appropriate methods. Many indicators were refined during the three years, some were added and several were discontinued (see TABLES 6-5 and 6-6).

Insight

In PM&E methodology, participatory indicator selection is considered a significant difference compared with mainstream M&E (see 5.1). This process should enable locally perceived measures of success to shape the data collection focus and, therefore, more locally relevant or resonant insights to emerge. However, this process is no guarantee that information will be used locally (see 6.4). It assumes that those involved are clear ahead of time what they think is important to know, echoing Presupposition 5 of mainstream M&E (see Chapter 4). As some of the experiences in 6.3 will illustrate, the ‘proof of the (information) pudding’ is very much in the eating. Only when looking at the data did stakeholders understand their potential use. This calls for a more evolutionary approach to indicator selection (or information prioritisation). Hence, PM&E methodology falls into the same error as mainstream M&E by assuming that information needs can be accurately determined ahead of time.

6.2.6 Step 6. Develop a calendar to facilitate implementation

The final step before data collection could start was to develop what we called the implementation calendar. Six questions were used to construct the calendar:

1. which method(s) will be used (for collecting and registering information);
2. how often will indicators be measured and in which month/season;
3. what will be the sampling unit and size;
4. where will data collection occur;
5. who will undertake what data task – collection, compilation, analysis, feedback;
6. who will use the information and how.

TABLE 6-5 Objectives and indicators per activity for activities in Projeto Paraíba (Sidersky and Guijt 2000)

<i>Prioritised activities</i>	<i>total # of objectives identified</i>	<i># of objectives prioritised for monitoring</i>	<i># of indicators to monitor</i>
Community Seed Bank Support	11	3	5
Banana Weevil Control	9	4	7
Contour Planting	7	4	5
Alternative Fodder Production and Storage	17	2	5
Total	44	13	22

TABLE 6-6 Objectives and indicators per activity for STR activities in Araponga (Projeto Paraíba AS-PTA and IIED 1997)

<i>Prioritised activities</i>	<i>total # of objectives identified</i>	<i># of objectives prioritised for monitoring</i>	<i># of indicators to monitor</i>
Apiculture		2	3
Traditional maize variety trials	26	3	4
Mineral livestock salt	17	4	6
Medicinal plant work	31	2	3
Agroforestry trials	29	4	4
Total	103	15	20

First, we focused on methods to collect data for each of the indicators, drawing on both mainstream (*i.e.* individual interviews) and more participatory methods, such as participatory mapping and impact flow diagrams (*cf.* IFAD 2002, Annex D).

Method selection was an interactive process. I presented an overview of methods before the indicators were selected to expand people's ideas of the possibilities. Then I suggested two or more methods for each indicator and held a dry run with the group using imaginary data. After this we assessed the appropriateness of the method, particularly reliability ('could the method provide trustworthy data?') and viability ('could it be applied easily?').

Particularly tricky were the 'who' questions (see questions 5 and 6). When answering 'who will do the task', the tendency was only to focus on data collection which automatically seemed to be allocated to farmers and the STRS. By making explicit that monitoring also required compilation, analysis and feedback, the other partners took on roles as well.

Insight

During implementation (see 6.3), the clarity which we thought we had

achieved by detailing the implementation of monitoring proved to have given us a false sense of security. Many changes happened in relation to all aspects – methods, frequency, sample size/unit, location, and division of labour. Each of these changes is illustrated in 6.3 below.

In particular, the question of using findings was revisited repeatedly. When stipulating who would use the information, the tendency was to say that all partners would use it for a range of purposes. After the first round of data analysis, which showed that this was definitely not the case, this question was revisited. Even so, there was a rather optimistic perspective on who would find the information of interest. In section 6.4.1, I discuss how, in the end, information was used. This formed the basis for design principle 3, Chapter 8. This phenomenon is also related to the ‘messy partnership’ context in which we were working, where allocating responsibilities was less clear than it would have been within the context of a single organisation and its hierarchy. But the novelty of data collection also played a role. Partners apparently needed to experience the workload involved and the return on this investment in order to have greater clarity about the overall merit of certain information needs. This echoes the problems of Presupposition 2 (Chapter 4), which states that those involved will know how to make monitoring serve management.



Source: IFAD 2002

6.3 Year 2 – Implementing Ten Experiences

In total, five experiences of collective monitoring were undertaken in Minas Gerais and four in Paraíba, with a tenth being a parallel experience with the Most Significant Change (MSC) method in both locations. Each of these experiences offers insights about participatory monitoring in practice. I will first describe the experiences in Projeto Paraíba, then those in Minas Gerais and will round off with a discussion of the shared experience with the MSC method.

6.3.1 Activity 1. Banana Weevil Control – Projeto Paraíba

Bananas grow in the Brejo sub-region with its smaller, more humid niches, where it is the main cash crop. Weevil (*Cosmopolities sordidus*) infestation is high, weakens the plant, and reduces production, while non-chemical weevil control measures are not well known. The alternative that Projeto Paraíba was advocating (see TABLE 6-7) was placing inverted banana tree trunk segments among the banana growth that act as traps under which weevils shelter enabling manual catching and removal.

When we were identifying appropriate methods for each indicator, the third and fourth indicators posed problems. Initial attempts to use an impact flow diagram⁴⁵ for the third indicator had been rejected by the *animadores* as too complicated, following a field trial with several farmers. Instead we opted for simply listing the effects perceived by farmers. The difficulty with the fourth indicator was caused by the even distribution of banana production throughout the year, with almost weekly harvests. Unless farmers were accurate at noting themselves, which they were not considered to be by the NGO staff and *STR animadores*, it would require excessively frequent visits. Therefore, we agreed to focus only on the indicator of ‘perceived effects’ and not productivity.

In 1998, the monitoring of banana weevil control was discontinued when the practice stopped being disseminated. An alternative biological control option had emerged – a fungus being tested by the nearby university. The monitoring information never proved useful as the activity itself was being questioned (and not as a result of the monitoring data). Dissemination efforts by the project team were put on hold until the alternative was tested.

Insight

The key lessons for us from the monitoring of this activity were twofold. First, is the importance of keeping information simple and relevant in a monitoring partnership, no matter how tempting it is to include all interesting information. This insight is hardly novel – it appears repeatedly in all guidelines on monitoring and/or evaluation (cf. Salafsky *et al.* 2001; IFAD 2002). Apparently, this lesson needs to be learned time and again by those involved (see ‘Insight’, Step 6, section 6.2). Rather than finding it odd that the lesson needs to be learned, perhaps it makes more sense for monitoring theory to recognise the inevitability of refining of information needs.

The second lesson was the importance of accepting that in a new partnership such as Projeto Paraíba, priorities and, therefore, plans are bound to evolve as understanding grows. This was clearly the case in Paraíba with

⁴⁵ An impact flow diagram is a visual depiction of cause-effect linkages that can help to make explicit the causes of a problem or issue, or to identify effects or impacts of a particular change

TABLE 6-7 Monitoring focus and implementation for banana weevil control

Objectives	Indicators	Methods	Actual Fieldwork
1. <i>Farmers adopting the control measures</i>			
	<ul style="list-style-type: none"> • number of farmers trapping weevils • % of area under banana being controlled • number of non-trained farmers now trapping weevils • reasons for non-adoption 	counting and registering on maps during community meetings	2 years, except for fourth indicator (not assessed)
2. <i>Reduced weevil numbers</i>			
	<ul style="list-style-type: none"> • number of weevils captured per plot, for specified time period 	asking a sample of farmers to track	not undertaken
3. <i>General improvement of banana crop</i>			
	<ul style="list-style-type: none"> • frequency with which interviews effects of weevil trapping in banana are noted by farmers 	interview	sample of 15 of 33 farmers capturing
4. <i>Improved quality of banana crop</i>			
	<ul style="list-style-type: none"> • annual productivity compared to neighbours 	measuring a sample	later rejected as too difficult

doubts about the activity that was being monitored. Therefore, the relatively heavy time investment required for participatory monitoring should perhaps initially focus on those aspects that are more likely to be stable. On the other hand, in the context of the more mature ‘messy partnership’ in Minas Gerais, changes also occurred. Perhaps, therefore, where development cannot be planned very easily and requires a more evolutionary pathway (see institutional transformation in Chapter 1 and the Cynefin framework in Chapter 7), this phenomenon must also be accommodated in a monitoring system.

Both lessons challenge presupposition 13, of M&E as a static system, and form the basis of design principle 8, Chapter 8.

6.3.2 Activity 2. Contour Planting – Projeto Paraíba

One of the main results from the initial municipal-wide agroecosystem analysis that project staff had undertaken in 1993-94 at the onset of the work was the importance of tackling soil fertility problems and erosion (Petersen 1995). Reducing soil erosion and enhancing nutrient management thus became a key thrust to Projeto Paraíba’s work. The main dissemination activity involved training farmers how to plough and plant along the contours. We sought data on the adoption of contour planting and *atravessado* (a kind of approximate

contour planting, based on visual assessments of contours) and impacts (see TABLE 6-8).

Much to everyone's surprise, the 1996 data showed that *atravessado*, which was thought to be widespread, had decreased dramatically in favour of the more soil-conserving practice of contour planting. How was this possible? Notwithstanding the project's intense extension efforts from 1994 onwards, everyone realised they could not claim responsibility for this great shift. What other factor had caused the switch? More importantly, was it still worthwhile to invest time in training farmers on contour planting and should Projeto Paraíba drop this activity, or was the monitoring process fraught with ambiguous questions? The team decided to undertake a mini-appraisal to better understand land management. In the meantime, it put on hold further training efforts in contour planting.

Instead of monitoring the five selected indicators, NGO staff and the *animadores* undertook a participatory appraisal exercise in two communities. In-depth discussions with farmers on how they prepared their plots for sowing and whether or not contour planting was a useful alternative, led the partners to understand better why many farmers were opting for contour planting. For example, in one of the two communities, farmer adoption of contour ploughing was partly a result of dissemination efforts that had inadvertently triggered the unplanned, quick uptake of animal traction by farmers. A local leader, who was a keen experimenter and active disseminator, had taken the initiative to use his own animals in demonstration trials that were part of the contour planting training. As he knew that the animals were unable to plough up and down steep hills, he expected it would reinforce the message to farmers to plant along the contour lines. He also knew that farmers in that area faced a labour shortage, thus making animal traction more appealing. Thus, once farmers learned about the possibility of hiring the services of other farmers with draught animals, the contour planting message was 'adopted' on a wide scale as part of an overall change in land preparation techniques.

The short study in Paraíba confirmed the accuracy of the monitoring data from the 1996 in one of the visited communities (only one of the two communities involved in these discussions had been monitored the year before with participatory mapping). So, the team agreed the need to rethink its entire strategic approach to soil conservation in the region. This led to a detailed soil nutrient management study (Sabourin *et al.* 2000) and a markedly different project strategy in subsequent years.

TABLE 6-8 Monitoring focus and implementation for contour planting

Objectives	Indicators	Methods	Actual Fieldwork
1. <i>Farmers adopting contour planting or atravessado</i>			
	<ul style="list-style-type: none"> • number of farmers adopting the two proposals (contour planting/atravessado) • area planted under two proposals 	participatory mapping	1x – maps made with mixed groups in 7 out of 32 communities where this activity occurs
2. <i>Soil conserved</i>			
	<ul style="list-style-type: none"> • frequency with which effects of contour planting/atravessado are noted by farmers 	interviews	suspended after first data emerged from indicators above
3. <i>Farmers disseminating technique to others</i>			
	<ul style="list-style-type: none"> • origin of information of adopting farmers 	discussion during map production	undertaken once during map-making exercises (see above)
4. <i>Increased productivity</i>			
	<ul style="list-style-type: none"> • difference between average productivity of plots under normal and contour-planted conditions 	estimates from farmer interviews	undertaken once with 32 farmers in 4 communities

Insight

The monitoring from 1996 clearly had an important impact on this activity, as the data forced the team to rethink its assumptions about the region and its strategy. It is exactly this type of learning that makes collective monitoring such a valuable process. The surprising results were not ignored but questioned and formed the basis for further analysis. Our lesson from this example was about the importance of explicitly seeking information that questions critical strategic assumptions, which the contour planting information (unwittingly) did.

6.3.3 Activity 3. Community Seed Banks – Projeto Paraíba

By creating a community stock of seeds, those in need can borrow and then repay with interest to keep a continual, fresh supply of seeds available to support those in crisis. This avoids having to resort to uncertain or often expensive external sources, with dubious quality, and also maintains local seed diversity. In 1995, a government programme to distribute seeds increased the amount of seed available for banks to reinforce the need to move from STR-managed to

community-based banks (AS-PTA 1996:3). Initially focusing on the common bean, the banks later expanded to include two other bean varieties – *fava* (*Phaseolus lunatus* L.) and *macassa* (*Vigna unguiculata* Walp) – and maize.

Projeto Paraíba did not introduce community seed banks into the region. As a drought survival and food security measure, the practice existed prior to the NGO's arrival (Almeida and Cordeiro 2002). But total seed stocks were low and the STRS, rather than communities, managed what was meant to be a community-based initiative.

The NGO team and the STRS were disseminating the idea of community seed banks to communities unfamiliar with it, facilitated discussions about good management, and sought to improve seed quality (see TABLE 6-9). As seed quality was critical to ensure the credibility and, therefore, viability of seed banks (Silveira *et al.* 2002:74), Projeto Paraíba and the STRS established a partnership between a university-based laboratory and the community banks, with results sent to the farmers who supplied seed to the bank.

This activity was monitored largely as planned, partly because the activity itself was known. Unlike in the case of banana weevil control, community seed banks were a familiar idea in the region and there were working examples on which to draw. Each seed bank had a minimal internal management structure, which, although not systematic, meant that the notion of monitoring was not alien to the communities. There was clarity that the monitoring was useful in two ways: (1) to manage for quality by having a system that could use unambiguous evidence to facilitate the rejection of poor quality seed from farmers trying to dump their poor stock in the bank; and (2) at the state-level by using data from the seed banks to show both the poor quality of seed that had been provided by the state and the importance of this type of drought survival strategy.

Insight

What seemed critical to the success of this monitoring experience was that our work was simply strengthening an existing monitoring system that had a clearly perceived collective benefit. It met the need for public accountability of a collective investment in people's own seed banks, which called for a clear management structure and method, both of which were provided by the monitoring process. It involved people with a joint vested interest. Therefore, the critical lesson was the value of locally embedding monitoring into existing structures (design principle 4, Chapter 8) and relating it to very specific learning purposes (design principle 3, Chapter 8).

TABLE 6-9 Monitoring focus and implementation for community seed banks

Objectives	Indicators	Methods	Actual Fieldwork
1. <i>Ensure poor farmers have access to good quality seed at the right time</i>			
	<ul style="list-style-type: none"> proportion of 'easy access' seed (from seed bank or farmers' own stock) compared to 'difficult access' seed (bought seed or 'share-cropping' seed) 	individually collected data on short questionnaires	animadores interviewed 60 farmers in communities with seed banks and 60 farmers in communities without seed banks
2. <i>Lower expenditure on seed</i>			
	<ul style="list-style-type: none"> expenditure on seed for a seed bank member compared to non-member 	individually collected data on short questionnaires	same as above
3. <i>More community independence of seed companies through well-run seed banks</i>			
	<ul style="list-style-type: none"> seed returned after harvest, compared to seed borrowed 	control sheets of the seed bank (self-administered per farmer)	animadores collected information from 17 seed banks
	<ul style="list-style-type: none"> quality of stored seed and of seed returned to the bank 	via sub-contracted seed analysis (germination, humidity, purity and infestation)	laboratory analysis at local university (UFPb-Areia), plus training in data interpretation of about 20 farmers and animadores
	<ul style="list-style-type: none"> size of seed bank committee and quality of committee members' participation 	to be discussed with the committees	not monitored during action research process period

6.3.4 Activity 4. Fodder Experimentation – Projeto Paraíba

All smallholders in the region undertake some level of animal production. Diversity of fodder systems is high, including the use of crop residues, native pastures, planted pastures, and fodder crops, such as cactus (*Opuntia* sp.) and elephant grass (*Pennisetum purpureum*). Fodder practices range from free grazing to fixed enclosures for those with more resources. The main problem is the widespread and acute shortage of fodder, both in terms of quality and mass, particularly towards the end of summer. As technology development was becoming central to Projeto Paraíba's work, monitoring the experimentation with fodder production and storage (see TABLE 6-10) became an impor-

TABLE 6-10 Monitoring focus for fodder experimentation

Objectives	Indicators	Methods	Actual Fieldwork
1. Develop fodder system using the agricultural space			
	<ul style="list-style-type: none"> • production of fodder on farm • advantages and disadvantages of farmer-specific innovations 	<ul style="list-style-type: none"> • questionnaires • from discussions in interest groups • maps of individual properties with various proposals 	<ul style="list-style-type: none"> • 2 farmers in first year • undertaken in group discussions • maps during annual evaluation
2. Develop fodder processing and storage systems			
	<ul style="list-style-type: none"> • amount of fodder processed and stored per system • advantages and disadvantages of farmer-specific systems 	<ul style="list-style-type: none"> • interviews • matrix scoring and flow diagram 	<ul style="list-style-type: none"> • undertaken with 8 farmers • group discussion during annual evaluation

tant learning process. It was also our most difficult experience.

Standard texts on participatory technology development (Veldhuizen *et al.* 1997) state that the (group of) experimenting farmers should formulate objectives for the experiment and then identify indicators that they register systematically and analyse. We found reality to be far from this simple when it concerns genuine innovations rather than (minor) adaptations of existing practices (Guijt 2000:7). The farmers with whom we were working often had fairly divergent objectives for the same basic experiment, making joint indicator identification impossible. We also found that the farmers tended to make overall assessments of the success of experimentation, unconsciously using an integrated mix of indicators. Hence forcing them to select separate indicators appeared to be an alien form of assessment. Finally, data registration was an unpopular task, and while we could have forced this issue, we felt there was no point as we were interested in developing something that would be sustained without outside pressure.

Insight

As we sought a viable monitoring approach for innovations, we realised that experiments pass various stages and each has different potential in terms of participatory monitoring. This requires a more differentiated approach to monitoring, taking into considerations these differences. Thus the key lesson was the important of recognising the unique features of what is being monitored and developing different approaches suited to each issue (see 6.4.4 for

TABLE 6-11 Monitoring focus and implementation for agroforestry experiments

Objectives	Indicators	Methods	Actual Fieldwork
1. <i>Keep soil covered</i>			
	<ul style="list-style-type: none"> • % of soil covered under agroforestry as compared to conventional coffee systems 	wooden frame to estimate % covered, 2x per year, on two areas (with/without agroforestry) per farmer	all 5 farmers for 1 year
2. <i>Diversify production</i>			
	<ul style="list-style-type: none"> • number of species cultivated, per area 	counting by farmers 2x per year	all 5 farmers for 2 years (and ongoing for several years)
3. <i>Reduce production costs</i>			
	<ul style="list-style-type: none"> • costs of the variable expenses (labour, fertiliser, limestone, etc.) 	recording by farmers of time spent and inputs applied	all 5 farmers for 2 years (and ongoing for several years)
4. <i>Maintain / increase production</i>			
	<ul style="list-style-type: none"> • amount of each product (maize, coffee, fuel wood, etc.) harvested 	recording by farmers of harvest collected	all 5 farmers for 2 years (and ongoing for several years)

our typology of these differences in relation to technology development). This challenges the uniformity of monitoring approach embedded in mainstream M&E and forms the basis for design principle 3 (Chapter 8).

I now turn to Minas Gerais and the five monitoring experiences there.

6.3.5 Activity 5. Agroforestry Experiments – CTA-ZM⁴⁶

In 1996, farmers in the municipality of Araponga were interested in agroforestry, which was for them an uncommon form of farming that offered the potential of more diverse production, stable income and soil improvement. Not surprisingly, being a fairly complex type of agroecosystem, the merged agroforestry ‘objectives tree’ listed 29 objectives. The farmers said that the process of defining objectives and indicators helped them better understand agroforestry as a technical proposal. Four key objectives were chosen for more detailed monitoring by the group of five experimenting farmers (see TABLE 6-11). More farmers were experimenting with agroforestry but were not registering data at that point. In year 2, the farmers took up a fifth objective to monitor – ‘fertilise soil’.

⁴⁶ This experience is documented in detail in Cardoso *et al.* 2001

Data collection varied per farmer in terms of timing, the units ('sack' instead of kg), besides the large differences between their land in terms of when planted, management, level of complexity, etc. This variation did not diminish the value of the data for the farmers or for CTA-ZM but did preclude the calculation of averages. The planned comparison of diversity on areas with and without agroforestry was not possible as the participating farmers had 100% agroforestry cover and considered it socially not possible to collect data from neighbours without agroforestry.

All indicators were monitored for two years, except % of soil covered which was quickly ascertained as being more than four times greater under agroforestry and was discontinued (Cardoso *et al.* 2001:251). The information further showed that, despite the ecological gains in terms of erosion control and increased biodiversity, the labour investment to initiate an agroforestry system is very high and the returns on production take too long to be economically viable for these low income farmers.

After the first 15 months of monitoring, much data had been registered that was of use to the farmers. While inadequate for deriving statistically valid analyses, farmers valued these numbers to gain an integrated picture of 'cost-benefit', and to compare their own performance with others (Cardoso *et al.* 2001:251). During the evaluation of the agroforestry systems based on this data, the farmers, CTA staff and UFV researchers reached four conclusions (Carvalho and Ferreira Neto 2001):

1. Agroforestry systems were effective in covering the soil and thus reducing erosion;
2. Most farmers cannot afford the amount of initial investment of labour required, as production remained low in these first years. So extra external investments are necessary to initiate agroforestry systems and ways must be found to manage the systems with less labour;
3. It is necessary to improve nutrient recycling, make better use of fertilisers, and to use plants more adapted to local soil conditions and with quicker productive capacity; and
4. Productive diversity in agroforestry systems, moving farmers away from an economically fragile monoculture livelihood, seems to be stable or increasing but insufficient data were available for conclusions.

The data that emerged in the regular exchange visits and meetings that accompanied the monitoring provoked much debate. While ecologically beneficial, the agroforestry proposal was not increasing production as planned and seemed economically unfeasible. Armed with data they had collected themselves, the farmers were confident about debating these contradictions and

challenging the researchers and CTA-ZM about the agroforestry systems that the NGO had introduced in Araponga. Using the labour data to argue their case, the farmers and CTA-ZM succeeded in accessing local development funds to compensate the farmers for the labour invested in establishing agroforestry plots. Furthermore, the farmers, with the university scientists, started radically adapting the agroforestry model for a more optimal mix of economic and ecological benefits (CTA-ZM and IIED 1999:5). Without the monitoring information, the farmers said they would only have had a general idea about the performance of agroforestry but insufficient to make a clear assessment about whether or not to continue with this practice (Cardoso *et al.* 2001:255).

In 2001, CTA-ZM and the STR of Araponga started shifting their investment away from agroforestry to organic coffee, so the agroforestry experiments drew to a close, although all the experimenting farmers continued noting data on their own accord. The information from this monitoring processed was later compiled into case study material for a farmer-to-farmer extension course on organic coffee that CTA-ZM offered as of 2003 and has been published following a detailed systematization process with farmers in 2006 (Cardoso and Ferrari 2006). Thus the monitoring information not only served to radically alter the agroforestry designs in favour of farmers' priorities but also to lay the basis for further agroforestry innovation with farmers elsewhere in the Zona da Mata region.

Insight

Rather than being surprising for the farmers, the data served to confirm their suspicions and was wielded with confidence vis-à-vis CTA-ZM. Our key lesson from this experience was the empowering potential of participatory monitoring if data that fills a genuinely felt information gap is linked directly to reflection opportunities where critical debate is encouraged (see design principle 5, Chapter 8). Concluding that participatory monitoring can be empowering should not, perhaps, be considered a lesson. Wasn't its potential why we had invested so much time in the action research process? The contrast with other, less effective examples discussed in 6.3, helped us to understand better under which conditions monitoring can have an empowering effect. This experience constituted clear evidence for us, and motivation, of its potential. It served as the basis for subsequent socio-economic monitoring work that has become a key area of interest for CTA-ZM (CTA-ZM 2007). Furthermore, we had seen that compromises had been necessary in terms of methods and data rigour to ensure that the monitoring process stayed meaningful for farmers. Hence our conclusion that participatory monitoring required careful

reflection on the rigour norms, data collection methods and data interpretation processes to ensure relevance for those whose information needs were being met (Fária 1994; Barbosa 2001).

6.3.6 Activity 6. Biodigital Work (Medicinal Plants) – CTA-ZM

Official health services in rural Brazil generally are not of a high standard and are expensive for the rural poor. This is also the case in Araponga (CTA-ZM and IIED 1999:6-9). As part of the PRA that the STR and CTA-ZM had undertaken in the municipality in 1994 (Fária 1994), work on local health issues were an important concern. One of the alternatives that had gained popularity when our monitoring work started is known locally as *biodigital* or *bioenergetica*⁴⁷. This is a voluntary community-organised and implemented form of medical diagnosis for ailments that are treated with medicinal plants. The focus on local medicinal plants was also viewed by CTA-ZM as a stimulus to conserve local biodiversity. The work is organised in pairs, generally a woman and a man, who undertake the diagnosis and prepare the tinctures. They register their observations and treatment for comparison during follow-up visits by the patients.

The monitoring was kept simple (see TABLE 6-12). Unlike with agroforestry, *biodigital* is a totally local activity. CTA-ZM was not involved in any way and limited its involvement to facilitating data collation and analysis.

Monitoring this activity was directly strengthening existing monitoring work of the eight *biodigital* pairs, who were loosely organised in a mutual support group. Creating the objective tree gave the group a more systematic perspective on their work, while indicator identification helped them think about and improve the quality of the patient annotations that they were already taking. Throughout the monitoring period – and for several years after the action research process ended – the pairs were continually improving their annotations as the group meetings helped them analyse where, for example, inconsistencies were occurring in disease names.

The main fluctuations occurred due to time pressure. The pairs, most of them also farmers, would temporarily pause their diagnosis work when agricultural tasks required their full attention. Some pairs stopped with the work altogether, while others joined and some invested personal money and time in professionalising further by attending a homeopathic course at a regional university. This group combined the use of the MSC method (see Activity 10 below) with indicator-based monitoring.

⁴⁷ This method was developed by a doctor Yoshiaki Omura in New York between 1976 and 1988. In 1996 it arrived in Minas Gerais (<http://www.radiolider.fm.br/artigos.asp?categoria=338>)

TABLE 6-12 Monitoring focus and implementation for biodigital work

Objectives	Indicators	Methods	Actual Fieldwork
<i>Implement treatments more efficiently</i>			
	<ul style="list-style-type: none"> • the number of people consulted who return for a check-up • the number of people consulted per pair specific innovations • the number of ailments treated per person per year 	<ul style="list-style-type: none"> • noting by pairs in their notebooks • regular meetings (quarterly) to share and adjust work 	<ul style="list-style-type: none"> • All active pairs keep noting, with some irregularity, to date. Meetings keep occurring, if infrequently and irregularly

During the final evaluation of the monitoring process in 1999, the *biodigital* group illustrated how monitoring helped improve and standardise individual performance (CTA-ZM and IED 1999:9-12). Starting the group-based monitoring provoked discussion on standards, such as how everyone should do a diagnosis and a check-up, and when a treatment could be called successful. Organising meetings to share data also became opportunities to share experiences. Sharing the annotations and interpreting them together revealed that not all pairs were equally knowledgeable about diseases or treatments. They identified several areas where they needed support, *e.g.* training on plant varieties, drying techniques, psychosomatic diseases, and nutrition.

Their work as a group had grown to such an extent that in 2002 they were planning to start negotiations with the municipal council about the merits of their work in order to seek municipal financial support. For this, they wanted to further perfect their monitoring system to be able to make the data more convincing.

Insights

Three key lessons from the biodigital monitoring experience regarding PM&E were:

- its contribution to capacity-building when those collecting the data also interpret them and translate them into action points (see design principle 5, Chapter 8);
- accepting that participatory monitoring cannot necessarily be approached as rigorously as might be ideal when it is carried by volunteers who also fulfil a range of other roles (see design principle 3, Chapter 8); and
- the importance of building monitoring on existing groups with an identity and purpose, which makes the motivation for monitoring internal to the group rather than external and enhances the chances of sustained learning (design principle 2, Chapter 8).

6.3.7 Activity 7. Traditional Maize Variety Plots – CTA-ZM

The purpose of community-based field trials with traditional maize varieties in the municipality of Araponga was to facilitate farmers' independence from commercial seed manufacturers and to encourage agrobiodiversity as local varieties have lost much ground to officially introduced varieties. Furthermore, CTA-ZM and the STR argue that local varieties appear to have greater capacity to produce sustainably in the region than those that have entered the system through formal extension processes. The maize trials were monitored using some standard indicators, such as 'number of community fields' and 'types of varieties grown on each', but also less standard ones such as 'the number of farmers planting traditional varieties besides those who participate in the community field trials' (see TABLE 6-13). This last indicator helped to track whether other farmers were also becoming interested in the work to revive traditional varieties. In that perspective, the collective seed plots could be seen as a strategy to increase interest. It was a proxy indicator for assessing uptake of this technology.

CTA-ZM played an important role in the implementation of this activity in terms of technical expertise. However, during the monitoring process, CTA-ZM disappointed the farmers by rarely appearing and leaving the monitoring up to the farmer monitors and the STR. It was only in 1998, the last year that CTA-ZM made an effort to help the farmers compile a set of data that could be analysed in more detail.

Due to the irregularity of data collection, reflection on this activity suffered and information was not used by any of the partners other than for strategic revision at the end of the three years of our monitoring process. Farmers and CTA-ZM identified several causes for the data collection problems (CTA-ZM and IIED 1999:14-16): distances between collective plots made it time-consuming for the responsible monitors (farmers without transport), lack of clarity on the part of the monitors regarding the purpose of the monitoring, poor support from CTA-ZM, STR and UFV in monitoring, and insufficient detail about when and what to monitor (the indicators were adapted regularly).

Notwithstanding these difficulties, during the single reflection meeting that was held, the data did serve to raise questions about the viability of collective seed plots in general, given that there were fewer plots and participating families. From 1997/98 to 1998/99 numbers of participating farmers decreased from 28 to 18. Those leaving the groups were producing the seeds on their own plots. Furthermore, there was a general regional trend to reduce maize production in favour of coffee, thus reducing interest in the collective plots.

TABLE 6-13 Monitoring focus and implementation for traditional maize variety plots

Objectives	Indicators	Methods	Actual Fieldwork
1. Produce traditional varieties adapted to the region			
	<ul style="list-style-type: none"> number of farmers participating in groups number of farmers who do not participate in groups but have taken up traditional varieties 	<ul style="list-style-type: none"> group notebook: quantity, quantity sold, name of farmer, community, variety. Also map and form, per farmer for amount planted and harvested ask group members which other farmers acquired seeds and visit them 2x per year 	<ul style="list-style-type: none"> delayed so undertaken in 1999 from memory for past three years
2. Create new seed plots with new varieties			
	<ul style="list-style-type: none"> number of plots plus types of varieties grown on each 	<ul style="list-style-type: none"> visits groups 2x per year to ask municipal map to locate all plots 	<ul style="list-style-type: none"> same
3. Produce sustainably			
	<ul style="list-style-type: none"> number of farmers in groups who continue to plant traditional varieties annual productivity of fields of group members, per quantity planted 	<ul style="list-style-type: none"> visit existing groups, check with farmers who reduced inputs and other practices, using flow diagram make map to locate farmers 	<ul style="list-style-type: none"> data by memory for two years no data on productivity collected

The data also served to query how to deal with decreasing agrobiodiversity. Many farmers use seeds but with this comes the risk of cross-fertilisation by other varieties, including hybrids. Only two varieties stayed over the three years, with other farmers changing varieties, thus indicating that the collective seed plots may not be a successful agrobiodiversity strategy. An alternative strategy for sustaining local agrobiodiversity emerged as focusing on individual (family) plots but maintaining collective moments of analysis.

In general, the data led the farmers and CTA-ZM to conclude that farmers are more interested in using, rather than collectively producing, traditional seed varieties.

Insights

This activity confirmed the potential of monitoring to trigger strategic reflection (see design principle 3, Chapter 8). Another important insight was the need to be clear and frank about the responsibility of different partners in

relation to a specific (monitoring) activity (see design principle 2, Chapter 8). This was an activity in which CTA-ZM had an important technical role and STR had a significant support role. Yet the farmers ended up without support in the critical beginning period and the monitoring stagnated. CTA-ZM has since stopped its direct support of the maize variety activity, as part of an overall reduction of activities.

6.3.8 Activity 8. Mineral Livestock Salt Production – CTA-ZM

As part of an overall strategy to improve livestock health, CTA-ZM with the STR disseminated the collective production of a mineral salt that improves livestock health and reduces the cost of inputs. CTA-ZM had not disseminated information on this activity in Araponga since 1995 so the monitoring work (see TABLE 6-14) was based on the assumption that mineral salt production groups were operating well.

The first data was collected in 1997 from five groups, with farmers from nine communities, but most of it occurred in 1998 and 1999 (CTA-ZM and IIED 1999:12-14). Data collection was undertaken by the designated (voluntary) monitor, Jonas Evangelista Lopes – a STR member. The initial idea had been to ask each group to collect data but the planned workshop to train someone from each group as monitor never took place. Hence an alternative strategy was needed and Jonas undertook it all. Jonas experienced the work as excessive, requiring him to walk between five locations throughout the municipality, which he found demotivating. Farmers started seeing him as the ‘salt controller’ without understanding the potential value for them of the monitoring work. Another problem for him was the lack of support from CTA-ZM, UFV or the STR in data collection and particularly analysis. UFV was not working on livestock issues, CTA-ZM no longer had a livestock professional among the staff, and STR was generally too busy with its core tasks. The lack of analysis also made it impossible to share results with the salt production groups, which did nothing to stimulate their interest in the monitoring work.

The indicator ‘state of livestock hide’ proved particularly difficult to interpret in the absence of additional information. After the first monitoring attempts, it was clear that state of the livestock hide was caused by more than only mineral salt application, so analysis of this variable in isolation was not sensible. Furthermore, it constituted sensitive information, as no one would publicly state that the hide of their livestock was bad. Jonas shifted to individual interviews and farm visits from a sample of farmers, to assess the state of the hide himself but also to ask questions such how often is salt given, what is the ratio of ingredients used, what feed and other inputs do the cattle consume, etc.

TABLE 6-14 Monitoring focus and implementation for mineral salt production

Objectives	Indicators	Methods	Actual Fieldwork
1. <i>Collective salt production</i>			
	<ul style="list-style-type: none"> • number of meeting of salt groups per year • number of participants per meeting of each-salt group 	<ul style="list-style-type: none"> participants' list made at each group meeting, which meets irregularly 	3 years of data
2. <i>Build capacity of farmers to produce mineral salt</i>			
	<ul style="list-style-type: none"> • number of farmers who make and use salt • number of farmers who have started using salt after finding out from trained farmers 		2 years of data
3. <i>Sensitise / stimulate farmers for other initiatives in livestock programme</i>			
	<ul style="list-style-type: none"> • number of group participants who only use salt and have not adopted any other livestock improvement initiative 		2 years of data
4. <i>Improve health of livestock</i>			
	<ul style="list-style-type: none"> • condition of livestock hide 	self-evaluation by farmers was changed to interviews by - external monitor	2 sets of measurements among sample of farmers

The lack of investment in embedding monitoring in the mineral salt groups denied them the opportunity for self-evaluation and overburdened Jonas. In his final assessment, Jonas was sure he had learned much more about livestock production than the groups. The groups never reached the stage of reflecting on the merits of mineral salt for improving cattle health, a discussion that only took place between CTA-ZM and Jonas. During the three years of monitoring he had started to function as a community 'consultant' on mineral salt and instructed many farmers on its correct production and use. He was able to identify several innovative experiences that he felt should be shared more widely with others. He concluded that if this work was to continue, more farmers would need training in salt production but also that a more comprehensive municipal strategy for improving animal health was needed⁴⁸.

⁴⁸ The farmers in Araponga are now working on livestock issues in a systematic manner following a grant from Wilde Ganzen, the Netherlands (http://staff.science.uva.nl/~janssen/pages/index_en.html)

CTA, STR and UFV only used the information for strategic reflection. Data showed that fewer meetings were taking place and fewer farmers were making salt. The information itself as well as the difficulties that Jonas experienced in finding support from the supposed monitoring partners raised the question of whether mineral salt groups was the best entry point for adopting improving livestock production in Araponga. This decreasing interest was also explained by some STR leaders as reflecting the general regional trend of increased investments in coffee, to the detriment of other farming components.

Insights

An important lesson from this experience concerned the difficulty of jointly implementing a publicly agreed division of labour. Despite clear and collective agreement – and reaffirming this importance at each plenary workshop – it was only very late in the monitoring process that CTA-ZM gave its support to Jonas and data were interpreted. Yet why did CTA-ZM, which had stopped supporting livestock activities in Araponga, still prioritise it as important to monitor? With hindsight, their purpose was to conduct a one-off evaluation of the impact of this activity, rather than on-going monitoring to strengthen the activity. This activity helped them to distinguish between a one-off information collection exercise and an ongoing monitoring activity. But it also helped recognise the importance of being clear where the limits are of a partnership, rather than perpetuate the illusion of undertaking all activities jointly. This is the basis of design principle 2, Chapter 8.

6.3.9 Activity 9. Apiculture – CTA-ZM

For some farmers in Araponga, honey production and collective marketing offers potential to increase income and to support biodiversity. Only a few farmers are engaged in this activity and they experience considerable difficulty in marketing their honey for a reasonable price. In addition to honey, farmers harvest propolis⁴⁹ and wax. When we started the monitoring work (see TABLE 6-15), the beekeeping farmers had just formed a group to explore if collective marketing could be advantageous.

Bee keeping being a secondary activity; farmers tend to spend less time on this when other tasks are more pressing. For example, in November and December 1998, union elections required everyone's full attention. The irregularity of meetings due to other commitments affected the monitoring. The marketing analysis was not undertaken as the regional farmers' association had not paid out the honey that the farmers had entrusted to them, thus

⁴⁹ Propolis is a wax-like resinous substance collected by honey bees from tree buds or other botanical sources and used as cement and to seal cracks or open spaces in the hive

TABLE 6-15 Monitoring focus and implementation for bee keeping

Objectives	Indicators	Methods	Actual Fieldwork
1. <i>Improve apiculture production</i>			
	<ul style="list-style-type: none"> amount of honey and other products produced per beekeeper number of beehives per beekeeper 	<ul style="list-style-type: none"> form per beekeeper for him/her to note each time a beehive is harvested (about 2x per year) group meetings to analyse data (biannual) during 2 of the existing quarterly meetings 	<ul style="list-style-type: none"> all data collected from August 1998 to May 1999 2 'sharing and analysis' meetings held with CTA-ZM (annual)
2. <i>Organise collective marketing of honey production</i>			
	<ul style="list-style-type: none"> activities implemented or stimulated (sale and buying) by beekeepers' group that are linked to marketing 	<ul style="list-style-type: none"> registering on individual forms at time of buying/selling (quarterly) analysis in group (biannual) using individual data and a flow diagram for marketing flows analysis, 2x per year 	<ul style="list-style-type: none"> farmers noted individual sales

reducing their motivation to pursue this question. Nevertheless, the farmers all had noted the data.

Comparisons of the final data were difficult as beekeepers had registered with varying frequencies, some had stopped while others had started, and the bee keeping practices varied considerably among the 13 participating farmers. Farmers had different numbers of hives in different locations, and harvested with different frequencies and at different times. For example, some produced 446 kg of honey in five harvests while others produced 259 kg in six harvests, or 404 kg of honey produced by 12 beehives and 448 kg produced by seven hives. With the existing data, the beekeepers concluded that those that had invested more in bee keeping had enjoyed greater profits at the end of the year.

Insights

Despite the relatively short life of the monitoring experience, the beekeepers valued the process and the information for several reasons (CTA-ZM and IIED 1999:14-16). First, when comparing production and other yield data, they noted differences, discussed possible causes, and set up a healthy friendly competition between them, thus improving the effectiveness of this activity. They also realised that together they represented a considerable source of honey for the trader and can therefore ask for higher prices, which they have done – hence it had an empowering effect. Third, the data helped them estimate how much income they could expect in the coming year, and what they

would need to invest to achieve this, and therefore assess if this activity would be worthwhile to continue individually and as a group. A fourth insight was that sharing data helped the participating farmers to improve their beekeeping practices. For example, one farmer, Donizete, reduced the number of his beehives from 21 to 17 yet produced more honey. This was explained by the effect of location on production and the moment of harvesting on production. The farmers identified when the best time was to invest in each product, considering marketing issues and labour constraints. Thus the sharing became a form of internal capacity strengthening. Finally, monitoring the activity stimulated beekeepers to improve their production and continue collecting information. Some continued to register the data after the end of our action research process.

These insights point to the importance of closely linking data and analysis (see design principle 5), and of balancing informal exchanges with formal data protocols (see design principle 4, Chapter 8).

6.3.10 Activity 10. Most Significant Change Method – Projeto Paraíba and CTA-ZM

In year 2, we reviewed our work in both locations and agreed that the focus till then on tracking technology development and diffusion via indicators would not offer us insights about broader objectives, be they institutional, partnership, methodological or policy objectives. In addition to tracking the micro-world of activities, we now needed to tackle the monitoring of less tangible aspects of the organisations' work.

An unanimous decision was made to seek an alternative to the process of identifying relevant activities, objectives, indicators and methods, partly out of a concern with the time involved but also due to the intangible nature of changes related to these themes. Tracking through indicators was not considered a hopeful approach. So we decided to experiment with a method I had just discovered and appeared to offer a viable and interesting alternative. The 'Most Significant Change' method was developed by Rick Davies in Bangladesh and is described in Box 6-1.

A trial run during the plenary workshops left participants keen to try the new method. It was deemed simple and initially seemed effective at provoking the sought after reflection and sharing. The implementation of the MSC method differed between the two sites (see TABLE 6-16). The intention of Projeto Paraíba partners was to share views on change between themselves (see TABLE 6-17 for an example), so exchanging the full lists of changes and their single 'most significant change' was to take place every four months. They expected

Box 6-1 Most Significant Change method – a summary (Davies 1996; Davies and Dart 2005)

The MSC method emerged from a need for a monitoring system that deliberately abandoned the use of indicators as earlier attempts with indicators had not been sustained by the Christian Commission for Development (CCDB).

The approach centres around (initially monthly but later less than quarterly) inquiry of three types of change for each credit group funded via CCDB: the changes in people's lives; changes in people's participation; and changes in the sustainability of people's institutions and their activities. Additionally, the group can report any 'other type of change' enabling field staff to report on other factors that are deemed important. For each type of change, a simple question is answered for each of these four types of changes: 'During the last month, in your opinion, what do you think was the most significant change that took place in ... [for example, the lives of the people participating in the project]?' The group is asked to provide a two part answer: (1) descriptive – describing what happened in sufficient detail such that an independent person could verify that the event took place, and (2) explanatory – explaining why they thought the change was the most significant out of all the changes that took place over that time period.

Deciding on the most significant changes is a subjective expression of the values and concerns of respondents. The explanatory response to the questions provides a forum for these values to be shared and debated, compared and selected. The approach does not provide mundane information on the day-to-day running of the project but rather information on extremes, be they positive or negative. This kind of information can be used directly by project staff: where negative changes were reported, the project would try to avoid this in future. Where positive changes were reported, these would try to be reinforced or replicated by the project. Although not indicators in a conventional sense, the indicative change events serve to define organisational 'milestones'. They thus provide a flexible approach to monitoring impact.

In the CCDB context, a system of progressive upward selection (from credit group to headquarters level) means that a wide range of respondents' experiences are subject to 'an iterated process of analysis (choice-explanation-choice...) that eventually select a small number of stories of high value'. The structure was designed to 'take the form of a slow but extensive dialogue up and down the CCDB hierarchy each month'. The regular feedback between the Head Office and Project Offices enabled the decision-making criteria to be shared between the two levels. This helped project staff to adapt their criteria to those of head office staff or actively seek different examples and better explanations for the changes they had selected. The information generated has been used extensively in CCDB publications, videos and educational materials.

Davies reports that about 90-95% of all the changes documented were positive

changes. This may reflect project staff concerns about recording negative changes. Evolution of the project could include asking a specific question about negative change. Alternatively, feedback from the Head Office, through identifying a negative change as one of its key changes, could emphasise the importance of recording both negative and positive changes alike.

This approach differs from logic theory approaches in various ways. The approach makes use of the diverse perspectives between stakeholders, an aspect that can hinder agreement on indicators. It acknowledges different sets of values between stakeholders and thus does not force the use of narrow, static indicators. Contextually-explained stories that represent changes significant to the overarching goals of the intervention are valued above synthesised statistics. Recorded change events reflect a changing world and a changing set of perceptions about what is important.

TABLE 6-16 How MSC was implemented in Paraíba and in Minas Gerais

NGO	Focus	Who	Frequency	Implementation
<i>Projeto Paraíba</i>				
	Four thematic areas:	Projeto Paraíba	quarterly plus	applied 2
	1. influencing policies for more sustainable agriculture	team	sharing (not merging) between	times
	2. strengthen and broaden partnerships	STR Solânea	groups and over-	
	3. improve (communication) methodologies	STR Remígio	view at end of	
	4. construct a new vision for the STR		year of the three applications	
<i>CTA-ZM</i>				
	STR level – initially no thematic focus but after some use, identified three objectives to track:	Board of STR	at every STR	Actual use:
	1. networking between organisations that operate within the municipality to formulate and implement public policies	Araçuaia	meeting, one of the three	Obj 1 = 2x
	2. development of technical proposals (agricultural innovations)	some of thematic groups (bi-digital, maize variety trials)	themes to be discussed	Obj 2 = 2x
	3. development of organisational proposals (social innovations)			Obj 3 = 1x
	Thematic groups discussed changes they observed in ‘overall performance’			Thematic groups: agriculture =1x biodigital = several

TABLE 6-17 Example of MSC method in Paraíba (related to ‘improved communication methodology’, Jan-April 1998) (Guijt 1998b:5-6)

<i>STR Solânea</i>	<i>STR Remígio</i>	<i>Projeto Paraíba</i>
<i>Most important change/event</i>		
farmers disseminate their experimentation experiences and innovations to others without Projeto Paraíba or STR support	course on seed quality management for banks	slow reaction by team to the prevailing drought
<i>Where noticed</i>		
in the local diocese centre	seed department in local farmer, Areia campus	evaluation and planning session in Centro São Miguel
<i>Who participated</i>		
STR, Projeto Paraíba, Associations and individual farmers	community association members, Projeto Paraíba, STR Remígio	Projeto Paraíba team
<i>When happened</i>		
15 March 1998	10 March 98	16 April 1998
<i>Reason for choice</i>		
as this is an example of how farmers are taking on this new role that will strengthen the dissemination work.	capacity-building is essential to help banks to improve the way they managed seed quality (germination quality)	despite having known about the drought since the end of 1997, we only rescheduled work in April 1998, therefore making it difficult to provide better support to struggling farmers

that during their annual evaluation they could use the outputs from the three analyses to generate an overall assessment of the impacts achieved and problems encountered that year. In Araponga, participants decided to try it both within the STR Board meetings, as well as to complement the indicator-based monitoring of the five activities. The idea was for outputs from the thematic groups to be shared with the STR Board and with CTA-ZM. CTA-ZM helped facilitate the initial use of the method but did not use the method itself.

During the period that it was used, the method itself required some adaptation. In Araponga, for example, the groups wanted to list positive and negative changes and select one ‘most significant change’ from both lists. However, this was time-consuming. It proved difficult to reach an overall

view of whether the past period had seen an improvement or deterioration related to that theme. Later only one change was selected – either negative or positive – to represent the theme. Furthermore, in Araponga, the STR Board started using lists from previous discussions to see if any advances or further deterioration have been signalled, as a way of tracking changes over a longer time period than the four month gaps.

In Paraíba, STR Remígio was more articulate and radical in its views and so the themes identified represented their view rather than that of the more moderate STR Solânea, particularly that of ‘construct a new vision for the STR’ which was interpreted as a move to oppose the existing Board. This led to some hesitance by the Solânea union members to use the method and decreased their motivation for discussing that dimension of change. This is an example of the risk that pushing for public consensus as the mode of decision-making to subsume significant differences between stakeholder groups.

The initial assessment of the MSC method in both sites was very positive (Guijt 1998b; Projeto Paraíba AS-PTA and IED 1998:8-11). The method was considered feasible, good at provoking essential debates about STR strategy and providing information that would otherwise have been lost. For example, the biodigital group in Araponga applied it several times and found it gave them a sense of overall achievement, helping to highlight the problems they need to resolve.

Interestingly, despite the positive assessment, in neither site did groups continue with this method. As STR members said during our evaluation of the Araponga process: ‘Monitoring, even with this relatively simple method without indicators, is still perceived as one more task.’ In Paraíba, after the change of presidency following trade union elections in Remígio, there was little interest in using this method that was associated with their ousted opponents. The sharing between the three partners quickly fell by the wayside, with the hope of picking this up once relations stabilised. In Minas Gerais, with the demise of the collective bee keeping marketing, mineral salt production groups, and traditional maize trials, group meetings stopped and with it use of the MSC method ceased.

Insight

Our key lesson for this method was that sustained use of the method depends on more than the stability of the group and regularity of meetings. No matter how simple and effective the method appears in an externally facilitated forum, when it comes to continual use, each group had its own system and discussion culture in which MSC was perceived as an extra task. Monitoring processes need to be culturally embedded within organisational cultures, rhythms and capacities if they are to be perceived as useful and to last (see design principle 2, Chapter 8). It also means that monitoring must be

allowed to evolve towards a good fit with those seeking to meet information needs. To do this requires asking what information people continue to collect and why, and what this tells about the incentives and priorities.

6.4 Year 3 – Distilling Lessons

In Year 3 at both sites, we further refined implementation by discussing the problems that kept emerging. In Minas Gerais, for example, significant limitations in implementing the agreed monitoring calendar were the distances between the communities that limited participation in analysis meetings, lack of transport for designated monitors to visit communities and lack of funding to overcome logistical constraints. Furthermore, there was an overall lack of interest by farmers in the activities being monitored and, therefore, limited interest in monitoring. The active involvement we had managed during the design of the monitoring system did not result in similar levels of engagement by all stakeholders during implementation. In Minas Gerais, there was relatively little participation by CTA-ZM, UFV and STR which hindered data collection and analysis, with only the farmer monitors actively involved (CTA-ZM and IIED 1999).

Besides ongoing refinements, we devoted the last workshops (Projeto Paraíba AS-PTA and IIED 1998; CTA-ZM and IIED 1999) to evaluating and deriving lessons regarding the participatory monitoring process we had followed. These lessons related to:

- learning from process and data;
- participation and messy partnerships;
- valuing data and dialogue;
- differentiated learning events, mechanisms and needs; and
- sustainability of the learning.

6.4.1 Learning from Process and Data

Echoing Patton's focus on process and findings (Patton 1997), two aspects of the monitoring work were evaluated as useful by those involved: (1) the process of developing it collectively and (2) using the information itself. Distinguishing between the contribution that monitoring can make to learning via the design process and the information is important in the context of 'messy partnerships', which requires continual articulation, refining and (re)aligning of understandings and priorities (see Chapter 7). Mainstream M&E (Chapter 4) and participatory M&E (Chapter 5) are both based on an assumption that using the data is what triggers learning.

Returning to the idea of different ‘collectivities’ of learning (Chapter 1), group learning among farmers occurred as did organisational learning by the NGOs. Social learning can be argued to have occurred, in particular, through the joint design process, i.e. of developing the monitoring work together through a series of iterations.

Developing the objective trees, identifying indicators, and gathering information helped to clarify incorrect assumptions the different groups were making about cause-effect links related to certain activities. This constitutes an example of clarifying hypotheses that is considered critical for adaptive management (Chapter 3). The joint design process created more realistic expectations among partners about what each activity could hope to achieve. By seeing the long-term objectives alongside immediate outputs, the partners developed greater strategic thinking about how the activities could contribute to overall goals. This is an example of what Röling calls social learning – how multiple perspectives ‘grown into a joint picture, ... can meet on platforms for land use negotiation, and decide on collective action’ (2002:35).

In Minas Gerais, we analysed each step of the design process per actor group – farmers, STR, UFV and CTA-ZM. The Minas Gerais partners found the objective trees (see Step 2, 6.2) valuable to develop clarity about the purpose of a planned activity. However, they agreed that such ‘trees’ should only be constructed by those who have an active role in the work. For example, having UFV develop a tree on *biodigital* despite playing no role in that work was not useful for anyone. But when it came to the step of merging the trees, opinions varied about the usefulness. The STR and farmers asserted that forcing this consensus perspective helped reduce distance between the partners by creating better understanding of each other’s perspectives. However, CTA-ZM felt that the objectives were sufficiently different that the merging of objectives would tend towards a lowest common denominator type of agreement, overriding priorities of one of the groups. Thus the challenge remained of finding a way in which partner-specific objectives could be respected amidst the search for a common monitoring focus (see ‘Participation and Messy Partnership’ below).

In relation to the second factor that could have triggered learning, data use, in both sites various purposes were noted (see TABLE 6-18). Information contributed to learning in terms of changes in implementation and in strategy, information sharing about technical issues, and enhanced advocacy efforts. When undertaken close to evaluation and planning moments, the data are used more actively (Projeto Paraíba AS-PTA and IIED 1996b; CTA-ZM and IIED 1997). The diverse use of information as a result of monitoring efforts highlighted the

TABLE 6-18 Usefulness of information in both research sites

Purposes	Projeto Paraíba	CTA-ZM
<i>Adjusting implementation</i>	<ul style="list-style-type: none"> • Use of information to improve technical proposals (contour planting, banana weevil control) 	<ul style="list-style-type: none"> • Adjusting experiments where poor planning was revealed in setting up the monitoring (agroforestry)
<i>Revising strategy</i>	<ul style="list-style-type: none"> • Erosion control strategy shifted to nutrient management strategy • Improving way in which to work with and what to expect of farmer experimentation groups with which the project team was just starting to work 	<ul style="list-style-type: none"> • Rethinking livestock strategy (via mineral salt production) and maize variety plots • Rethinking of municipal action plan. The STRS realised by tracking a few activities that their assumptions about how municipal change happens were incorrect and that plans require continual adjustment by learning from practice
<i>Improving individual performance</i>	<ul style="list-style-type: none"> • Farmers' capacity built by sharing and assessing innovations (fodder experiments) 	<ul style="list-style-type: none"> • Sharing data between those working on agroforestry, bee keeping, biodigital on technical aspects of the activity
<i>Advocacy</i>	<ul style="list-style-type: none"> • Use of monitoring data with State Secretary of Agriculture to argue for more and better seeds 	<ul style="list-style-type: none"> • None
<i>Upward accountability</i>	<ul style="list-style-type: none"> • Donor reporting facilitated 	<ul style="list-style-type: none"> • Donor reporting improved
<i>Partnership strengthening</i>	<ul style="list-style-type: none"> • Rich discussion at moment of compiling and interpreting information, particularly from the MSC method 	<ul style="list-style-type: none"> • Clarified limits of partnership and provoked more strategic reflection about mutual expectations, which translated into a clearer new triennial plan for CTA-ZM

need for monitoring to be shaped by clarity about learning purposes, rather than a singular objective hierarchy (see design principle 3, Chapter 8).

A significant caveat in data usage was that the STRS, although expressing interest in the data, did not use it for their own purposes between 1996 and 1999. For example, in Paraíba, while pleased to see that the seed banks had made a big difference in farmers' access to seed, the STRS did not use this information in, for example, a leaflet for union members or negotiations with

local banks to fund more seed banks (Guijt 2000:7). This caveat is, as I argue below, related to how participation was perceived by the partners in the ‘messy partnerships’.

6.4.2 Participation and Messy Partnerships

Messy partnerships require, as we came to understand, finding an interpretation of ‘participation’ that fosters concerted action yet respects the uniqueness of partners and their own cultures and rhythms of reflection. The dynamics within each stakeholder group and the strength of commitment to concerted action influenced the extent to which a shared appreciation and pursuit of monitoring emerged.

Finding the balance between giving space for differences and seeking synergy from joint activities saw us initially assuming that all stakeholders were equally committed to the partnership above individual mandates and priorities. We incorrectly assumed that there was shared and equal clarity about the joint development vision. We also assumed that information needs among partners would be compatible through an indicator-based methodology, despite having identified much diversity in expectations of the monitoring work (see TABLE 6-1). We had assumed ongoing and strong commitment to sustaining the activities being monitored as well as the monitoring itself. We overvalued consensus as the basis for concerted action and the monitoring work.

We concluded that the generic call for ‘stakeholder participation’ that differentiates PM&E from M&E (see 5.1) is an inadequate distinction to help in operational terms. Instead, much greater clarity is needed about how participation in monitoring is to occur. Questions that must be addressed include: who is responsible for what aspects and why, with what support or not from others, based on what assumptions about overall role in local development? Even when addressed, and we certainly sought clarity about these issues, power relationships influence how answers are shaped.

Most notable in our case was that despite their presence and active involvement at all monitoring design and implementation events, the STRS did not have sufficient space to dictate the terms of the participatory monitoring process. This had several reasons.

First, the STRS are civil society organisations that rely largely on voluntary input. In both sites, the STR representatives have many demands placed on their time and monitoring had become just another time consumer. The issue of excessive commitments for the STR surfaced at each plenary workshop. We never adequately addressed the time constraints faced, which was closely related to how different partners perceived the partnership.

A second factor that made it difficult for the STRS experienced in engaging fully with the monitoring process is related to our particular 'messy partnership'. The STRS had no formal contractual obligation (with financial remuneration that could have covered some costs and salaries) with the two NGOs in relation to the joint monitoring. Their allegiance was, in the first place, to the services they provided for their members prior to the monitoring work. Taking care of documents and resolving problems of individual members remained their prime mandate. The sustainable agriculture work was novel to them, particularly in Paraíba, and, therefore, of secondary importance. The staff of both NGOs assumed that the STRS were central actors in the local development work, whereas the STRS leaned heavily on the NGOs for guidance and motivation.

We concluded that it is critical to construct participatory monitoring as a mix of shared and stakeholder-specific data, reflection and planning processes. To develop a more balanced mix than we had achieved requires understanding organisation-specific reflection learning processes and strengthening these – and only then considering where overlap exists and concerted monitoring action is potentially beneficial.

For monitoring to be equally useful to all those involved in the partnerships, it needed to be embedded in existing and organisation-specific discussion and decision-making processes. Our last activity in 1999 in both sites was to map out these processes of the STRS of Remígio, Solânea and Araponga in terms of:

- organisational spaces/meetings and their annual frequency;
- membership of these spaces;
- content of issues discussed during meetings;
- what sources of information they use
- where information from these meetings is registered.

The insights this gave us about the organisational rhythms and spaces would have helped at the onset of our work. However, within the funding timeframe of our action research process, it was too late to be of use. The idea of working with organisational learning spaces and rhythms, inspired by the Community Development Resource Association in South Africa, was important in subsequent work with CTA-ZM (see Chapter 8, section 8.1). It provoked my curiosity in the organisational learning literature (see Chapter 7) and forms the basis of design principles 2 and 4, Chapter 8.

6.4.3 Valuing Data and Dialogue

If we need to appreciate ‘messy partnerships’ more as dictated by the individuality of the actors with a certain (but variable) degree of overlapping interest in monitoring, then dialogue between partners is critically important for data to be useful. Data alone will not necessarily indicate the direction that improvements need to take – it will require debate to reach conclusions on which the different actors can act. As farmers said in Araponga (CTA-ZM 1999):

‘The monitoring helped a lot in seeing that soils are improving but are still poor under some crops, in identifying the high initial cost of [agroforestry] experiences and for some of maintenance, in showing the efficiency of soil cover ... but what do we now do to capitalise on the gains and realise the full potential of the [agroforestry] proposal? Do we now know how to manage soil nutrients better? Do we invest more energy in promising plants and cultivate them in a more organised manner within our plots?’

Follow-up discussions are needed to translate findings into actionable steps. Indicators allowed us to see ‘what’ was happening, but did not provide insights about ‘why’ this was the case nor about ‘so what’ could be done next. To enable that shift, participatory monitoring requires shifting from a view of monitoring as a data system (see Chapter 4) to seeing monitoring as a communication process. A balance is needed between investing in data (indicators, methods, collection) and dialogue (analysis, interpretation, planning). Where partners did not participate equally, the quality of analysis was hindered and reduced the learning impact in terms of clearer understanding about progress or agreements about the municipal-level work. This lesson forms the basis for design principle 5, Chapter 8.

Dialogue about the monitoring process itself is also important. As discussed in 6.1, several indicators had a short shelf-life, methods proved not feasible or insufficiently accurate, activities became defunct while new ones emerged and required shifting the focus of monitoring, partners changed in composition and willingness, and new partners joined the process. The continual revision of the monitoring process that we experienced was only possible by regular and critical discussion about how the different partners were perceiving the process and the data that was emerging. Working in a ‘messy partnership’ adds more dynamics to a development intervention than one that is totally driven and controlled by one entity (Guijt 2000:10). Hence related monitoring processes must be approached as evolving – this forms the basis of design principle 8, Chapter 8.

6.4.4 Differentiated Learning Events, Mechanisms and Needs

We unintentionally retained presuppositions 5, 7 and 8 (Chapter 4) in our version of PM&E. We pre-supposed that monitoring had to be developed as a single system around indicators and an objective hierarchy. Our experiences showed their limited validity for the type of institutional transformations being pursued through the 'messy partnerships' in Minas Gerais and Paraíba. We noted a need to differentiate between technical and organisational monitoring of the development activities, and monitoring the social processes underlying the partnership (see 7.2.1).

In Paraíba, our final analysis focused on differentiating participatory monitoring in terms of the uniqueness of each development activity as determined by its organisational mechanisms and dynamics, clarity, planning and evaluation cycle, and participants. We identified three distinct types of activities, each requiring its own monitoring approach: technical innovation, innovation dissemination and organisational themes.

1. Technical innovation requires monitoring by farmer experimenters within the context of their own group processes. Indicators can be used in diverse ways: sometimes some indicators being monitored only by a few group members, sometimes no indicators but an end-of-year evaluation based on observations, sometimes a mix.
2. Dissemination of technical innovations and activities that involve collective management of natural resources can be monitored using indicators. However, only those involved in the activity should be included. For example, monitoring dissemination activities might only be undertaken by *animadores* and NGO staff, as this information is not necessarily of interest to farmers.
3. Organisational themes require regular reflections, for example quarterly using the MSC method but no pre-determined indicators. These themes include, for example: strengthening farmers organisations; developing strategic alliances for sustainable agriculture; developing farmer participatory methodologies; contribute towards changing municipal policies towards more sustainable agriculture. The activities do not necessarily follow linear sequences of activities and can emerge from a mix of planned and opportunistic initiatives⁵⁰.

We further refined monitoring guidelines for the first type of activity after distinguishing between different types of innovations. When an innovation is a complete novelty for the farmers, they are generally far less able to identify indicators as they do not know the nature of the crop or practice that they are testing. Furthermore, if it is complex – having many variables and,

⁵⁰ These themes relate to 'emergent' and 'transformative' change processes discussed in Chapter 1 (Reeler 2007)

therefore, several unknowns – it is even more difficult to isolate key indicators. The *animadores* and project team agreed that it would not make sense to ask farmers to monitor specific indicators but simply to observe what was happening. Projeto Paraíba would track some basic indicators and would add these to a general end-of-year assessment by farmers about the innovation.

If initial results from innovation testing were promising, then more structured monitoring by farmers could be considered. The farmers involved in the technology testing would have shared various experiences and perhaps decided on which of the different versions of the innovation appeared best. With more clarity about the potential of the innovation, they could track specific indicators. However, farmers also vary in their individual propensity to experimentation in general, and to registering/writing, in specific. Hence this diversity must also be accommodated.

We developed short guidelines for each of these three types of change, specifying chronologically what should ideally occur annually in terms of formal and informal monitoring that facilitates end-of-year evaluation and learning. Many of the activities of Projeto Paraíba at the time were both experimental and being disseminated, hence monitoring in practice required combining more and less indicator-focused approaches, and more and less formal methods for registering and disseminating findings.

Thus the notion of approaching all monitoring through one type of data process (i.e. indicator-based) and one version of partnership was acknowledged as a crude and inappropriate way to view information needs. In institutional transformation through messy partnerships, each activity is characterised by a different social organisation, different linkage to the group(s) driving the monitoring work, different maturity, different degrees of actor engagement, different ways in which indicators are able or not to represent the issues at hand, and different degrees of organisational embeddedness. This diversity is the basis of design principles 3 and 6, Chapter 8.

6.4.5 (Un)Sustainability of the Process

Would what we had tested over the three year period constitute a cost-effective and sustainable process for stimulating social learning within messy partnerships?

Setting up the monitoring process proved more costly than initially expected in terms of people's time, particularly as the joint objectives were not clear at the onset. Clarifying objectives is arguably part of a planning, rather than a monitoring phase, and hence could be left out of the monito-

ring budget line (Rodenburg 1995). However, some clarification of objectives will inevitably be needed as partners come and go and understanding evolves. Other shortcuts in our process are conceivable, such as the unnecessary detail of the objective trees and not pursuing indicators with novelty innovations (see section above). Nevertheless, continual learning, negotiation and adaptation appear essential to the monitoring work for a range of reasons outlined in this chapter.

Sustainable our work was not, as most of the monitoring work stopped soon after the action research process stopped. My role as facilitator, the funding available to pay for NGO staff time and (minimum) inputs fell away. But other issues also affected the sustainability. Most farmer groups dissolved with the STR reverting to its existing crisis management style, as the then president confirmed in an interview (I. Guijt, field notes). The nature of the partnerships was also changing, for example, with CTA-ZM shifting to a more strategic contribution in Araponga and distancing itself from hands-on involvement in all field activities except the agroforestry work. In Projeto Paraíba, the differentiated approach to monitoring continued to inform monitoring practice. For example, the need for community seed banks to track seed quality and return rates, project team to assess dissemination of innovations, and farmer groups to track their experiments grew and with it the use of basic monitoring issues that we tackled, even if the specificities changed as activities ceased and were born.

In neither region, did the STRS take on board the idea of participatory monitoring during the period of the research. This was due to several factors as I have mentioned at various points in this chapter. We had not embedded the process within the existing M&E and learning process of the STRS. In Paraíba, the (influential) STR Board members did not participate due to their lack of interest in the overall work. And the STR *animadores* and farmer monitors were caught between the double demands of farming and union activism, and the double demands of core STR business and the added agricultural work.

In both regions, for different reasons, the STRS disengaged. CTA-ZM in the Minas Gerais work took very much a back seat in the monitoring – assuming that it was for the benefit of the STRS and that they had to be prime protagonists in municipal development. This led to a certain degree of disillusionment on the part of the STR and the *animadores* and, eventually, disengagement. In Paraíba, the reverse was the case. The NGO staff members were the main driver behind the monitoring work – data was stored at their office and they initiated data analysis meetings. This is not for lack of trying to stimu-

late more STR-based ownership. However, the project was dealing at the time with two STRS who were trying to decide if they wished to expand from a traditional farmer rights-focused orientation to one that was more agriculturally oriented (Guijt 1996a). Until the STRS made that decision – and stuck to it despite changes of leadership due to elections, they would only remain marginally interested in monitoring other activities in the ‘messy partnership’ related to agricultural development.

Unless information is useful for the STRS and embedded in their structures and processes, monitoring in any other form but the traditional crisis management mode focused on issues related to their main mandate is unlikely to continue. This observation is the basis of design principles 1, 2, and 4 discussed in Chapter 8.

6.5 Conclusions

6.5.1 Retaining Presuppositions and Surfacing New Ones

With hindsight, several of the presuppositions on which programme-logic based M&E is based were inadvertently retained in our approach to participatory monitoring. TABLE 6-19 refers to each of the 13 presuppositions, whether or not they were retained and implications for our work. Below I summarise some of the more significant issues that emerged.

Only one presupposition was retained fully (Presuppositions 1) but with a slight twist. Although we did focus on monitoring and left evaluation processes to one side, as the NGOs felt these were already adequately dealt with, we built in analysis through the notion of evaluative monitoring process.

Several presuppositions were partially or temporarily retained (Presuppositions 2, 6, 7, and 11). Where they were partially retained, in some cases we thought we had addressed them adequately in our alternative approach only to be proven wrong. For example, in relation to the power relations (Presupposition 11), we sought to combine stakeholder specific discussions with mixed group discussions to allow space for issues to surface in the stakeholder groups. However, we had not counted sufficiently on the difficulty that farmers and STRS had to express apprehensions and frustrations. These emerged during the process. Another example is that, despite trying to work with supposedly participatory methods, we should have spent more time understanding and valuing farmers’ methods (cf. Petersen *et al.* 2000:18), even if the initial methods were selected during the plenary workshops with the active involvement of farmers. The maps, intended for use in several activities, proved too complicated, when simple pen and notebooks worked much better with farmers.

TABLE 6-19 Presence of M&E presuppositions (abbreviated formulation) in participatory monitoring in Brazil (Degree of Retaining and Adaptations/Limitations)

- 1. It is necessary and/or useful to define 'monitoring' as distinct from 'evaluation'**
Retained but with a twist. – we focused on monitoring as distinct from evaluation. But we built in analysis, i.e. an evaluative process, as part of monitoring. Our monitoring calendar was dovetailed so that data should, in theory, be able to be used during annual evaluations.
- 2. Those involved will know how to make monitoring serve management**
Partially retained – we assumed that simply clarifying who would use what information in which manner would ensure that this would happen. In our context, a messy partnership, responsibility allocation becomes more difficult and needs more focused attention that we gave it.
- 3. Strategic analysis and sense-making do not need to be explicitly designed for in monitoring**
Not retained – we planned for analysis but in practice this proved difficult to structure and allocate time for this due to problematic presuppositions we had about 'participation' in monitoring.
- 4. Information is critical, rather than processes to make sense of and use the information**
See under 3 above
- 5. Stakeholders can anticipate their information needs irrespective of the diversity or development of actors or issues at stake**
Not retained – we recognised the need for stakeholders to learn how to undertake monitoring and accommodated changing information needs and methods.
- 6. Processes to transform information into learning need not be described in M&E methodology**
Partially retained – we understood the importance of analysis but did not detail how this should happen. We underestimated the importance for farmers and STRs to be supported in analysis by the NGOs and did not structure analysis moments sufficiently within the existing evaluation and planning moments of the individual partners.
- 7. Indicators are an appropriate form in which to express and convey all key information**
Retained temporarily – we started with this assumption but included the MSC method halfway through to incorporate change processes not suited for summarising through indicators.
- 8. A balanced picture of information is produced from the chosen set of indicators**
Not retained – we regularly adapted indicators and methods if the emerging information was not deemed useful or balance. We also took on an alternative approach, the MSC method, to fill the perceived information gap, with only partial success.

TABLE 6-19 *Continued*

9. Stakeholders have sufficient time, expertise, clarity and willingness to follow the basic steps.

Not retained – We supported building capacity of designated monitors by involving them hands on in designing the detailed monitoring process. But simply attending and helping to design the monitoring process was insufficient for them to be able to implement their tasks.

10. The steps are valid irrespective of the context.

Not retained – we used a generic set of steps in both locations but allowed for local rhythms, capacities and issues to dictate the pace and direction of implementation. But we failed to accommodate organisational differences sufficiently between the partners.

11. Power relations between those involved in monitoring are not noteworthy or do not influence the quality of the process or its outcome sufficiently to merit special methodological attention.

Partially retained – we thought we had created sufficiently open space for partners to define responsibilities, regularly revising these as soon as problems arise. However, seeking consensus as the basis for agreed actions proved problematic as it swept power differences under the carpet.

12. People will know how to deal with and effectively use informal monitoring.

Partially retained – we did not take stock of existing informal monitoring processes and build on these. Instead we came in with an indicator-focused approach and only later recognised the importance of the informal exchanges through the meetings and field visits.

13. It is not necessary for monitoring processes to learn from, and adapt to, the environment

Not retained – built in ongoing reviews and revised information needs, processes and methods.

Another example relates to Presupposition 7, which is inherent in many documented experiences (Estrella *et al.* 2000; Probst 2002) that maintain a focus on indicators as the pillar of data collection, as is generally advocated in PM&E methodology. Some challenges to this presupposition have been emerging more recently. For example, Paudel and Ojha noticed that their focus on indicators for joint forest management in Nepal was actually hindering learning that led to improved resource management: ‘More significant perhaps was our observation from these initial meetings and workshops that an undue focus on indicators to assess planned activities took attention away from other more important prerequisites that would enable active forest management by the FUGs [forest user groups]’(2007:51). Methodologically, stories and narratives are increasingly being recognised as alternatives to indicators (Earl *et al.* 2001; Davies and Dart 2005).

Where we deviated most from mainstream M&E as discussed in Chapter 4 was in relation to Presuppositions 3, 4, 5, 8, 9, 10, and 13. Although we recognised the need to ease ourselves into monitoring and adapt en route, slowly incorporating new aspects of the development activities being undertaken by the partners, the continual evolution of the monitoring processes was a surprise. Stability appeared elusive. As long as partnerships change in terms of the actors and their priorities, in terms of the individual people involved, there will always be shifts in focus and related information needs, and the need for newcomers to learn how to learn.

What surprised myself (and some of the NGO staff) during the analysis of the participatory monitoring work in Brazil, that a new set of presuppositions emerged related to ‘participation’ in monitoring. For example, that consensus was a solid basis for concerted action, that involving stakeholders in designing the process would ensure their interest in and commitment to it, and that a partnership implies a considerable degree of shared vision and commitment on the part of the partner organisations. We failed to value the importance of sorting out logistics – simply getting data collection to happen, in this context where voluntary efforts were all important yet the civil society organisations were operating on a shoestring. We also failed to recognise the importance of understanding and building on the existing governance structures and processes in the individual partners – and from that identifying where shared monitoring made sense.

6.5.2 Remaining PM&E Dilemmas and Gaps

Evaluation of our monitoring process at the two sites led to a more detailed perspective on PM&E than the generic and simplistic set of steps commonly found in guidelines (see 5.1.2). In particular, the experiences illustrate the tensions between our implicit and explicit expectations of participatory monitoring and the dynamic realities of the partners within their political contexts and embedded in their own learning pathways. They show the importance of viewing monitoring as a context-specific information and communication system that needs to serve diverse learning purposes.

These issues, when related to the peculiarities of a messy partnership engaged in concerted action, require considerably more than the simple suggestions for ‘using participatory methods’ and ‘more stakeholder involvement’ that mark the PM&E discourse. In particular, more thought is needed about existing organisational conditions (Guijt 2000:5) and the unique identities of the organisations involved in the ‘messy partnership. As the final research report concluded (Guijt 2000:9):

'... participatory (inter-organisational) monitoring is greatly more diversified and dynamic than we had assumed. It is about much more than 'grassroots indicators' as is commonly assumed. For us, much more of the value seems to lie in the realm of 'building social capital' and re-strategising. By coming together to identify what people want to achieve collectively, it appears to force a rethinking of objectives (and the extent to which these are truly shared), of the merit of strategies for working with a participatory approach, for the choice of activities, for the implicit assumptions in any partnership about who is responsible for what, etc.'

Unresolved challenges with which we ended the work in 1999 include:

- What would a learning-inspired, rather than M&E -driven, system look like for messy partnerships such as CTA-ZM and Projeto Paraíba?
- What is needed to embed ongoing learning in messy partnerships?
- How can a range of learning purposes be fulfilled through monitoring, feeding diverse practical and strategic needs?
- How do we balance respect for the uniqueness of partners with the desire for concerted action and learning?
- How can the dynamics of the partners be accommodated while also ensuring some stability of information needs without which monitoring becomes meaningless?

Given that the existing guidelines on participatory monitoring on which our process was partly based are clearly insufficient to deal with the complex issues involved, these questions call for further reflection. In the next two chapters, I attempt to do this at two levels. First, I revisited CTA-ZM in Brazil on various occasions from 2000 to 2007 to build on this initial work with participatory monitoring and develop what they called an 'institutional learning' system. These opportunities enabled ongoing reflections with them of these lessons from the initial participatory monitoring experiences. The results of key changes made are reported in Chapter 8. Second, in Chapter 7, I turn to discourses on cognition and organisational learning in order to theoretically contextualise the experiential learning described in this chapter.

INSIGHTS FROM STUDIES ON COGNITION AND ORGANISATIONAL LEARNING

7

Monitoring constitutes a deliberate and collective attempt to shape our understanding by seeking and processing information. Hence the process of knowing, or cognition, is central to this thesis. Yet, cognitive studies appear to have had little, if any, (direct) influence on the discourse and practice of M&E in general, and monitoring in specific (see Chapters 3 and 4). Organisational learning is a second area that has potential to inform the discourse and practice of monitoring. This field examines how a group of people communicate and deal with information as an essential component of organisational survival. The influence of this body of work on the M&E discourse and practice has been, although greater (see Chapter 1), largely restricted to a recognition that development organisations need to become learning organisations. Shifts in organisational practice based on an in-depth understanding of innovation from this field are more difficult to find in the development sector.

This chapter seeks to develop an alternative understanding of monitoring for learning that draws on a selection of concepts from both fields. I first recap the challenge that messy partnerships face when monitoring their institutional transformation processes. Then I briefly discuss the relevance of cognitive studies and organisational learning literature. The core of this chapter discusses four ideas in which I integrate several recent contributions from cognitive studies and organisational learning. I end with comments on the future of monitoring.

7.1 Recapping the Challenge and Introducing New Fields

7.1.1 Institutional Transformation

One challenge for mainstream monitoring relates to institutional transformation. In Chapter 1, I define such transformations in terms of deliberate interventions that seek systemic reform of institutions to favour the poor and the environment, which requires facilitating changes both in vulnerable constituencies and among those who decide on resource allocation. Such transformation can occur either by creating the (dis)incentives for individuals and groups to behave in specific ways or by undertaking activities that aim to shift the norm and that are based on divergent goals and intentions from the institutional norm.

Transformation can occur in behavioural, cognitive, associative, regulative and constitutive institutions (Parto 2005). In Minas Gerais and Paraíba, *behavioural* changes are pursued, for example, through farmer-farmer extension on agroecological alternatives. *Cognitive* transformations are sought by participatory research on, for example, organic coffee production and silage alternatives. *Associative* changes include the development of farmer associations and the community school based on agroecology and social change principles in Zona da Mata. *Regulative and constitutive* changes include the emergence of municipal rural development plans and the formalised Municipal Councils for Rural Development. Changes occur both intentionally and unintentionally. For example, socio-economic monitoring (see 8.2) while initially set up as a research endeavour of CTA-ZM has led to behavioural and cognitive changes among participating farmers.

Such transformations occur through diverse change processes, which Reeler (2007) refers to as emergent, transformative and projectable change. This typology recognises that not all social change can be planned or based on clear cause-effect relationships but also emerges as a result of daily interactions and crises. FIGURE 7-1 offers a visual image that characterises the challenge. It depicts a flow diagram of what would be needed for sugar cane farmers in western Kenya to overcome poverty. This figure was sent to funding agencies, who were asked to convert it into the logical framework format that grantees are required to develop. The funding agencies were unable to do this, yet continue to ask for adherence to their existing protocols for the work on this type of transformations that they funded (Ashish Shah, pers. comm.).

Due to the interaction of diverse change processes, institutional transformation has features that have implications for monitoring. Non-linearity and unpredictability of change means that objectives change en route, as contexts change, alliances shift, and understanding is enhanced. The intertwined efforts on multiple fronts that are needed to achieve such changes cannot be fragmented into actor-specific achievements. Tangible changes are only part of the process – to explain the transformation requires capturing incremental steps rather than the visible result at the end. The long timeframe for institutional change to occur makes it difficult to anticipate what changes can be achieved within the common three to six year timeframe that funding agencies use. These features mean that adaptive behaviour, responding to signals of progress or stagnation, by the actors involved in the change process is critical.

Monitoring of concerted action needs to track the institutions that have been targeted as requiring change, as well as the actions being undertaken to induce that change. However, monitoring also needs to be directed inward to see how the actors themselves are changing, in terms of their goals, understanding, behaviour, rules and organisation (see FIGURE 1-2, Chapter 1). Their learning and shifts are part of the institutional transformation process.

7.1.2 Messy Partnerships

Institutional transformation, such as required for the type of challenge depicted in FIGURE 7-1, requires multiple efforts. 'Messy partnerships' is one form of coordination through which such efforts converge. As I describe in Chapter 1, this type of social network has distinct features with implications for collective learning and monitoring in particular. The work discussed in Chapter 6 is an example of such 'messy partnership'.

The members of the messy partnerships in Brazil are distinct organisations, yet bound together in a common vision for their region, based on shared values of agroecology and community as the basis of development. Poor farmers, their needs, relationships and capacities are the prime concern of the partnerships. The organisations have unique communication styles, decision-making processes and capacities that affect their (potential) contribution to collective monitoring. They have varying degrees of influence on decisions about the concerted action, which varies over time. And they have different legal responsibilities vis-à-vis those who fund activities in the concerted action.

The members of the 'messy partnerships' hold different degrees of allegiance to the partnerships. Their interdependency is not time bound and has no central driver. In the words of Kurtz and Snowden (2006, citing Juarrero 2002), such dynamical systems look like 'bramble bushes in a thicket': 'And it is extremely difficult, as any outdoorsman will tell you, to determine precisely where a particular bramble bush ends and the rest of the thicket begins' (page 4). Clusters can be identified in complex networks, and messy partnerships do 'projectise' activities and form temporary clusters of concerted action. However, in terms of the totality of activities of the partnership, such partnerships cannot be assumed to have some stable identity that can be held to account externally for the sum of its actions.

These features make mainstream monitoring that assumes a hierarchical, single authority context of contractually binding activities that is stable for a certain time period less than ideal. New actors (organisations and individuals) will need to be integrated, in terms of visions for and understanding

of development, roles in monitoring, needs and capacities to undertake monitoring. Also important is multi-level and multi-noded monitoring: per farmer group, per organisation, per joint action. If institutional transformation is recognised as happening through a convergence of planned and ad-hoc efforts from a range of stakeholders who come and go in ‘messy partnerships’, then these and other consequences must be considered carefully.

7.1.3 Introducing New Fields: Cognitive Studies and Organisational Learning

Cognitive science is a loose coalition of sciences of the mind whose common goal it is to understand how thought itself is materially possible (Clark 1997:xi). Cognition, the focus of its study, is considered central to the discipline of psychology with wide-ranging discourses and applications in philosophy, linguistics, artificial intelligence, education, child development, economics, and cognitive neuroscience. But its relevance is also increasingly recognised in other disciplines. As acceptance grows about the central role of human action and interaction for rural resource management, so does an appreciation of the importance of understanding the human actor, the knower and his/her cognitive processes. A growing number of references make use of the concept of human cognition in the context of natural and rural resource management. Jane Lubchenco (1998) reframes humans as a ‘major force of nature’, an observation that has made others speak of our era as the ‘anthropocene’. Anthropogenic climate change and degradation of ecological services require concerted human action across multiple scales, including the global scale. Such concerted human action cannot be expected to emerge from the individual pursuit of selfish interests but seems to ask for collective cognition and decision-making.

Cognitive science has many schools of thought. I have selected several ideas from the Santiago School of Cognition (Maturana and Varela 1987) and from the tradition that refers to ‘embodied, embedded’ cognition (Clark 2001b). The concepts that I believe can help rethink monitoring are: collective cognition, correspondence and coherence, distributed cognition, and cognitive dissonance. Each term is defined in 7.2 below.

As in the case of cognitive studies, *organisational learning* is a vast body of literature with diverse perspectives: management science, sociology and organisation theory, strategic perspectives, production management, cultural perspectives, and ‘the learning organisation’ (Easterby-Smith 1997). The definition I use is:

'Organisational learning occurs when members of the organisation act as learning agents for the organisation, responding to changes in the internal and external environments of the organisation by detecting and correcting errors in organisation theory-in-use, and embedding the results of their enquiry in private images and shared maps of organisation.' (Argyris and Schön 1978:29).

Key authors on whom I draw within this body of theory are authors who apply learning theories to organisational contexts, highlighting in particular the types of informal feedback mechanisms and learning-for-change behaviours in which I am interested. I have chosen to focus on three ideas: multi-ontological sense making; organisational mindfulness; and the social life of information.

The fields of cognitive studies and organisational learning overlap considerably. For example, bounded rationality is important for cognitive scientists (cf. Gigerenzer and Todd 1999) and organisational theorists alike (March 1999; Snowden and Boone 2007) to explain alternative decision-making processes used by individuals and groups, respectively. Similarly, the phenomenon of cognitive dissonance is discussed in both fields (cf. Weick and Sutcliffe 2001; Lorini and Castelfranchi in press), though different terms are used in each discourse, such as 'surprise' and 'valuing crises'. Distributed cognition (Hutchins 1995) has parallels with 'the social life of information' (Seely Brown and Duguid 2000). Such connections are not surprising as both fields essentially seek to understand how knowing occurs and contributes to survival, with one focusing on individual 'knowing' and the other on group 'knowing'.

This section of the thesis does not seek to provide a comprehensive discussion of either body of literature. Instead, I have selected and combined a choice of concepts that throw interesting light on the issues raised thus far in the thesis. In so doing, I explore a new understanding of monitoring, which helps explain some of the discrepancies between what monitoring intends (Chapter 4) and its practice in the context of messy partnerships and institutional transformation.

7.2 Ideas for Innovation in Monitoring

The concepts I have selected from these two fields come together around four ideas that I believe can help rethink monitoring (see 7.3). These ideas are:

1. Messy partnerships as a collective cognitive agent and monitoring as instrumental in its self-management;
2. Sense-making as a critical concern if monitoring is to contribute to learning;
3. Distributed cognition as both the reality of and an opportunity for monitoring; and
4. Cognitive dissonance as a source of learning.

7.2.1 Messy Partnerships as a Collective Cognitive Agent

Learning can be understood as ‘cognition’. Rölíng (2002) builds on work by Maturana and Varela (1987), Bawden (2000) and Kolb(1984) to suggest a definition of cognition that goes much beyond the conventional view of cognition as thinking. FIGURE 7-2 is based on this perspective, with cognition constituting perception, emotion, action and theory. Thus cognition requires perceiving information in the environment (perception), reasoning about those perceptions using existing knowledge (theory), acting to make a reasoned change to the external or internal environment (action), and having an intention based on what feels good or bad (goals, emotions) (Maturana and Varela 1987; Shimoda undated).

Essential in this view of cognition inspired by the Santiago School of Cognition is that cognition is contextual. It arises as a continual interaction of the organism and its ‘domain of existence’. Thus cognition ‘is necessarily something that occurs ‘in the moment’. Learning, that is, occurs in the continuous present and is necessarily adaptive’ (Rölíng and Jiggins 2001:151). In summary, ‘cognition is effective action’ in the domain of existence (Maturana and Varela 1987:244). By effective action, I refer to effectiveness as related to the agreed goals and objectives of the partners.

Rölíng and Jiggins (2001:157) extend the notion of cognition to collectives: ‘We speak of a collective cognitive agent when people:

1. *perceive* their domain of existence in a similar way, perhaps because they share a monitoring system;
2. have similar *emotioning* in that they have negotiated shared goals or subscribe to the same goals because they are part of a community;
3. engage in concerted *action*, based on
4. a shared *knowledge* about what is expected to be effective action in the domain of existence; and
5. construct the *domain of existence* according to a shared design. In the sense defined here, a collective cognitive agent acts as if it were one cognitive agent⁵¹. (emphasis added)

Hence a messy partnership can be redefined as a collective cognitive agent if it meets these criteria. Note that it is a reflexive process. A messy partnership engages in collective cognition but collective cognition is also the result of interactions. Hence, a cognitive system is a ‘co-evolving *duality* of the perceiving organism and its environment’ (ibid: original emphasis). Also, complete commonality of cognition is not the case. Sufficient and not total convergence

⁵¹ The Santa Fe Institute defines collective cognition in terms of the interaction among: the individual abilities of the agents, their shared knowledge, and their communication structure.

is needed around perceptions – sharing observations, emotioning – sharing higher order goals, knowledge – co-constructing understanding to come to concerted action, which in practice means agreeing who will do what.

These elements occur at individual, organisational and partnership levels (see FIGURE 7-2). For each level, different mechanisms are used. TABLE 7-1 illustrates the mechanisms used by CTA-ZM, as an organisation, and by the messy partnership in which CTA-ZM is one actor, that relate to the four elements of cognition.

What does this mean for monitoring? Monitoring enables the ‘collective agent’, i.e. the messy partnership, to know if it is managing to purposefully develop and maintain its cognition. In their definition, Röling and Jiggins (2001) relate monitoring to the ‘perception’ element – monitoring as the window on the domain of existence. However, the messy partnership must be managed as a collective cognitive agent, hence monitoring occurs in relation to all elements⁵² (see FIGURE 7-2). Each partner individually and as a partnership is monitoring if and how well the actions are taking place and how the context is changing as a result, which is the focus of formal and explicit monitoring. Furthermore, there is often also tacit and informal monitoring to see if goals and understandings are still shared. Such monitoring happens in daily interactions and during collective planning. When monitoring is collective, it requires agreement on focus and standards (per level).

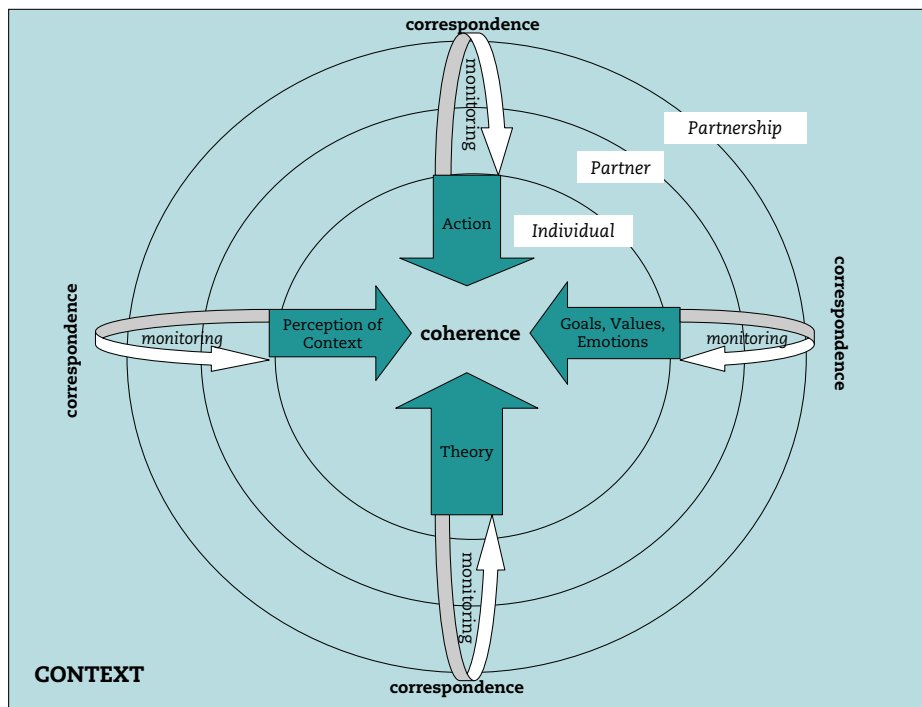


FIGURE 7-2 The four elements of cognition (based on Röling 2002)

⁵² Also see distributed cognition, 7.2.2, which is critical in this type of setting

TABLE 7-1 Mechanisms for collective cognitive acts in Minas Gerais

Cognitive Acts CTA-ZM	Messy Partnership in Minas Gerais	Monitoring Focus
<i>perceive their domain</i> weekly staff meetings, external evaluation and monitoring, plus same as for partnership	exchanges through daily interactions in joint acti- vities, participatory re- search, socio-economic monitoring, in daily acti- vities (e.g., farmers as they work on their fields)	Impact – how well is our environment doing and are we doing as a partnership?
<i>sharing of goals</i> participatory process for triennial plans and for each programme (with partners and farmers), annual reviews	same as for CTA-ZM, as CTA-ZM implements commonly articulated goals	Convergence – do we all (still) subscribe to the same visions and goals?
<i>engage in concerted action</i> weekly staff meetings, discussion with partners during interactions, monitoring of activities, joint reviews at the end of activities	share tasks in agreed activities, including farmer experimentation, advocacy work, capacity building	Activities – how well are we undertaking planned activities?
<i>develop shared knowledge</i> systematization, writing articles together, chats over coffee, interacting with other NGOs	systematization of experi- ences, farmer participato- ry research, participation in events elsewhere in Brazil, developing cours- es for farmer target group	Theory – does our stra- tegy and vision on deve- lopment still make sense, given what we are per- ceiving?

The contrasting and complementary notions of ‘coherence’ and ‘correspondence’ (Gigerenzer and Todd 1999) are significant for monitoring as they are the basis for survival of the ‘agent’⁵³(see Box 7-1). *Coherence* focuses on ‘internal logical coherence of judgements rather than with how well they help us to make useful decisions in the real world’ (ibid:21). It is needed to ensure the internal logic of the four elements and maintain their convergence. For example, where perceptions no longer tally with goals or theories,

⁵³ The limited effectiveness of mainstream monitoring (see Chapter 4) could be viewed as an excessive focus on coherence (internal logic) to the detriment of correspondence (appropriate for the context)

Box 7-1 Two examples of ensuring coherence and correspondence in CTA-ZM

Coherence: The Board is composed of a mix from different partners, including farmers and university staff. Board members attend the annual retreats where personal values are shared and renewed, thus fostering coherence of partnership.

Correspondence. This year, 2007, saw a persistent funding crisis in CTA-ZM reach crisis point, with self-imposed salary cuts of 25% to avoid staff leaving. It has triggered a major questioning of the focus of the work – why is it not more fundable or more important, easier to have an impact with decreasing funds? Correspondence can be said to be a problem. CTA-ZM and its closest partners organised a large gathering in August to connect differently with other social movements and help challenge current strategies. Staff members have also visited each municipality where work is taking place to revisit the agenda and seek new ideas. This input has shaped its new triennial plan.

discomfort is likely to be felt and adjustments are needed (see ‘Cognitive Dissonance’, 7.2.4). Coherence among the cognitive elements is needed for each partner but also for the partnership as a whole, and in relation to different activities (see FIGURE 7-2). *Correspondence* enables the agent to ensure a fit of the environment with its cognition. If decision-making strategies are not appropriate in relation to the external world, then effectiveness will suffer.

Correspondence and coherence are both essential. Too much emphasis on ensuring coherence and the agent’s adaptation to the context suffers, too much emphasis on correspondence and internal disorganisation takes hold and affects effectiveness. By monitoring for coherence and correspondence, a messy partnership is in essence undertaking quality checks. It enables identifying if the different constituent parts are able to tackle problems effectively, and if not, what needs to happen. In so doing, not only is a community of practice created but also a ‘community of purpose’ (Hamel 2007:69).

7.2.2 Distributed Cognition

Distributed cognition upends a long held notion in cognitive studies that saw cognition as a process internal to the individual mind but now situates human cognition in a complex socio-cultural world and affected by that world. The originator of the term, Hutchins (1995), studied the interactions that occur in the process of ship navigation, particularly the social and information management aspects. He found that successful navigation of a warship was achieved thanks to the interactive nature of cognitive processes distributed across different individuals aboard the ship and their ‘tools’: ‘many kinds of thinking were happening in parallel, some in coordination with others, some inside the

heads of individuals, and some quite clearly both inside and outside the heads of the participants' (ibid:6). He calls this 'distributed cognition', as much knowledge and many cognitive tasks are not housed within individuals but 'is inter-subjectively shared' (ibid:219). The navy team becomes the cognitive system, just as the messy partnerships in Brazil are cognitive systems (see 7.2.1).

Distribution can be viewed in two ways: (1) the distribution of perceptions about the system among different agents and (2) the distribution of different cognitive elements among agents. In Hutchins example, the ship's environment was both monitored in relation to different data by different individuals but these individuals also excelled in or were given different parts of the cognitive puzzle to perform. The second issue implies that knowing how to optimally distribute cognitive tasks is critical for the collective cognitive agent to be effective. Bringing together these different perceptions and, possibly therefore, different representations of reality around the need for concerted action is based on hierarchy ('I decide what is reality and so we act') or communication ('we agree on reality and therefore act'), or a combination. In a messy partnership, shared decision-making is essential which, in turn, implies convergence of understandings of reality.

When cooperative work occurs, Hutchins speaks of 'overlapping knowledge distribution', not mutually exclusive to one or the other. So groups may have quite different cognitive properties than the individuals that form the groups. This helps explain why a team may find it impossible to plan each detail of their coordinated action, as new situations will mean they extend beyond their preset task domains to compensate for gaps and novelties that might occur. Hence distributed, rather than centralised systems, may be better able to adapt to change.

The idea of distributed cognition is echoed in the organisational literature with images such as organisational mindfulness (Weick and Sutcliffe 2001) and 'learning as an ecology'⁵⁴ or the 'social life of information' (Brown and Duguid 2000)⁵⁵. Weick and Sutcliffe's work focuses on the performance of so-called high reliability organisations (HROS) such as aircraft carriers or fire fighting teams. They have developed, the authors argue, 'a collective mindfulness'⁵⁶. Such mindfulness is the product of five processes or ways of acting and leadership, one of which is deference to expertise (rather than hierarchy) as exhibited by fluid decision-making. While the day to day mode

⁵⁴ Hutchins speaks explicitly of his 'cognition in the wild' evoking a metaphor to give a sense of an 'ecology of thinking' (1995:xiv)

⁵⁵ It is also at the basis of Surowiecki's notion of 'the wisdom of crowds' (Surowiecki 2004)

⁵⁶ Snowden (2003) cautions extrapolating this to the private sector as HROs command exceptional alertness due to the high personal stakes should things turn sour

of operation is based in HROS on hierarchies, when the unexpected occurs, they take on a different pattern of deference. HROS allow expertise at the bottom of the pyramid to rise to the top when needed.

Brown and Duguid (2000) looked at the contribution of relationships to learning, showing how information technology (of which monitoring databases are one example) need social interactions to become useful. 'Attending too closely to information overlooks the social context that helps people understand what the information might mean and why it matters.' (ibid:5). They caution about 'the tight focus on information, with the implicit assumption that if we look after information everything else will fall into place, is ultimately a sort of social and moral blindness' (ibid:31). They cite the example of informal breakfast gatherings of photocopy repairers that enabled everyone to be up to date and learn about the machines and customers.

Hutchins concludes that 'learning can be seen as the propagation of organisation through an adaptive system' (1995:373) or 'adaptive reorganisation in a complex system' (ibid:289). He continues: 'the real power of human cognition lies in our ability to flexibly construct functional systems that accomplish our goals by bringing bits of structure into coordination' (ibid:316). Brown and Duguid echo this by saying that in the context of our digital age:

The ends of information, after all, are human ends. The logic of information must ultimately be the logic of humanity. For all information's independence and extent, it is people, in their communities, organizations, and institutions, who ultimately decide what it all means and why it matters. Yet it can be easy for a logic of information to push aside the more practical logic of humanity. (2000:18)

The observations from Hutchins and others have two implications for monitoring processes wishing to make the most of 'distributed cognition'. First, it means that monitoring systems need to cater to the social spaces and interactions needed to enable information sharing and interpretation that lead to collective insights about action. These interactions also need to be designed based on the need for diversity of cognitive perspectives and skills. 'Diversity and independence are important because the best collective decisions are the product of disagreement and contest, not consensus or compromise.' (Surowiecki:xix)

Second, monitoring systems can explicitly consider allocating different tasks (see FIGURE 1-3) to different partners depending on where cognitive strengths lie. In Chapter 6, the STRS with their daily interactions with farmers were responsible for data collection, the NGOs helped with data compilation, everyone helped interpret and decide on collective action.

7.2.3 Sense-making

Considering monitoring in messy partnerships as distributed cognition in action begs the question of how information is interpreted. But where is sense-making within the understanding and practice of mainstream monitoring, or, for that matter participatory monitoring? As I have argued in Chapters 3 and 4, it is assumed to happen without deliberate design of the forums or processes nor informed by an understanding of how sense-making might best happen.

Yet as evident from Chapter 4 and 6, interpreting information to make it usable for action – even if that is ‘do nothing’ – is essential. Otherwise monitoring will only result in piles of data that clog the arteries of organisations or ‘datafication’ (Brown and Duguid 2000). Brown and Duguid argue that focusing on information ‘allows people to slip quickly from questions to answers’ (ibid:19).

In the thesis, I have been referring to ‘sense-making’ as a critical missing concept and practice in monitoring, in terms of the link to sense-making forums, the creation of sense-making processes, and the use of sense-making frameworks. I define sense-making as: ‘a motivated continuous effort to understand connections (which can be among people, places, and events) in order to anticipate their trajectories and act effectively’ (Klein *et al.* 2006:71).

Weick (1995) and Snowden (Kurtz and Snowden 2003; Snowden 2005) are perhaps the most well-known voices on sense-making in organisations. Both authors come to the topic from an interest in responding to complexity and have many commonalities (Browning and Boudès 2005). They find each other in the need to acknowledge failure and learn from it (also see 7.2.4 below) and in valuing action as important for sense-making under conditions of complexity. This brings me to the Cynefin framework, a valuable heuristic that Snowden has developed to understand diverse approaches to sense-making.

In the Cynefin framework (FIGURE 7-3), multi-ontological sense-making is central (Snowden 2005). Snowden argues that ‘different ontologies (defined as the nature of systems based on the relationship between cause and effect) require different approaches to evidence, analysis and action’ (Snowden 2007). Determining in what context one is operating – simple, complicated, complex, chaotic or disorder – enables appropriate choices (see Box 7-2).

As explained in Chapter 1 and 7.1, institutional transformation often follows an unpredictable trajectory, hence is best managed, as both Weick and Snowden might well argue, by an iterative process of probing/acting-sensing-responding. And central to ‘sensing’ is monitoring what is happening in

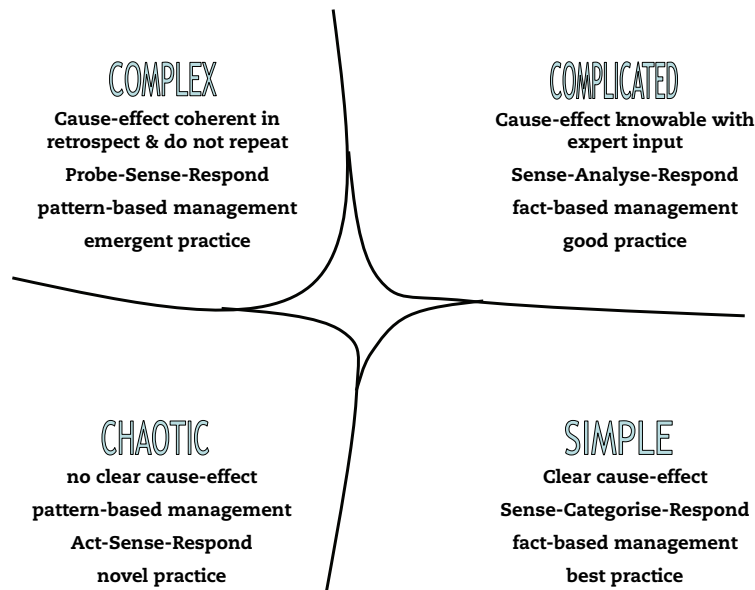


FIGURE 7-3 The Cynefin framework (Snowden and Boone 2007)

terms of emergent patterns rather than precise, pre-defined results. The core business of organisations such as CTA-ZM and Projeto Paraíba is innovation. They are seeking to transform the institutions that hold back small farmers, hence they explicitly develop technical and social innovations to illustrate that alternative modes of development are possible. Innovations implies working with unknowns, hence a significant part of their work can be located in the ‘complex’ domain of the Cynefin framework.

Thinking about monitoring as requiring a process of ‘multi-ontological sense-making’ opens up several avenues. First, it proves a solid reason why the development sector should not expect the universal applicability of programme-based logic, particularly in contexts where innovation is a key feature. In complex and chaotic situations, probing and action are needed prior to understanding what response is best in that context. Hence it helps to

Box 7-2 Knowing when complexity is at play

Abma (2005) works with a similar notion of multi-ontological sense making when it comes to evaluation in the Dutch health sector. She refers to ‘responsive evaluation’ as ‘especially appropriate in health promotion contexts characterized by ambiguity. Ambiguity refers to the absence of or contradictory interpretations about what needs to, can and should be done, when and where’ (ibid:393). Abma identifies three situations where high degrees of ambiguity can be found: non-routine interventions, collaborative interventions; and absence of consensus among stakeholders. The Brazilian partnerships (Chapter 6) continually operate in contexts where all three situations are at play.

TABLE 7-2 Differentiating monitoring responses for degrees of predictability (building on Snowden and Boone 2007 - see FIGURE 7-3)

<i>Situation</i>	<i>Monitoring Responses</i>
<i>Simple</i>	Routine data collection of variables and comparing them to projected performance (as in programme logic-based monitoring). Compare practice with 'good' or 'best' practices from elsewhere.
<i>Complicated</i>	Engage experts (from science and practice) to undertake joint analysis. Variables can be tracked to feed into analysis. Negotiation of possible explanations needed.
<i>Complex</i>	Track the emergence of critical events, engage those involved to help understand / explain significance and generate ideas about possible responses, track those responses in terms of what they lead to, and so forth
<i>Chaos</i>	Intense dialogue between partners, reviewing and re-strategising following each action, monitor to know which is the next crisis that needs action and to know to what extent earlier response had desired effect

manage expectations of what is knowable: 'acknowledging and accepting complexity is better than placating it with planning models' (Browning and Boudès 2005). Hamel gives the example of IBM's emergent business opportunities that are not expected to fulfil the same accountability norms:

'it requires accountability for different sorts of things than would be expected of a mature business... not expected to provide precise profit forecasts, they are expected to be very explicit about their hypotheses, lest unstated and untested assumptions lead the venture into an expensive dead-end' (Hamel 2007:226).

Second, the framework allows a widening of the role that monitoring plays in each of the situations (see TABLE 7-2). In the simple state of the Cynefin framework, monitoring is straightforward: 'how many children were vaccinated', 'how often did children not attend school', 'what was the default rate of micro-credit lending'. Information functions can be automated and 'best practices' are a valid way to summarise and share experiences. In the complicated situation, there are multiple right answers and expertise is needed to analyse information. For the farmers in Minas Gerais, collaboration with soil specialists around their agroforestry trials was essential to understand different fertility management options. Monitoring may involve more variables and more discussion to understand what it represents. In the complicated state, Snowden says that the task is to 'seek to understand a sufficiency of the present in order to act to stimulate evolution of the system. Once such stimulation is made, monitoring of emergent patterns becomes a critical activity so that desired

patterns can be supported and undesired patterns disrupted. The organisation thus evolves to a future that was unknowable in advance, but is more contextually appropriate when discovered.' (Kurtz and Snowden 2006). For CTA-ZM, an example of a complex situation would be the long process of facilitating agreement about a buffer zone around a new national park that involved changing the mindsets of farmers as well as state officials. In the chaotic domain, there are no right answers as there is only turbulence. The September 11, 2001 events in New York are an example of this domain, when unanticipated crises dictated actions. Monitoring under such conditions focuses on seeing where the 'bleeding' is heaviest and staunching that in an effort to create some stability. In all domains, sense-making is a continuous process, hence monitoring is continually occurring as is the process of interpreting what is perceived.

Finally, the framework helps explain the reason why diverse types of information and sense-making are essential in order to understand progress and be able to respond effectively. It defines the ontological boundaries of methods:

'Understanding the limits of evidence, and the concept of sufficiency of information to take an experimental and evolutionary approach to the development of future strategy mitigates the question of a strict data driven concept of evidence, but also places a requirement for management discipline. It is not about gut feel or intuitive/emotional decision processes. It is about using the right sort of science. Realising that we are not in a [simple or complicated, IG] Newtonian universe but [a complex, IG] one in which uncertainty, phase shifts, coalescence and emergence are key concepts that can be used by managers, and can be used with confidence give their science base.' (Snowden 2007)

In relation to this, Snowden and Weick are strong advocates of narrative as a sense-making tool in complex situations, which constitutes an amalgamation of facts, opinions, ideas, theories and ideologies. By bringing diverse information to bear on the situation, probing and interaction help explanatory patterns to emerge that are the bases of responses. Furthermore, sense making by co-creating narratives is a democratic concept, invokes 'reason, value and action' simultaneously (Browning and Boudès 2005), and plays an important role in coherence (see 7.2.1). By clarifying understanding, those involved are acting to create meaning. Beinhocker explains the value of stories: 'Stories are vital to us because the primary way we process information is through *induction* [original emphasis]. ... We like stories because they feed our inductive thinking machine, they give us material to find patterns in – stories are a way in which we learn' (2005:126-127). Narratives are the subject of considerable study (cf. Mitchell and Egudo 2003; Colton *et al.* 2006; Denning 2007), which I will not delve into in this thesis.

7.2.4 Cognitive Dissonance and Surprise

In sense-making process, surprise, the unexpected, the little cues require attention: 'look for evidence that disconfirms [the organisation's] cherished expectations, and see beyond its simplifications (Weick and Sutcliffe 2001:155). In Weick and Sutcliffe's notion of 'organisational mindfulness', surprise figures in one of the five principles that enables a highly reliable organisation to perform. They argue that to be mindful is to have a rich awareness of discriminatory detail and an enhanced ability to discover and correct errors that could escalate into a crisis. For Snowden, it is the harbinger of important insight, or as Bateson says: 'Information consists of differences that make a difference' (Bateson 1979:99).

Surprise can be understood through the idea of 'cognitive dissonance', a term coined by Festinger (1957). Cognitive dissonance occurs when different 'bits of knowledge' do not tally. It is discomfort induced by disharmony, either between behaviour and opinions, or between simultaneously held opinions. Cognitive dissonance occurs constantly and people seek to reduce inconsistent cognitions. Festinger argued that reactions to dissonance depended on the scale of triggered dissonance, whether this resulted from the increase of a particular dissonance, the increase of the number of dissonances, the mitigating presence of non-dissonant cognitions, or how the individual values the dissonance (Rudolph 2007). Different strategies for dissonance reduction include: making the different bits of knowledge consistent, adding additional compatible information to mitigate disharmony (see Box 7-3), or changing the perception of importance of one aspect of the dissonance⁵⁷ (e.g. selective memory).

One conclusion of Festinger's that particularly challenged thinking at the time was that instead of requiring attitude change before behaviour change, behaviour change induced attitude change. The discomfort that people feel which indicates dissonance can, when scrutinised, lead them to revise their understanding and attitude. This use of cognitive dissonance is important for institutional transformation where attitudes hinder shifts, and policy changes or experimentation can help (see Box 7-3)

In Chapter 3, surprise is stressed in the adaptive management discourse as a particularly important source of learning. It is an important survival mechanism – it 'is aimed at solving the consistency [between input and prior knowledge] and at preventing possible dangers due to a lack of predictabili-

⁵⁷ An example of the latter comes from one of Aesop's fables in which a fox is eyeing a bunch of luscious looking grapes. He tries to reach them but when he cannot he concludes 'they were probably sour anyway'

Box 7-3 Resolving cognitive dissonance with extra information (Morin et al. 2000)

Morin and his colleagues worked on leaf colour charts that helped farmers adjust nitrogen fertiliser application based on the plants' apparent needs. However, asking farmers not to spray in the 40 day period after planting during which leaf folder pests are active contradicted accepted farmer practice. 'The contradictory nature of the heuristic is a source of 'cognitive dissonance', which needs to be resolved by the farmers receiving the message. ...The dissonance questioned farmers' understanding of the relationship between insects, insecticides, and yield, offering an alternative view. It suggested that these relationships are not fixed, *i.e.* not every case of insect infestation requires insecticide.' (ibid:6-9). By engaging farmers in on-farm experimentation, they could judge the efficacy of the leaf colour charts. 'For farmers this is a valuable lesson. It implies that there are other ways to control and/or live with pests.' (ibid:9).

ty and to a wrong anticipation' (Lorini and Castelfranchi in press:1). Lorini and Castelfranchi's analysis of the cognitive basis of surprise focuses on⁵⁸ 'symbolic representations of expected events' (ibid:2) and can trigger the process of belief reconsideration. They distinguish between mismatch-based surprise and astonishment in recognition. Both are of potential interest in development interventions, which are based on symbolic representations of expected events. In the first case, there exists an anticipatory explicit representation of the next input against which data are matched. Programme-logic based thinking is a good example, which articulates expected outputs through the ritual of developing an objective hierarchy (*e.g.*, in a logframe matrix) and expects monitoring data from indicators to match it if work proceeds as expected. A mismatch would be cause for further investigation as to the source of the discrepancy (such as in Projeto Paraíba for contour planting, see 6.3.2). In the second case, Lorini and Castelfranchi refer to a perceived fact and a recognition of its implausibility. This version, too, relates to development as it constitutes the random, unexpected, unplanned encounters and events that occur as activities unfold and people interact.

The conscious use of dissonances in monitoring are particularly interesting to help individuals or organisations question firmly held beliefs. This type of learning is essential in 'emergent change' (Chapter 1), *i.e.* situations of complexity (see 7.2.3 above). Deliberate study of events and outcomes during non-linear change processes can facilitate using cognitive dissonance purposively

⁵⁸ They also to refer to a more peripheral form of mismatch between what is seen and sensory-motor expectations

to trigger learning. Viewing a set of data and seeing the extent to which it tallies with expectations can confirm existing views or call them into question. Hypothesis-led monitoring that adaptive management is an advocate is one option – comparing differences and hopefully some surprises. Aspects of surprise and difference are built into the enterprise of science but are only theoretically present in monitoring practice. And only then it concerns comparing what was expected with actual events, and undervalues the unanticipated.

Alternatively, asking people what surprised them over a certain time period⁵⁹ requires them to articulate a cognitive dissonance based on a sense of discomfort, that relates to events or information that do not tally with tacit or explicit expectations. Reflecting on this in terms of what it means for existing practices, policies or priorities can lead to reconsideration of beliefs and revision of assumptions, i.e. learning. If surprise, or cognitive dissonance, is a significant source of learning, then a critical question is what it is in a monitoring system that allows cognitive dissonance to emerge and serve to trigger further efforts to understand the source of the dissonance. Most monitoring systems do not cater for surprise.

At a meta-level, cognitive dissonance can also be turned inward, on programme-logic based monitoring itself. I have sought to do this in Chapter 4 by articulating what is expected in terms of presuppositions of such monitoring and starting to contrast this with experiences that show a mismatch (section 4.3 and 6) in order to come to a reconsideration of my assumptions (see Chapter 8). Beinhocker looks at the case of economists, noting: ‘The rise of behavioural economics has left the field in a state of cognitive dissonance: many economists admit the validity of criticisms against perfect rationality, but they plug away using the Traditional assumptions because they lack an alternative that they can use in a formally stated model’ (Beinhocker 2005:119, original capitalization). So cognitive dissonance can, apparently be lived with for long by vast numbers of people, in this case traditional economists – it does not necessarily have to be reduced. My hope is that the fate of monitoring will fare differently.

7.3 The Future of Monitoring

The four ideas discussed in this chapter can be summarised as follows. Messy partnerships must maintain coherence in their organisational and collective cognition, and correspondence with the external environment, two

⁵⁹ The Most Significant Change Method (Davies and Dart 2005) is based on the idea of noting information that ‘was a difference that made a difference’ (Bateson 1979). This does not, in practice, always mean that ‘surprises’ or dissonances are identified and scrutinised

tasks in which monitoring plays an important role. Cognition in a messy partnership is distributed, which requires convergence in order to come to effective concerted action. Sense-making is critical for convergence for which different approaches are needed, depending on the complexity of the circumstances and issues faced. Cognitive dissonance, or 'surprise', is an important indicator of situations in which coherence or correspondence are awry. Monitoring systems could be more purposively designed based on valuing cognitive dissonance as an important trigger for learning, on the recognition of distributed cognition, and incorporating sense-making processes.

These ideas challenge several of the presuppositions that shape mainstream monitoring, and more importantly, offer alternative perspectives. They provide a more precise basis from which to start designing monitoring processes than the existing 'M'/'E' divide (Presupposition 1) and build in, through sense-making, linkages to decision-making (Presupposition 2). Sense-making as discussed here takes the mainstream far beyond its current discourse (Presuppositions 3-8, 10 and 12). Furthermore, as cognition is described as an ongoing recursive process, monitoring by default is renewed as part of that process (Presupposition 13). The original presuppositions become very tenuous when development is viewed in terms of complexity (Rihania and Geyerb 2001). There is much to explore about the linkages between complexity and the procedures, such as monitoring, through which development is delivered.

What does all this mean for the future of monitoring? I close by drawing on Hamel's (2007) work on the future of management. The parallels with the future of monitoring, which is inherently about management of efforts, are too striking to ignore. Hamel pronounces management as dangerously being out of date and needing management innovators. Its initial principles, dating from the beginning of the previous century, are based on 'control, precision, stability, discipline, and reliability ... To be fair, many of the 21st century's new management challenges have been acknowledged... Yet our progress to date has been constrained by our efficiency-centric, bureaucracy-based managerial paradigm' (ibid:14). The future of management needs to be imagined and then invented.

Monitoring, too, is out of date. It, too, requires innovators and innovations. The ideas in this chapter seek to imagine a different future for monitoring by offering a set of concepts that can move the development sector beyond the limitations of current practice (see Chapter 4). A shift is needed to see monitoring as:

- dialogical (not only a singular rationality);
- multi-ontological (not only assuming an ordered universe);
- distributed (not centralized),
- functioning through relationships and heuristics (not only through data and the hope of omniscience);
- essential for impact (not just a contractual obligation);
- sustaining collective cognition (not only the tracking of implementation); and
- seeking surprise (not only documenting the anticipated).

Business-as-usual, based on obsolete ideas of how monitoring occurs, will do development no service. The development sector needs to learn how to learn differently if it is to question the underlying wisdom of its visions, strategies and practices. Clearly, there must be the will to (self)critique and question – and that is often lacking⁶⁰. Recognising conceptual blind spots and fuzziness, daring to question the source of existing ‘methodological DNA’ fits well within other pleas to change the foundations of established practice (Beinhocker 2005; Hamel 2007). Easterly, in his widely acclaimed indictment of Western aid (2006), urges a shift from Planners to Searchers. Searchers accept complexity, uncertainty, home grown adaptations, the need to understand whether people are getting what they need, and the importance of trial and error. And Searchers need monitoring to support them in this endeavour.

⁶⁰ Twenty years of neglect for African agriculture has finally been admitted (Bank 2007) but if better monitoring could have helped avoid this is open for debate. The insert in *The Economist* of 13 October 2007 on innovation articulated the shift from R&D to multi-stakeholder processes but still based on a business-for-profit model. The type of innovation needed to deal with the larger systemic challenges of fossil energy depletion, climate change, unabated levels of poverty are not mentioned. Such myopia may well be the tragedy of the future. Besides monitoring that enables retrospective learning, scenario planning to facilitate anticipatory learning becomes essential.

MONITORING THAT NURTURES THE ‘GOLDEN GOOSE’

8

This thesis argues that, to date, monitoring has been seen quite narrowly by those working in rural resource management; usually as a mechanistic exercise that is composed of little more than indicator selection, data collection and, sometimes, statistical analysis. So its potential to trigger learning, in all its diverse forms as needed in messy partnerships (Chapter 7), is limited. Monitoring is expected to fulfil a generic ‘learning’ function, yet current theoretical understanding and practice demonstrate serious inadequacies (Chapters 4 and 6). Fundamental changes are needed in how monitoring is conceived and designed if expectations are to be met.

This chapter identifies the building blocks of an extended perspective on monitoring that provides more correspondence (Gigerenzer 2007, Chapter 7) with the contexts in which it is supposed to contribute to learning as defined in Chapter 1. I start this chapter with a metaphor – ‘the golden goose’ – that illustrates the need to update the ‘monitoring DNA’⁶¹ of development practice. I then return to CTA-ZM, one of the Brazilian NGOs discussed in Chapters 5 and 6. I discuss key changes it made as a result of the lessons learned from the participatory research on monitoring, and relate them to concepts from Chapter 7. In the final section of this chapter, I present eight design principles that build on the insights that emerge from the empirical material and theoretical discussions in this thesis.

8.1 Returning to the ‘Golden Goose’

Monitoring processes should be able to facilitate development actors to examine and understand the unique development process in which they engage, allowing them to know how better to respond. The Indian NGO, SPARC (Society for the Promotion of Area Resource Centres) refers to development as ‘the golden goose’ and urges a model of assessment and learning that places the goose at the centre, rather than its golden eggs (Patel 2007). Assessing and learning about development as a process of social change requires, in part, charting the ‘golden eggs’ of defined outcomes that can be discerned, for example, the numbers of citizens served, the capacities built, or the shifts in thinking of government agencies observed. However, by valuing only the eggs, the goose is in danger of serious neglect. Patel cautions:

⁶¹ Borrowing from Hamel (2007) who critiques obsolete principles in today’s ‘management DNA’

‘With few insights about how to understand it and measure its [i.e. development, IG] level of maturity and sustainability, external assessment processes are too rigid to understand these dynamics. Sadly, the goose is often killed due to lack of understanding’ (ibid). A model of monitoring that builds on the goose rather than its eggs is, she argues, more appropriate for social change that tackles social injustice and sustainability concerns.

As Chapter 6 suggests, the participatory monitoring initiative in Brazil was focused on ‘golden eggs’. We did not keep our eyes firmly on the ‘golden goose’ in constructing our monitoring process around very focused activities. In so doing, we were not questioning the bigger picture and longer term strategies, or key issues such as how to sustain organisational alliances. But during the course of the fieldwork, we starting missing ‘the golden goose’, which led to our experimentation with the Most Significant Change Method (Davies and Dart 2005). Nevertheless, this constituted a methodological addition, rather than a fundamental questioning of the premises and direction of our monitoring efforts.

At the end of the action research process, a key observation of the NGOs and the farmers was that to be successful, comprehensive monitoring had to become more ‘normal’ – not an additional research task – and enmeshed in the existing organisational approach. It had to become part of the daily rhythm of interaction. Working with indicators was too much work for too little insight, thus not an efficient enough learning process, notwithstanding its utility for certain issues. The farmers and NGO staff did not consider it feasible, given the resources and time they have available to extend this to all ongoing activities. Furthermore, participatory monitoring on activities as we had undertaken is only one component of a much wider set of activities that together provide the basis for collective cognition to be created and renewed (see 7.2). We had yet to include the work on environmental education, the work on engaging with municipal councils to embed ‘sustainability’ as a planning priority, the work on making the farmer trade unions themselves more gender sensitive, the training trajectories for youth, and so forth. Design Principle 1 (section 8.3) is derived from this insight about the broad and diverse nature of development in which CTA-ZM was but one actor.

In Minas Gerais, the discomfort felt by CTA-ZM team members, the farmer trade unions and myself about where we had ended in 2000 formed the basis of next steps that sought to resolve our own cognitive dissonance and create a more feasible and comprehensive system of feedback loops that linked to decision-making. From 2001 to date, I have accompanied CTA-ZM’s ongoing efforts to

improve and extend the monitoring work until it could meet all learning needs. This section draws on a second phase of consulting, advisory work and a series of interviews with key players (see Chapter 2 for methodological background).

8.2 CTA-ZM's Ongoing Process to Strengthen Institutional Learning

8.2.1 From Monitoring to Organisational and Institutional Learning

As a consequence of the participatory monitoring work that focused on the municipality of Araponga, one of the first decisions by CTA-ZM was to both simplify and complexify the monitoring work.

Simplification took place in the form of recognising the value in sharper organisational boundaries, notwithstanding the joint commitment and efforts in Zona da Mata. Being in a messy partnership did not, the organisation realised, mean subsuming one's own organisational identity, mandate, strengths, needs and responsibilities. Engaging in concerted action does not mean that all tasks need to be collective (see Chapter 7). Hence, from 2000 onwards, CTA-ZM took itself as the unit of analysis from which to start developing a more comprehensive and integrated *organisational* monitoring and learning system. CTA-ZM started paying closer attention to its own learning processes and information flows.

On the other hand, CTA-ZM is an entity with blurred boundaries. The shared origins of the NGO and regional STRS (see Chapter 5), and practices such as having farmers on the Board and NGO staff present at union meetings has led to mixing identities, shared allegiances and unspoken expectations of round-the-clock mutual support. On the one hand, CTA-ZM is a local NGO, with technical staff, a clear triennial programme and a budget. However, many actors are part of the wider CTA-ZM institution, including municipal partners (farmer trade unions, associations, administrative bodies, etc.), university departments, the Executive Committee/Council/General Assembly of CTA-ZM, the rural women's movement and the environmental movement. Each of the programmes of CTA-ZM's triennial plans (CTA-ZM 2004, 2007) are undertaken as concerted action by these actors and involve collective monitoring. CTA-ZM consciously and continually constructs strategic partnerships to meet its learning needs (see Box 8-1). Hence, it is also valid to refer to CTA-ZM's 'institutional monitoring and learning' plan and processes.

Chapter 6 discusses the tensions between participation and partnership. Greater clarity about the synergy and uniqueness of partners led CTA-ZM to see the messy partnership as requiring clearer boundaries. This insight, in

Box 8-1 Build strategic learning partnerships

CTA-ZM seeks to create formal relationships with those groups/actors that complement its own capacities. They have diverse memoranda of understanding with university departments (mainly soils, agroecology, (environmental) education, rural sociology) that ensure scientific insights inform the work. The NGO also has agreements with government research groups and state agencies, such as the State Forestry Institute. Not all these partnerships are equally effective in achieving concerted action. However, formalizing linkages around a concrete activity, such as farmer-based research or participatory planning creates the entry point from which to act, debate, share, challenge and learn. The quality of relationships is continually monitored through informal reflections at team meetings and with local leaders.

turn, has enabled the NGO to make explicit and then let go of the assumption that a messy partnership working on participatory development should be able to organise its work around a single monitoring system. On the one hand, CTA-ZM is now sticking closer to home with clearly bounded intra-organisational monitoring of the plans for which it is contractually responsible (CTA-ZM 2007; Guijt 2007f). On the other hand, it has expanded its understanding of monitoring to ‘institutional monitoring and learning’, in recognition of the need to strengthen concerted action by consciously co-creating knowledge and ensuring that intentions are sufficiently shared. Clearer definition of diverse monitoring processes has occurred (see 8.2.3). Design Principles 2 and 3 (see 8.3) are derived from this insight. It is an example of distributed cognition (see 7.2.2) being used more effectively – recognising who is best placed to undertake what part of the necessary monitoring.

8.2.2 Shift to Relationships and Governance

Another key insight from the participatory monitoring action research can be summarised as ‘learning is about relationships’. This led to two further changes in CTA-ZM’s conceptualisation and structuring of the monitoring.

First, the unease about having formalised monitoring and creating an unwieldy system that was turgid and cumbersome brought the team back to valuing existing processes. By asking why existing processes were inadequate – or perhaps not so bad after all, CTA-ZM came to recognise that much valuable exchange and reflection at both strategic and operational levels were continually occurring through informal interactions among the partners. The frequent, intense and personal contact that exists between staff, farmers and municipal leaders is no trivia. It is crucial for CTA-ZM in terms of understand-

ding power relations, contextual changes, the quality of impact, gaps needing attention, and so forth. It is in the quality of these ongoing interactions that information is exchanged, doubts are expressed, surprise is registered, innovative ideas are sparked, and informal agreements are made. They did not need formalising – it would mean the death of effective monitoring.

Hence our new starting point for improving monitoring was first to identify and value existing monitoring processes, especially in terms of what information is shared and how it is debated and transformed into actionable ideas. Where inadequacies were evident, the team identified improvements. For example in the Programme to Preserve the Atlantic Forest in the Brigadeiro Range, under the objective ‘initiate and implement a methodological proposal for environmental education in primary education and implement in 2 communities’, the improvement needed for better monitoring was ‘create a discussion and evaluation space with the schools and local residents’ (CTA-ZM 2002a).

A second issue emerged from the difficulty we experienced in ensuring that monitoring information was used in decision-making. We realised the need to view monitoring as a communication process. Information flows had to be mapped based on the question of who does what in the system and thus who needs to know what in order to perform. CTA-ZM staff, therefore, listed the ‘reflective spaces’, in effect describing the organisational governance structure. They identified eight such spaces, articulating the mandate of each and their inter-linkages: the Board, the Council, General Assembly, technical team meetings, general team meetings, funding agencies, external communication, and community-based programme coordination/management/evaluation. These spaces then led to identifying what information each requires for the decisions they are expected to make. Thus monitoring became viewed as creating and feeding information flows based on needs and reflective spaces (see Box 8-2).

The focus on relationships and governance as a key organising principle for monitoring systems has an important consequence. As the work in Zona da Mata evolves, relationships change, new actors come on board while others recede. Farmer union and municipal elections have seen local leaders come and go, staff have changed responsibility, farmers’ children are now youth leaders, relations have deepened, soured and blossomed. The loci of decision-making, though not shifting in terms of the formal space where it happens, changes in composition. When decision-making power is transferred between players, there are implications for who needs to know what

Box 8-2 New foundations for Triennial Monitoring Plan 2001-2004 (CTA-ZM 2000; Guijt 2007f)

For the Triennial Plan 2001-2004, CTA-ZM developed a monitoring plan for each of its six programmes. The monitoring plans were developed in two stages. First, for each of the levels in the plan, based on a logical framework approach, the columns of 'indicators and verifiable means' was replaced with one column 'What do we want to know?'. That question led to a mix of indicators and questions being identified as the skeleton of CTA-ZM's information system. The second stage then took each level (each objective) and refined this further. The resulting matrix gave the answer, per objective, to the following questions:

1. What do we want to learn about this programme? Are these strengths and weaknesses about the programme and/or more specific data on the scope/impact, or is it something else?
2. For which purpose will this information be used, to which 'space' will it go and when?
3. To answer the first two questions, what type of information do we need? (Quantitative indicators, opinions, process histories, etc.)
4. Are existing learning processes (collection, sharing, documentation, use) sufficient to be able to answer our questions (see 1 above)? If not, what needs to be improved (methods, capacities, responsibilities, communication pathways, etc.)?
5. To what extent is it viable, useful and possible to involve partners in a more structured learning process? What should/can participate in answering these questions?

Rethinking and designing the monitoring system along these lines had four effects:

- Helped to clarify the decision-making spaces in terms of mandate, role, agenda and inter-linkages;
- Created space for question-driven and not only indicator-focused monitoring;
- Made explicit the need for systematization as an alternative approach to deepen understanding about certain aspects of the work; and
- Helped in writing reports, mainly for the NGO coordinator, as it provided the structure for diverse and fragmented observations and data. The reports themselves are key sources of information for various other communication needs.

about the collaboration between the stakeholders but also in terms of their capacities to engage with the required information flows. This dynamism is reflected in Design Principle 8.

The valuing of informal exchanges and relationships is the basis of CTA-ZM's 'organisational mindfulness' (Weick and Sutcliffe 2001, see Chapter 7). However, the inclusion of relationships outside the organisational boundaries makes it more accurate to refer to 'institutional mindfulness'. These interactions were effective in terms of sharing the information necessary for continual readjustments and seeing new opportunities or impending problems. They enable coherence and correspondence in the concerted action (Chapter 7). But it cannot be taken for granted. Distributed cognition needs to be nurtured and cannot be assumed to occur as automatically as is, perhaps, the case in a two-way exchange between captain and the mate at the helm of a ship (Hutchins 1995).

Thus CTA-ZM has changed its vision of monitoring from meeting information needs that track planned activities to meeting information needs based on reflective spaces and learning purposes that sustain the relationships needed for concerted action. This novel way to view monitoring is the basis of Design Principles 2, 3, 4, 7 and 8 (see 8.3).

8.2.3 Learning in All its Diversity

Following the recognition that different aspects of rural resource management require different monitoring processes (see 6.4.4), one of the first tasks in 2000 was to think about monitoring as a set of parallel and interlinked learning processes. Specific learning purposes, rather than the catch-all and generic term 'monitoring', became the entry point (see Design Principles 3 and 6). Box 8-3 shows the different learning purposes that CTA-ZM distinguished in 2000 as part of the preparation of its triennial plan (see Box 8-2).

With monitoring now seen as an information web connecting different nodes (i.e. reflective spaces) to facilitate concerted action, learning approaches also needed more diversification. Focusing on questions, rather than indicators (see Box 8-2), created the mental space needed to identify different approaches. Some of these existed but had not been recognised, such as the regular meetings between technical team members and farmer leaders. From a limited, indicator-focused understanding of monitoring, CTA now consciously uses a wide range of mechanisms and processes to feed the information needs and fuel debate at different levels (see Box 8-3 and TABLE 8-1).

TABLE 8-1 partly reflects the realms of evaluation and capacity building. But it also reflects different forms of monitoring, with diverse frequencies, participants, tangible and intangible results – a set of interlinked information mechanisms. The annual reviews are only possible if implementation has

Box 8-3 Key learning purposes for CTA-ZM in 2000

- Accountability (financial): for transparency, credibility, viability (financial and strategic/programmatic) with as main audience funding agencies
- Strategic decision-making and downward accountability at different levels: (1) during General Assembly and with farmer associations who help identify main strategic lines; (2) by the technical team which drafts the plan and monitors its implementation; (3) with local associations and STRS who help implement and monitor the plan
- Influence public policies and lobby for legislative changes in public entities, networking with government, municipal and state
- Generate innovations that work by researching with farmers
- Convince and amplify the target group by communicating innovations

been tracked and systematizations (see below) have taken place. External contacts with NGOs, while more topic based, serve as infrequent monitoring opportunities to update their knowledge about national debates, developments among NGOs, innovations and so forth.

Two examples of method diversification that resulted from the initial monitoring are socio-economic monitoring and systematization. Socioeconomic monitoring was initiated by CTA-ZM in the face of its inability to respond to critics of sustainable agriculture and sceptical policy makers. Proof of the added benefit of agroecology could not be provided. Furthermore, the NGO was seeking evidence that resonated with farmers and could be used to expand impact. Socio-economic monitoring involved comparative tracking of costs and benefits (in a broad sense) by a number of families working on agroecological principles and comparing these with non-adopters. It has been an effective approach for CTA-ZM (Ferrari 2004; Ferrari and Almeida 2005). First, it provided the basis for more evidence-based and broad debate among adopters and non-adopters, with many of the latter turning to agroecology (and thus dropping out as the control group). Second, it pointed out some strategic and conceptual gaps to CTA-ZM. Third, the process of reflection and debate proved invaluable for sharing innovations and making sense of the data. The data analysis happened through on-farm visits and walking around the properties. The walks provided important context to understand the data and assess the relevance of observed innovations. Information was mediated and gained through 'social life' (Brown and Duguid 2000). Thus, the way in which sense-making (see Chapter 7) was constructed proved essential.

TABLE 8-1 Overview of mechanisms for learning within CTA-ZM and its wider partnership

<i>What</i>	<i>Frequency</i>	<i>Who participates</i>	<i>Focus</i>	<i>Outputs</i>
<i>Regular contact between team members and other key actors, particularly farmer leaders</i>				
	daily	farmers and team members	whatever the issue is at hand, surprises, worries, personal events	quality of relationships, updated
<i>Team meetings</i>				
	every 2 weeks	team	operational snags, decisions, short term planning	decision, clarity about action points and responsibilities, support with problems
<i>Tracking of implementation</i>				
	ongoing, activity specific	varies	knowing if planned activities were implemented	data are activity specific (e.g. results, participation)
<i>External monitoring</i>				
	ongoing, new person every 3 years	external person and CTA-ZM team	if CTA-ZM is maintaining its planned focus and is learning	reviews progress reports to see whether it aligns with the goals
<i>Action research projects</i>				
	incidental but run for several years; each project involves monitoring	varies	topics included: learning/M&E system; agroforestry; participatory municipal development	insights about the questions being asked
<i>Systematizing of lessons</i>				
	periodic, at the end of a programme or a phase	farmers, CTA-ZM staff	strategy, vision, leadership development	insights that feed next phase of work or for sharing
<i>Annual reviews</i>				
	annual	assembly with the team	actual activities compared to planned	shared evaluation of the year's achievements and problems
<i>Exchanges with other NGOs</i>				
	often but not regular	team and often farmers / local leaders	topic specific (on technical, management issues or values)	new insights in issues, strategies, building of leadership

TABLE 8-1 *Continued*

<i>What</i>	<i>Frequency</i>	<i>Who participates</i>	<i>Focus</i>	<i>Outputs</i>
<i>External evaluations</i>				
	every 3 years	external team with CTA-ZM	all operations and impacts	key strategic challenges for current work
<i>Courses for external groups or staff</i>				
	one off, as needs emerge	team sometimes with specific farmer(s) leaders	depends on need (e.g. gender, leadership or agroforestry training)	shared conceptual and practical clarity, skills built, facilitation capacity enhanced

In the absence of monitoring as a regular data collection and ongoing difficulty to ensure this, another form of co-creating understanding evolved – systematization (Berdegué *et al.* 2004). The participatory monitoring research process and subsequent detailed monitoring plan (see Box 8-2) led the team to identify its need to understand several multi-year experiences. Several significant experiences had taken place (on agroforestry, municipal development, youth training around agroecology and equity) without being formally evaluated. Hence the team initiated a series of systematizations that constituted a form of retrospective participatory research spanning six months – jointly designing the information gathering and analysis, gathering existing data, sharing different perspectives on the process, and distilling joint conclusions. CTA-ZM’s systematization processes are an example of the use of narrative to understand complexity (Browning and Boudès 2005).

The participatory process that was followed has reinforced the collective cognitive agency of the partnership (see section 7.2) – objectives have been realigned, theories re-considered, new forms of knowledge production been developed, and future actions identified. One of these actions was to initiate more and more focused monitoring. For example, the agroforestry systematisation led farmers to identify four questions, which are now proceeding as participatory action research processes with the university, CTA-ZM and the farmers (Cardoso and Ferrari 2006). Systematization is clearly not the same as monitoring, but in the absence of regularly collected data, has become a useful alternative for CTA-ZM to capture insights and shape strategic directions and makes use of what has been formally and informally monitored. It is an example of sense-making, combining the ‘knowable’ and the ‘complex’ domains of the Cynefin framework (see 7.2.3).

8.2.4 Learning How to Learn

Since its inception, CTA-ZM has seen four distinct phases in its work and role (see 5.3.1). Each have been accompanied by distinct approaches to monitoring.

During *Phase 1* (1987-1990) the emphasis lay on gaining more knowledge of Zona da Mata, sensitising farmers, and undertaking activities. Monitoring was relatively simple as relationships and activities were few. Personal interactions, team meetings, and the incidental piece of focused inquiry sufficed.

Phase 2 (1990-1997) saw more structure emerging through thematic programmes to consolidate activities and the partnership with the STRS and achieve greater impact. During this period, the indicator-based monitoring was tested (Chapter 6) but existing (informal) monitoring continued with some monitoring of activities undertaken by the technical team.

Phase 3 (1997-2001) marked a shift towards the municipality as the focus, with thematic programmes continuing in parallel. CTA-ZM took on a more political and facilitating role and broadened its partnership. The need to monitor quality of partnerships, capacity development, strength of visions, commitment to action and other less tangible aspects emerged. Monitoring was reconceived as, what I call, a multi-noded web along which information was shared and debated through personal relationships. Developing the coherence (see 7.2.1) in the partnership was crucial.

Phase 4 (since 2001) had continued with a focus on municipal development plans but concentrating only on four municipalities, in order to understand, document and disseminate different trajectories to inspire other municipalities in the region and other NGOs in Brazil. A severe funding crisis has led the partnership to a fundamental strategic reconsideration – it has, to some extent, drawn CTA-ZM further into the ‘complex’ domain of the Cynefin framework (see 7.2.3) and arose from inadequate correspondence with the external environment (see 7.2.1). These developments have consolidated interest in what agroecology and equity mean as the basis for development, hence leading to greater use of systematization and participatory research as instruments for learning. It has also meant that the partnership has expanded, to link into other social movements and institutional transformation processes. Importantly, it has reconfirmed CTA-ZM’s focus on innovations (social, technical, organisational, political), making it even more critical to understand the implications for monitoring⁶².

As focus has shifted and with it the composition and nature of the part-

⁶² Some recognition exist of the limitations of traditional evaluation methods to assess the impact of innovations – which by definition must be allowed to ‘fail’ (Perrin 2002). However, the consequences of the nature of innovation in development has not affected mainstream monitoring

nership as well as the role of CTA-ZM, the monitoring emphasis has shifted. Certain learning purposes took on greater importance, such as influencing public policies, and learning activities. The understanding of what monitoring can and cannot contribute to learning evolves, and what is needed to embed this in the partnership, forms the basis of Design Principles 7 and 8.

8.2.5 Work in Progress

The process in CTA-ZM has been largely driven by the quality of internal leadership and the commitment and focus of its staff to creating experiences for others to learn. In a sense, it is a rural ‘laboratory’ of social change. From time to time, external facilitation has been sought, including inputs from myself, for example in 2007 as ‘external monitor’ (see TABLE 8-1) and critical reader of their draft Triennial Plan. The staff NGO members are deeply convinced that the local change process can only be carried by local stakeholders – and they only play a facilitating role.

Creating and sustaining communication flows on relevant information to engaged actors require ongoing attention. In May 2007, the technical team took stock of existing challenges and outlined a route for resolving ongoing problems with CTA-ZM’s system (Guijt 2007f).

First, they reflected on the detailed monitoring plan developed in 2000 (see Box 8-2). Despite having helped the NGO team develop a clearer and comprehensive vision of monitoring within their activities, the team agreed that it had greatly underutilized the potential of the monitoring plan. The plan had not become daily routine, thus leading to lost opportunities for information collection and debate. The initial monitoring plan had been too ambitious and the team had not invested sufficient time to reduce it to a manageable and, therefore, useful instrument. Furthermore, the team had not translated the ideas on ‘what to improve’ (see Box 8-2) into concrete instruments, *e.g.*, data templates to facilitate data collection at key events and moments. Finally, they observed there was no shared understanding about monitoring as a concept and a plan with the extended parts of CTA-ZM, *i.e.* the farmers and local leaders who were so central in enabling concerted action.

While planning the current triennial plan in 2003, the pendulum swung the other way with monitoring being restricted again to basic indicators for each objective. This rendered monitoring overly simple and ineffective, though theoretically much less work. Yet even this minimal structure was not used to guide data collection and analysis. Instead, attention focused on improving financial monitoring and perfecting the narrative progress reports that the key

funding agency required. With hindsight, the team noted insufficient communication of progress and strategy with the communities (poor downward accountability), a weak information base on which the Executive made its decisions, and inadequate data for strategic debates and annual reviews.

Box 8-4 lists the causes of the current limitations as perceived by the team. Based on this analysis, the current planning process for the next triennial plan (2008-2011) has been designed to start resolving these problems. This includes decisions such as integrating a detailed monitoring plan within the triennial plan (based on Box 8-2), involving the partners in detailing the monitoring plan, appointing a team member who is responsible for ensuring the flow of information (*e.g.*, ensuring the Executive receives a full information pack in time for its decisions). Time will show whether this ideas will resolve the monitoring problems, although funding and the activist culture of the organisation will remain constraining.

Box 8-4 Issues of improvement for the institutional monitoring plan as identified by CTA-ZM staff (Guijt 2007f)

1. Balance activist culture and practice with more motivation to write and collect data
2. Even more clarity about what information needs to be 'taken' to each decision-making space
3. Reinvigorate programme-specific annual reviews and use of formal spaces to share information
4. More debate in the Executive and the General Assembly – still insufficient clarity of all those involved about their role and how to use information to fulfil that role
5. Better compilation and systematization of data collected
6. More deliberate and systematic use of systematization results, particularly for internal strategic review (by technical team and Executive/General Assembly)
7. Identify who is responsible to ensure that data are 'transported' from its source to the intended decision-making space
8. Invite other partners to help develop the Monitoring and Learning plan (not only the technical team)
9. Better use of the logframe to track progress during meetings (Executive, team meetings)
10. Additional spaces to be created to ensure debate and strategic direction
11. Develop more methodological detail, *e.g.*, templates to help with data collection

The question must be asked of why even the most basic of issues – ensuring the Executive receives basic documentation – have not been resolved. Is this not simply poor management? Is it not failure to learn? Yes, it is. However, if an exceptionally reflective, capable and committed group of professionals as in CTA-ZM are facing such challenges, then they are probably not the only ones. Basic considerations such as these – building communication paths – must enter into a new understanding of monitoring if it is to meet the ‘learning and accountability’ needs in the development sector.

Would the application of the design principles I propose later in this chapter have solved this non-learning problem? Several of the design principles address issues in Box 8-4. For example, design principle 7 on institutionalising monitoring would have helped ensure more comprehensive efforts to support monitoring (points 4, 5, 6, 7, 9 and 11 below); design principle 2 about the nature of the partnership would have helped us address point 8 below; and design principle 3 about learning purpose driven monitoring could have helped address point 2 below. What prevented us from applying those principles was simply that it is only now, with hindsight and analysis of the ups and downs of the process, that these design principles have crystallised.

8.3 Design Principles for Monitoring that Triggers Learning

So where does this leave the development sector? Recognising that rural resource management is all rather messy, non-linear and dynamic may clarify why mainstream monitoring efforts are limited. But this does not help in managing the process better. The theoretical discussions (Chapters 3, 4 and 7) and empirical material (Chapters 4, 5, 6 and above) lead me to suggest that if those in rural resource management want to realise the learning potential of monitoring, then processes must be designed based on a different set of principles than is currently the case. The monitoring ‘DNA’ needs shifting.

This section articulates eight design principles that address the problems identified in this thesis and that build on its theoretical insights. These principles constitute a response to the limitations of mainstream and participatory monitoring as articulated in the thesis. Therefore, they are not a comprehensive set of design principles for learning-oriented monitoring.

The first three principles relate to the purpose of monitoring, the next three principles to operational concerns, and the last two to sustaining monitoring practice. The design principles are:

1. Understand the nature of institutional transformation;
2. Recognise the nature of actors and partnerships;
3. Specify monitoring in terms of learning purposes;
4. Plan for sense-making as well as information;
5. Balance formal protocols and informal processes;
6. Value and seek diverse types of information;
7. Ensure the institutionalisation of monitoring;
8. Approach monitoring as evolving practice.

8.3.1 Understand the Nature of Institutional Transformation

In Brazil, indicator-based monitoring led to frustration when we endeavoured to monitor innovations, particularly those with multiple variables and with no resonance for farmers (see 6.4.4). We also got stuck when we sought to track progress towards methodological, organisational, and policy influencing goals (see 6.3.10). What was monitored did not add up to clarity about the extent to which CTA-ZM and its partners were making a difference in Zona da Mata. Had we undertaken the monitoring with an explicit vision of development as ‘institutional transformation’, it may have enabled more precision about what aspect of institutions we were seeking to transform and what monitoring process might have been appropriate.

Institutional transformation requires a wide range of shifts: behavioural, cognitive, associative, regulative, and constitutive (Parto 2005). The Brazilian messy partnerships were seeking to affect farmers and municipal councilors’ behaviour, fostering understanding about agroecology, creating policy and practical innovations, linking actors in new alliances, and creating new municipal bodies responsible for sustainability and equity. Monitoring needs to continually scan for such institutional shifts, some of which are hard to pinpoint and assess.

Furthermore, such changes are the result of different processes that also need to be understood. Ison and colleagues (2007) suggest that three forms of human coordination are at play. Hierarchies (regulation and education) and market mechanisms work based on pre-determined problems based on fixed forms of knowledge. Human interaction as a ‘mechanism’ creates knowledge through concerted action, or social learning (ibid). Although all three are critical for development processes, the third is often ignored. Development that occurs through coordination or governance processes that rely on concerted decision-making and action, and therefore depend on agreement, interdependence, trust, etc., make special demands on monitoring.

The idea of multi-ontology sense-making (Snowden 2005) becomes relevant. As Chapter 7 discusses, mainstream monitoring is based on an ontology of ‘the known’ and ‘the knowable’ (Kurtz and Snowden 2003), which works fine for concerted action where there is (reasonable) clarity about cause and (likely) effect. Yet institutional transformation also includes the two other cognitive dimensions that Kurtz and Snowden refer to, the unknown and the chaotic.

Four questions are pertinent in relation to this first design principle. First, what types of institutional transformation are being sought? Second, what coordination mechanisms are at work? Third, what ontological basis is present in the type of transformations and coordination mechanisms? Finally, what does this tell us about the underlying theory of change that is guiding the concerted action for which monitoring is required?

Thus the first design principle stresses the need to understand the nature of development efforts, as these have implications for the type of monitoring that will be useful and needed. Furthermore, the ongoing process of creating such understanding among the actors is critical for ensuring cognitive coherence (See Chapter 7). It is distributed cognition in action. The theories of change that are present among the actors engaged in concerted action will differ and shift, as feedback occurs. Therefore, understanding the partnership becomes important, which brings me to the second principle.

8.3.2 Recognise the Nature of Actors and Partnerships

Institutional transformation implies a partnership – no single societal actor can achieve sustainability and equity on its own. Hence, feedback processes that draw together information and ‘digest’ this into concerted action involve multiple actors. Participatory monitoring can be a key dynamic to ensure learning among the partners, who need to understand how learning occurs between them and, therefore, how monitoring is best shaped. And this is where the problems arise that I discussed in Chapters 4 and 6.

Mainstream monitoring systems have come out of an intra-organisational perspective with an assumed hierarchy of authority governing everyone, that creates some order and control. M&E guides and monitoring guidelines are based on a single organisation perspective, or at least one in which the location of responsibility for decision-making (supposedly drawing on monitoring data) is centralised.

Yet development is not delivered in this form. Increasingly messy partnerships are involved (Chapters 1 and 7), bringing with them the dynamics of each partner and the related complexity of interrelationships. Such partner-

ships vary, in terms of the numbers and diversity involved, the degrees of autonomy between partners, more and less stormy relationships, more and less fluid boundaries, more and less frequent moments of chaos. These factors generate complexity and messiness. This was thoroughly experienced in Brazil (Chapter 6). It led the NGOs to realise:

‘ the need to be more realistic about what ‘the partnership’ is and, therefore, not to assume more participation than each of the ‘partners’ assumes is necessary and viable, and therefore to plan areas of monitoring that should be in partnerships and other areas that are only the responsibility of one of the partners as it represents their own interest.’ (Ferrari 2002).

To some extent, such partnerships can be ‘known’ or ‘knowable’ (Kurtz and Snowden 2003). When designing monitoring processes, organisational contexts can be understood in terms of governance structures, responsibilities, and mandate. Capacities in relation to monitoring can be ascertained. When it comes to sense-making processes at play and power relations, both of which strongly affect how groups produce knowledge, the realm of the less knowable intrudes as the rules of the game are, in part, tacit and dynamic, relational and contextual. The espoused theory may be articulated but the theory-in-practice emerges in action, as Chapter 6 illustrates. Hence, the actors must monitor themselves and their partnership to understand if visions remain shared, division of responsibilities remain optimal, and power inequalities are being aggravated or ignored.

In summary, the second design principle revolves around the need to understand the partners that have converged around the concerted action and what they bring to the mix that will impact on monitoring. Questions that require joint exploration include organisational histories, the strength and nature of ties to constituents, internal dynamics, the cognitive and decision-making culture, expectations of the concerted action, capacities to fulfil designated roles, commitment to the partnership, and partners’ ability to ‘enact’ lessons learned. These factors influence how monitoring processes can be constructed.

8.3.3 Specify Monitoring in Terms of Learning Purposes

During the action research process in Brazil, time and again, the question returned of ‘who will use this data’. Each time clarity on end users of data seemed to exist, practice proved otherwise. A publicly stated intention by the NGO or the STRs that they would use the data meant nothing. As described in 8.2, greater clarity emerged for CTA-ZM when the question expanded from

‘who’ to include ‘what purpose does this information serve?’. This shift enabled more appreciation of how monitoring added value to the work and was not just another obligatory task.

Purpose means refocusing monitoring on what one is learning *for*, not only what one is learning *about*. This distinction is only made in the most simplistic of ways in the development sector by reference to ‘monitoring for learning’ versus ‘monitoring for accountability’. As discussed in 8.2, for CTA-ZM accountability became one of several learning purposes – seeking and sharing information to ensure financial management and stability.

Drawing on the learning purposes that CTA-ZM identified, TABLE 8-2 shows nine learning purposes that need to be ensured by those engaged in concerted action for institutional transformation. Five of these pertain directly to management of the development intervention: financial accountability; operational improvement; strategic adjustment; contextual understanding; and capacity strengthening. Four learning purposes can also be part of the development interventions themselves: deepening understanding (research); building and maintaining trust; lobbying and advocacy; and sensitisation for action.

I have come to this list, inspired by the initial start in Brazil (see Box 8-3) but subsequently perceiving a wide range of other purposes in other organisations and contexts that were not identified by CTA-ZM. I have tested the nine purposes with diverse audiences in M&E workshops, who have helped refine it, and sees its wider value. Note that not all purposes will be equally important to each organisation or partnership at any one time, and some might not be needed at all, for example ‘self-auditing’ or ‘policy influencing’.

Clarity about learning purpose is key as it helps make monitoring operational (Guijt 2007). The purpose of each of these forms of monitoring defines the following features:

- the relevant time frame (longer or shorter period of tracking);
- linkage to decision-making (each space where information is used is governed by different priorities);
- degree of participation of wide group of stakeholders;
- depth of analysis and rigour (the audience indicates what is legitimate information).

Thus, I propose as a third design principle the need to specify monitoring processes in terms of learning purposes, which will enable more precise defining of tasks, protocols and responsibilities. This principle marks a deviation from the widespread use of ‘monitoring’ vs. ‘evaluation’ as the distinction of prime importance (see Chapter 4). Each learning purpose can thus

bring forth a custom-built monitoring process. And together, the processes will shape the organisational learning rhythm (Reeler 2001).

8.3.4 Plan for Sense-Making as well as Information

As I have set out in Chapter 4, monitoring focuses on ensuring that the information gap is closed. In Brazil (Chapter 6), more time was invested in deciding what information was desirable and collecting this, than in understanding how it could best be analysed in order to facilitate decision-making and strengthen the concerted action. Chapter 6 ends with the observation that only where discussion already occurred around a stable social entity – the biodigital (medicinal plants) group – did the monitoring have an ongoing contribution. In section 8.2, I discuss how the lack of clarity about the sense-making process has continued to hinder CTA-ZM's efforts to ensure that information is used. I also describe how it innovated methodologically with the introduction of socio-economic monitoring and systematization – for which unique sense-making processes were developed.

Chapter 7 details the importance of sense-making in concerted action – it is the basis of ensuring coherence. It is the process by which people choose between different possible explanations of perceptions in order to understand or act in their world. The notion of multi-ontology sense-making (Snowden 2005) was introduced as being critical, as not all relationships between cause and effect are known. Two questions are pertinent in relation to sense-making and monitoring – what it means and how to ensure it happens.

First, it is important to make sense of sense-making in a particular context. As Snowden says 'Context is the end all and be all of knowledge management.... shared context is vital to knowledge exchange, and such context always involves some human trusted validation' (2005:8). To enable critical reflection requires a mix of trust and novelty; trusting the source of information or advice and novelty to enable what Snowden calls 'the increase of the probability of an emergent solution' (ibid) or, I would add, explanation. Sense-making in context means asking questions about trust and epistemology. Who needs to understand what and who needs to interact with whom in order for this to be possible? How do the actors normally seek to make sense? To what extent do actors trust each other? How can different types of information be meaningfully integrated? How should sense-making occur if decisions are needed – actors, timing, communication? If partners come from different knowledge traditions – scientific, technical, practical – then how can these logics interact? Through its systematization and participatory research

TABLE 8-2 Differentiating monitoring types according to contribution to management and change processes

Monitoring that contributes to ...		
Core Purpose	Learning Focus	Example in practice
<p>1. Being financially accountable Maintain financial viability or security</p>	Proof of implementation of agreed plans	Standard reporting of money spent on which activities with which effects and/or impacts
<p>2. Improving operations Adjust implementation to be more efficient, effective</p>	Quality and outputs of activity implementation	Evaluation by course participants to understand what they have learned and how the course could be improved
<p>3. Readjusting strategy Examine/question strategy (e.g., by identifying and testing underlying assumptions)</p>	Higher level goals of the organisation, theory of change, assumptions about strategy (implementation and management)	Ongoing tracking of livelihood impacts among families to assess if the assumption of 'agroecology = sustainable livelihoods' is valid; continual review of organisational monitoring system
<p>4. Strengthening capacity Improve individual performance or that of the organisation</p>	Individual behaviour, attitude, effectiveness, doubts related to work/personal strategy	Ongoing peer review of colleagues and of self in order to improve implementation process
<p>5. Understanding the context Keep up-to-date on the context of implementation</p>	Political, social, environmental, economic changes	State-of-the-environment reporting
<p>6. Deepening understanding (research) Understand key uncertainties better and to formulate new questions on which to focus</p>	Any topic that is unclear, experimental, innovative	Participatory research with farmers on local adaptation of agroforestry systems that requires tracking of various indicators
<p>7. Building and sustaining trust Maintain transparency and therefore trust in (collective) use of resources</p>	Use of resources, such as forest products, money	Micro-credit groups reporting on who has been given/returned which loans; Joint forest users report on who has harvested what, where, when and how

TABLE 8-2 *Continued*

<i>Monitoring that contributes to ...</i>		
<i>Core purpose</i>	<i>Learning focus</i>	<i>Example in practice</i>
8. Lobbying and advocacy		
Push for political change/in public policies/with decision makers	Topic related to the policy change being demanded	Local alternative medicine groups, who provide a community service, need to document rigorously cases treated and solved to prove the need for change in public policy; Tracking of infringements of local forestry laws or of intended forestry concession plans to argue for need for change in public policy
9. Sensitising for action		
Sensitise others to build and sustain support for concerted action	Wider dissemination of a concern or experience; building critical mass of support for a concern/experience	Community tracking of a few families (by themselves) via filming the presence of phosphorescence-tinted pesticides in order to gain awareness of the need for collective action to seek alternatives (Sherwood et al. 2005)

efforts, CTA-ZM is advancing its understanding of what makes sense for the sense-making it seeks (Cardoso and Ferrari 2006).

Second, sense-making requires investment. People have to be motivated to want to understand connections and see patterns around them. When it comes to personal survival, motivation is not an option. However, in concerted action, where allegiance to one's 'own' organisation or to the joint effort are vying for time and attention, sense-making as part of the concerted action needs to be fostered. Creating the conditions for appropriate sense-making, building capacities, creating essential communication pathways, and allocation of resources are needed (also see Design Principle 7). Not perceiving the potential value of monitoring efforts has proven a strong disincentive for sustainability of such efforts.

Thus, the fourth design principle is to plan monitoring in terms of sense-making as well as information seeking.

8.3.5 Balance Formal Protocols and Informal Processes

During the past years, when asked what my doctoral interest was, invariably the response to my mention of ‘monitoring’ provoked slightly raised eyebrows and ‘oh’ after which the topic of conversation immediately changed. Perhaps people were surprised that the topic could be interesting enough to merit such study? Monitoring is burdened by the, in my eyes mistaken, image of dusty piles of paper, statistical analysis and mind-numbing perfunctory protocols. Say ‘monitoring’ and a common first association is ‘data collection’. This narrows down the practical focus to one of finding the ‘right’ data. And indeed, reading M&E guidelines (Chapter 4) leads to the conclusion that monitoring should, above all, be the mechanical manipulation of indicators, objective measurements, and data hierarchies. The formal protocols about what to collect and collate, how and with which standards dominate in descriptions of monitoring. Revision of monitoring often focuses on changing these forms and formats.

As I hope has emerged from this thesis, monitoring is something rather different in the context of rural resource management. In Brazil, it was diverse, dynamic, relational, dialogical, critical, political, contextually specific. It involved an ongoing negotiation about the nature of reality and the meaning of perceived phenomena, a social and political process. Monitoring as a deliberately constructed mechanism is not the only a means through which information flows occur. Social interactions are critical as sources of information and in sense-making.

In CTA-ZM’s second round of learning how to learn (see 8.2), a first step involved taking stock of existing practice among the partners to gather, share and make sense of information (see Box 8-2). Only if these mechanisms failed or were inadequate for the intended learning purpose (Design Principle 3), were more deliberate mechanisms identified to provide more structure.

Informal communication processes are ignored in monitoring frameworks (see Chapter 4). Yet a more relational perspective on monitoring allows space for cultural appropriate ways to keep an effective ‘finger on the pulse’ and to communicate problems, where deliberate and formalised monitoring constitutes an alien practice. Wageman (1987) refers to ‘by-pass’, the intentional ignoring of normal and formal processes, as existing institutions are often the largest obstacles to innovation.

The fifth design principle asks for deliberate incorporation of existing informal processes of interaction, sharing and debate as part of the monitoring design process, and for linking the informal sphere to formal processes

and channels. This principle recognises that governance is a mix of explicit agreements, protocols and informal dialogues that take place as part of everyday encounters.

8.3.6 Value and Seek Diverse Types of Information

Almost any monitoring guideline will advise seeking diverse types of data, urging the use of quantitative and qualitative methods. Yet indicators as the way to package and communicate information dominate. Where indicators failed to shed light, dialogue and narratives took over in the Brazil work. Jonas, the young farmer responsible for monitoring cattle salt (see 6.3.8), found the agreed indicators that farmers were supposed to monitor themselves inadequate to understand impact. He shifted to individual interviews and farm visits to assess the indicators and, in context, through dialogue to understand what he saw. We struggled with indicators. For topics that could not be summarised in terms of indicators and for which the NGOs and STRS had a less clearly defined strategy, we sought refuge in the Most Significant Change method.

From the action research process, the NGOs and their partners had concluded that depending on the degree of certainty and clarity about the topic or activity being monitored, we needed to decide whether predetermined indicators were feasible or whether to leave the information process more free and more qualitative (at least at the initial stages). The less clear the situation and the larger the number of variables to be considered, the less useful predetermined indicators will be.

As discussed in 8.2, for CTA-ZM, thinking in terms of learning purposes created the space that allowed alternatives, such as short stories, to serve as meaningful information about progress. Since then, CTA-ZM has broadened its methodological repertoire to include video narratives, life stories, laboratory-farm visits, and systematizations. Within each of these, a mix of numerical data, opinions, and stories are present. This diversity has enabled the messy partnership to understand its focused, community-based activities, its regional training and cooperative-building efforts, and its state and national level public policy advocacy work.

Another way to express our conclusions is the need to identify the ontological boundaries of a method, in our case of an indicator-based approach. Snowden uses his notion of multi-ontology sense making (Chapter 7) to summarise this as follows:

'different approaches are legitimate, but within boundaries and that methods and tools that work in one ontology, do not work in another. It is

thus behoven on management to know which ontological domain they are operating in, and what transitions between domains they wish to achieve.' (Snowden 2005:4).

Design principle 6 urges the valuing and seeking of different types of information. The Cynefin framework (Chapter 7) helps locate the ontological domains for diverse forms of information, and locates narratives, stories, surprises in the domain of complexity. This domain plays an important role in the type of institutional transformation processes in which the Brazilian partnerships are engaged.

8.3.7 Ensure the Institutionalisation of Monitoring

Monitoring as inter-organisational learning, i.e. as a key component of collective learning that oils the wheels of concerted action, represents a new perspective for the development sector. The past decades have seen the emergence of many new perspectives, including gender equity, community-based, participatory, empowerment, rights-based, pro-poor, good governance, fair trade, corporate social responsibility, and so forth. Each new perspective has been embraced by enthusiasts. Yet sustaining changes in the practices of organisations related to new perspectives has been much more difficult.

The examples from IFAD projects and from Brazil illustrate how difficult it is to ensure that monitoring works as intended – there is often a large gap between its theory and its practice. In Brazil, capacities had to be built, monitoring defined, responsibilities clarified, methodologies tested, interested individuals identified, and procedures developed. And yet, the efforts did not lead to sustained use of the monitoring as had been designed (see 6.5). Though not sustained as designed (see 6.5), the importance of monitoring has taken root and spawned ongoing efforts as reported in section 8.2. But what had we missed that hindered the institutionalisation of monitoring according to our original image?

Levy's work of why gender equity has not been institutionalised and become recognisable as regular and continuous social practice led her to identify the inherent 'conflict between the regular practices of organisations which inevitably reflect a particular set of interests, and their responsiveness to change reflecting other power relations and interest' (Levy 1996:1). Levy's research resulted in a framework of conditions under which she suggests this new 'gender aware' perspective can be taken on and sustained, and remain responsive. To encourage a more systemic and systematic analysis of what is needed to embed a value in an organisation, Levy developed the idea

of a 'web' of elements. The web identifies 13 essential areas (see Box 8-5) that need to be synchronised for a new perspective to be institutionalised. In Box 8-5, I have adapted the original web elements to reflect the issues needed to institutionalise learning-oriented monitoring.

Design Principle 7 asks for efforts to ensure that monitoring has a chance. Monitoring processes need to consider the incentive structures in which they operate in order to have realistic expectations of the learning that

Box 8-5 The web of institutionalisation of learning-oriented monitoring (after Levy 1996)

Partners Sphere

1. Involvement of partners. Are all partners involved in designing and implementing learning-oriented monitoring?
2. Willingness to reflect. Are all partners willing to reflect critically?
3. Donors and others critical for ongoing support. Are key strategic partners supportive of learning-oriented monitoring?

Organisational/Partnership Policy Sphere

4. Political commitment. Is there a formal political willingness to pursue learning-oriented monitoring?
5. Policy. What policies are in place that support such monitoring? Is it embedded in the vision, mission, activities?
6. Resources. What resources are in place to support policy and implementation on learning-oriented monitoring?

Organisational/Partnership Systems Sphere

7. Mainstream location of responsibility. Who/which actor has the responsibility to drive and implement monitoring, and are these large or small players?
8. Procedures. What routinised daily activities are in place to encourage monitoring? (e.g. reporting formats, terms of reference, etc.)
9. Human resource development. What is being undertaken to make people more competent in pursuing learning-oriented monitoring?

Delivery Sphere

10. Methodology. Does a clear philosophy and methods exist (eg that is used to guide human resource development) to ensure learning-oriented monitoring?
11. Formulation and delivery of programmes and projects. Is implementation consistent with learning-oriented monitoring?
12. Research. What research is being carried out to improve learning-oriented monitoring?
13. Theory building. How are research results translated into new and better theories about the role and practice of monitoring?

might be possible, and, where possible, offer stimuli that can help those involved to perceive the usefulness of such processes. While agreements on how to monitor the implementation of concerted action results from collective learning (institutionalisation as an outcome of social learning, Ostrom 1990), it also requires explicit investment.

8.3.8 Approach Monitoring as an Evolving Practice

In Chapter 4, I argue that monitoring usually is not viewed as an evolving practice itself. It is designed once, at the onset of development interventions and assumed to remain valid over time. In Brazil, six monthly reviews of our monitoring endeavours led to continual adjusting. In 2000, 2004, and 2007 CTA-ZM made further adjustments.

Revision had two causes. First, changes in development interventions and actors required adjusting the focus and implementation. Second, the NGOs and their partners were developing their own cognition on monitoring – refining intentions, perceiving how it works (and does not), identifying and implementing actions, and revising its theory of monitoring. Undertaking monitoring in the context of their messy partnership was a matter of acting, seeking what worked and then responding, thus hovering between the complexity and chaos domains of the Cynefin framework (Kurtz and Snowden 2003).

As this thesis has argued, monitoring is an evolving practice, which if undertaken consciously is epistemic learning: ‘knowledge of whether our cognitive strategies are sometimes limited, in what ways solutions can be true, and whether reasoning correctly about a problem necessarily leads to an absolutely correct solution’ (Kitchener 1983:226). Just as the development activities need to be the subject of monitoring, so does monitoring itself. Single and double loop learning about our learning processes were occurring (Argyris and Schön 1978).

The experimental nature of collective monitoring left us convinced that less is more – at least at first, an experience echoed by others (dos Santos *et al.* 2007; Mahanty *et al.* 2007). The combination of messy partnerships and institutional transformation involves complex and dynamic issues, relationships, and information needs. Too great a diversity of issues, actors, and monitoring purposes may jeopardize collaboration in monitoring. Too many issues to monitor may overwhelm those implementing it. Too many actors and their diverse interests may well have a stagnating effect, as the value of monitoring needs to be lived in practical application to be appreciated (Chapter 6). Too many monitoring purposes can cause confusion about priorities in data collection, information analysis, communication of findings and actors’ roles.

Design principle 8 states that monitoring must be viewed as an evolving cognitive process, subjected to regular critical reviews and adaptations as changes occur in understanding of monitoring, players and context.

8.4 Final Comments

I have many discussions with development actors on how to improve monitoring so that learning can ‘truly’ happen. They ask me what the latest innovation is, the newest method. What I have argued in this chapter is that the problem with monitoring is not resolved by a tweaking of methods, and additional or different tools. Some of the design principles may appear common-sense and not surprising – yet these principles are not, as I have argued, currently shaping the understanding and practice of monitoring. Mainstream monitoring is driven by a set of erroneous presuppositions (Chapter 4), lack of understanding of the consequences of partnership contexts (Chapter 6), and a limited perspective on the cognitive process (Chapter 7). In this chapter I have sought to integrate these ideas into actionable options for messy partnership engaged in development as a process of institutional transformation.

The potential benefits of collective monitoring (see Chapters 1 and 6) are not guaranteed. Not only are implementers confronted with a true ‘tiranica’ on the ground but those funding the work must respond so that a shift in practice becomes possible. The ‘golden goose’ needs to be valued by all the actors. Based on years of interaction with a range of international funding agencies, Patel (2007) suggests that funding agencies are important actors who often hinder rather than help the golden goose. She suggests a five point agenda for funding agencies:

1. Adopting learning orientation rooted in continuity of relationships to construct a shared understanding of strategy, results, and opportunities;
2. Acknowledging the need for risk-taking, funding innovations, setting precedents needed in institutional, politicised transformation and the methodological implications, plus investing time and creating opportunities to identify alternatives;
3. Seeking to understand the ‘real architecture of impact at scale’ (how is large scale, pro-poor development produced and sustained and who drives it), which requires more exchanges and debates and better use of existing learning opportunities;
4. Identify and fund alternative forms of learning to hear realities by inviting direct testimonies and the telling of stories, as reports rarely convey the reality of transformations that are taking place in poor communities. The danger is otherwise that agencies continue to operate on the basis of ‘virtual poor’ or

some other such labelled category, with assumptions about their clientele that have little to do with reality (Ploeg 2003; Moncrieffe and Eyben 2007);

5. And perhaps most important, aligning management systems to produce the types of institutional transformation that donors uphold, as building community capacities to undertake these processes and so as to manage them demand different strategies from professional NGO-managed projects.

Thinking about the influence of funding agencies, as part of the aid nexus, brings me to the importance of incentives. Current practice by funding agencies, widely driven by a programme logic-based model and superficial understanding of monitoring (Chapter 4), is a strong disincentive to invest in monitoring alternatives. The incentives and disincentives at play in the development process strongly affect whether or not learning is possible (Guijt *et al.* 2005). The application of the design principles identified in this section will only be possible if the incentives are in place, which includes supportive funding agencies. Crucial is that the development actors must value the information and insights produced, and resource it well (Design principle 7). Understanding what incentives exist— carrots, sticks and sermons (MacKay 2007) – will be important to know if learning-oriented monitoring as an alternative stands a chance. Or whether development organisations will deploy strategies of resistance behind the scenes, with no one challenging the mainstream monitoring protocols that not only shape what organisations do but how they think about what they do (Ebrahim 2005).

CONCLUSIONS: TOWARDS AN EXTENDED UNDERSTANDING OF MONITORING

9

This thesis has examined the contradiction between monitoring by ‘messy partnerships’ and development organisations as a basis for collective learning, and the reality of monitoring driven and dominated by a concern for accountability to funding sources. This mismatch represents a major lost opportunity to harness the potential of monitoring to deepen and sustain the learning that societies need when confronted with dilemmas and conflicts that appear to defy resolution. In the thesis, I have argued that the disjunction principally occurs in the epistemic perspective that underlies mainstream monitoring. The predominantly positivist and ‘development-as-project’ vision that guides such monitoring is inconsistent with the emergent and non-linear nature of institutional change that occurs through ‘messy’ partnerships and that is increasingly central in rural development and resource management. It is also inconsistent with the everyday reality of monitoring as a continual informal dialogue among development actors, not bound by official monitoring procedures and protocols.

This concluding chapter synthesises the findings in relation to the initial research questions and formulates implications for key development actors.

9.1 Restating the Case – a Synthesis

In this thesis I set out to analyse five core questions to understand and describe what monitoring, undertaken within the context of collective action, can contribute to the learning processes that many social actors feel are fundamental to ‘learn our way out of’ (cf. Milbraith 1989) rural resource-related problems. In this section, I summarise my arguments in this thesis for each question.

9.1.1 Research Question 1. *Expectations of Monitoring*

How is ‘monitoring’ viewed by rural development and resource management discourses that advocate more adaptive forms of rural resource management? On what assumptions and presuppositions about processes of monitoring, collective learning and improved action are these discourses based? What practical orientation do they give for learning-oriented monitoring? (Chapter 3)

Chapter 3 argues why the focus of this thesis is so critical. In it, I examine three key discourses that are currently guiding much of the thinking and

practice in rural resource management – adaptive management, collaborative resource management, and sustainable rural livelihoods. These discourses, or approaches, are all concerned with adaptive behaviour, collective learning and interactive decision-making. They are value-driven, and focus on environmental conservation, equitable resource use, and poverty alleviation. The three approaches are concerned with institutional transformation – working towards changing the behavioural, cognitive, associative, regulative and/or constitutive institutions (see Chapter 1) to become more supportive of rural resource use that is sustainable and favours the rural poor.

‘Learning’ with and by stakeholders is an important principle in all three approaches and is expected to help identify actions that, in turn, are expected to be more effective for goal achievement. Such learning is based on the systematic seeking and sharing of information, thus making the creation of feedback loops of fundamental importance. Monitoring is considered the prime vehicle for ensuring feedback. Monitoring within the context of concerted action, as advocated by the three discourses, is an important factor in enabling social learning. In addition, the adaptive management discourse in particular values ‘surprise’ as contributing to learning.

The *adaptive management discourse* highlights four key features in monitoring for resource management: the hypothesis-refining effect of models by using simulated monitoring data; the role of indicators to make tangible the visions, targets and resource states; the importance of investing in long-term data collection and deliberative processes on that data; and the focus on scientific experimentation and surprise. However, in practice problems occur relating to its time-consuming nature; the ample scope for scientific error; the fact that monitoring via models remains hypothetical and precludes surprise; the expense of the information required; stakeholders’ resistance to ensure open access to information; the poor state of ecological monitoring; the difficulty of achieving agreement on what merits experimentation and therefore needs to be monitored; and the widespread naivety about the real challenges and potential of joint design of monitoring systems and information analysis.

For *collaborative resource management (CRM)*, monitoring efforts should combine a logic model perspective and hypothesis testing. The programme logic model (in the sense of ‘logical framework analysis’) perspective is used for planning initiatives and for structuring monitoring of said initiatives (or of the process of coming to a co-management plan). Logic models focus on monitoring indicators related to specific pre-determined results to prove progress and ensure accountability. The joint articulation and continual

assessment of indicators is central to monitoring CRM. The hypothesis testing form of monitoring is the same as in 'adaptive management', where assumptions are formulated and matching indicators are found around which to collect data that can confirm or refute the hypothesis. Criticism of CRM includes: (1) the naivety with which 'community' is approached; (2) the focus on consensus as the way to deal with diversity among stakeholders (which effectively eliminates the diversity); (3) the island mentality that enables effective design and implementation of small-scale efforts amidst risks in the form of absent, unimplemented or contradictory higher-level policies; and (4) the simplification of the complexity of collective monitoring (including how to deal with heterogeneous data, merging different information needs, interpreting information with stakeholders guided by different norms and priorities, and the long time frames needed for reliable ecological information), and (5) little accommodation of ongoing problems with practice.

The *sustainable rural livelihoods approach (SLA)*, or framework, calls for an M&E system, with accompanying indicators, that enables assessing progress towards livelihood sustainability. Livelihood approaches rely on existing M&E practice, which, in the case of externally-driven/initiated development interventions, will be based on programme logic models. While adaptiveness and social learning are not explicit in SLA, the principle of dynamism highlights the importance of a learning attitude. The role of monitoring is couched in general terms, such as using the livelihoods framework to structure M&E processes. The livelihoods literature does not offer detailed steps but rather a set of desirable practices, which constitutes an idealised, overly simplified and arguably unrealistic perspective on monitoring. Other critique of the livelihoods approach with implications for monitoring includes: (1) its analytical complexity with several levels and interlocking components of analysis can lead to information overload and the identification of too many intervention options; (2) the construction of the framework around many generic ideas and large categories without being clear in operational terms what is needed and possible; and (3) an unquestioning adoption of existing methods and approaches that perpetuate the problems inherent in these approaches and do not clarify how they are to be used in a coherent and integrated manner.

Thus, none of the discourses articulates the practicalities of how these feedback loops need to be constructed and all remain vague about how learning occurs. The practice of monitoring is expected to provide the raw data and spaces for reflection that are to create the necessary knowledge. How learning should occur is couched mainly in terms of intentions and princi-

ples, with practical references being made towards existing logic models or hypothesis-testing approaches and to participatory methods. The discourses all appear to rely on an unclear mix of monitoring as a research process and monitoring of set objectives based on a programme-logic perspective. This thesis has focused on programme-logic based monitoring as the most frequently used in the type of rural resource management initiatives that I discuss. Programme-logic based monitoring is, by default, considered adequate and capable of helping to guide the efforts of those involved in complex institutional transformations who have turned for inspiration to adaptive management, collaborative resource management and sustainable rural livelihoods approaches.

9.1.2 Research Question 2. Underlying Presuppositions of Monitoring

What is the underlying logic – with related presuppositions – of mainstream monitoring approaches and hence what is the monitoring theory that is expected to guide practice?

In Chapter 4, I discuss programme-logic based monitoring in detail by drawing on several monitoring guidelines, representative of those widely used in the development sector. I identify 13 presuppositions that underpin the espoused theory of this mainstream monitoring perspective. These presuppositions relate to: the definitional boundaries of monitoring, how information is viewed, and how monitoring processes are perceived to be constructed and implemented.

A definitional boundary is created between ‘monitoring’ and ‘evaluation’, presumed to be a useful enough distinction to construct the required feedback mechanisms and related information systems for development efforts (Presupposition 1). Presuppositions 2 and 3 focus on use and analysis. Mainstream monitoring does not articulate the link between monitoring and how it is to serve management – that link is presumed to exist (Presupposition 2). Similarly, strategic analysis and sense-making are presumed to not require explicit inclusion when developing a monitoring process (Presupposition 3).

The second cluster of presuppositions relate to how information is viewed. The critical task of designing monitoring is that of seeking to fill the need for information, rather than of developing appropriate processes to make sense of and use the information (Presupposition 4). Stakeholders are presumed able to anticipate their information needs adequately, at the onset of development efforts, in terms of a comprehensive and fairly stable set of indicators, with related methods and processes, irrespective of the diversity or

development of actors or issues at stake (Presupposition 5). Importantly, monitoring guidelines do not pay attention to the processes of analysis, critical reflection, interpretation, and communication that are needed to enable information to meet different learning purposes (Presupposition 6). Indicators are considered an appropriate form in which to express and convey a balanced picture of information that enables learning (Presuppositions 7 and 8).

The third set of presuppositions relate to how monitoring processes are expected to be constructed and implemented, which are summarised as a series of standardised steps. Perhaps the 'killer assumption' is that stakeholders are presumed to have sufficient time, expertise, clarity and willingness to follow the basic steps in sufficient detail for effective results (Presupposition 9). Mainstream monitoring, notwithstanding the plethora of existing guidelines, presumes that the steps have a generic validity, irrespective of socio-cultural context (Presupposition 10). A case in point is that of the power relations between those involved in monitoring (and the context of these relations), which are given no attention in the discourse other than, at most, to say they matter (Presupposition 11). The steps lay the basis for the formally agreed protocols, yet much informal monitoring takes place through daily interactions. Mainstream monitoring presumes that people will know how to deal with and effectively use of informal monitoring outside the prescribed formal processes and channels (Presupposition 12). Critically, it is presumed that monitoring systems do not need to learn from, or adapt to, the environment in which they are being implemented (Presupposition 13).

Mainstream monitoring based on these presuppositions is expected to provide the feedback or information that is supposed to trigger learning in development initiatives. No distinction is made in terms of the validity of this model of monitoring for different types of development processes (emergent, transformative, projectable – see Chapter 1) or for different types of organisational configurations (projects, programmes, organisations, alliances, networks or 'messy partnerships' – see Chapter 1).

9.1.3 Research Question 3. Insights from Practice

What can practical experience from small scale rural change processes in Brazil and from a large rural development organisation show about what is needed for monitoring to contribute to collective learning?

In Chapter 4, I analyse the monitoring efforts of 33 IFAD projects, while Chapters 5 and 6 offer a detailed example of a three-year action research project with a 'messy partnership' in Brazil to construct monitoring that fos-

ters collective learning. The IFAD projects were expected to operate on the basis of mainstream monitoring, while the Brazilian work was based on participatory monitoring as a possible alternative to mainstream monitoring.

Evidence from 33 IFAD projects indicates that the presuppositions on which mainstream monitoring is premised are problematic (Chapter 4). In some ways, monitoring practice in the IFAD projects is richer than theory suggests, in other cases, it is weaker. Two types of difference can be found: between the monitoring theory about the operational context and the surrounding realities, and between monitoring theory and monitoring practice.

First, insufficient attention is given to the 'fit' of monitoring processes and their underlying logic with the operational contexts of IFAD projects. The monitoring process leads to the exclusion of information that falls outside the prescribed structure but that could provide critical warning signals about the robustness of the intervention logic and the likelihood of impact of the development intervention in question (see Presuppositions 5, 7 and 8). The influence of specific circumstances or context-specific features on prescribed monitoring procedures, such as solid or fragile partnerships or different levels of conflict, is not considered. Yet such features influence the extent to which the intended monitoring theory can be implemented (see Presupposition 10).

Second, the linear cause-effect perspective and procedural focus on how to construct and implement monitoring does not recognise the messy reality of evolving partnerships having to construct a shared understanding of the initial intentions of development intervention (see Presuppositions 9, 10, and 11). The guidance provided by mainstream monitoring is naïve about how organisations, partnerships and power relations function.

Third, monitoring practice is not based on a clear understanding of what learning is, how it can be designed and how it occurs in relation to monitoring (see Presuppositions 2, 3, 4, 6, and 12). By focusing on the construction of information, or rather data systems, the reflection and sense-making activities that enable effective learning based on a reading of data are ignored. Furthermore, in practice the boundary between monitoring and evaluation is blurred – monitoring has an evaluative function and evaluations are carried out internally and regularly. The classic distinction between 'M' and 'E' does not help to ensure learning is possible and is embedded in the design of feedback systems (Presupposition 1).

If such problems occur in contexts characterised by hierarchical, contractually binding relationships where development initiatives are undertaken as projects, then mainstream monitoring is even less likely to have success in

messy partnerships engaged in institutional transformation. Can participatory monitoring perhaps offer a better fit? Insights from the action research work in Brazil (Chapters 6 and 8) suggest five important issues if more participatory forms of monitoring are to contribute to collective learning.

First, learning emerged both from the process of developing monitoring and from the data (see 6.3.1). Distinguishing between the contribution of monitoring to both sources of learning is important in the context of ‘messy partnerships’, which requires continual articulation, refining and (re)aligning of understandings and priorities. The challenge remained of knowing how to respect partner-specific objectives amidst the search for a common monitoring focus.

Second, messy partnerships require finding an interpretation of ‘participation’ that fosters concerted action, yet respects the uniqueness of partners and their own cultures and rhythms of reflection. The dynamics within each stakeholder group and the strength of commitment to concerted action influenced the extent to which a shared appreciation and pursuit of monitoring emerged. Our assumption that all stakeholders were equally committed to the partnership above individual mandates and priorities, led us to several related erroneous assumptions, such as counting on ongoing and strong commitment to sustaining the activities being monitored as well as the monitoring itself; and consensus as the basis for concerted action and the monitoring work. The generic call for ‘stakeholder participation’ that differentiates participatory monitoring from mainstream monitoring is an inadequate distinction in operational terms. Participatory monitoring is best constructed as a mix of shared and stakeholder-specific data, reflection and planning processes. This implies understanding and strengthening information gathering and sense-making within each organisation – and only then considering where overlap exists and concerted monitoring action would be potentially beneficial.

Third, if ‘messy partnerships’ need to respect the individuality of the partners with a certain (but variable) degree of overlapping interest in monitoring, then dialogue between partners is critically important for data to be useful. Data alone will not indicate the direction that improvements need to take – they will require debate to reach conclusions on which the different actors can act. To enable that shift, participatory monitoring requires shifting from a view of monitoring as a data system to seeing monitoring as a communication process. A balance is needed between investing in data (indicators, methods, collection) and dialogue (analysis, interpretation, planning). Dialogue about the monitoring process itself is also important to ensure timely adaptation and sustained relevance.

Fourth, approaching all monitoring through one type of data process (i.e. indicator-based and driven by a hierarchy of objectives) and a static image of partnership in concerted action was acknowledged as a crude and inappropriate way to view information needs. Learning processes need to be diversified in relation to the different activities that occur in institutional transformation (e.g., technical innovation, dissemination, organisational change). Each activity is characterised by a series of differences, such as: in social organisation, linkages to other actors; organisational maturity, degrees of actor engagement, extent to which indicators can represent the issues at hand, and degrees of organisational embeddedness.

Finally, setting up the participatory monitoring process proved more costly and less sustainable than initially expected. Time is needed to clarify and continually adjust joint objectives, as partners come and go and (strategic) understanding evolves. The dynamics within and between the partners, and the shift in strategic focus as understanding emerged (in part as a result of monitoring) mean that activities come and go, and so does the related monitoring. Information must retain its relevance for the partners and be embedded in their organisational structures and processes.

In summary, participatory monitoring brought with it a new set of problematic presuppositions related to 'participation'. This includes the notion that consensus was a solid basis for concerted action, that involving stakeholders in designing the process would ensure their interest in and commitment to it. Furthermore, partnership does not necessarily imply a largely shared vision and commitment on the part of the partner organisations. New issues need consideration, such as sorting out logistics. Simply ensuring data collection was difficult where efforts are voluntary yet civil society organisations operate on a shoestring. Such issues suggest that considerably more is needed for collective learning to occur in messy partnerships than simply the advice to 'use participatory methods' and 'involve more stakeholders' that marks the PM&E discourse. In particular, more thought is needed about existing organisational conditions and the unique identities of the organisations involved in the 'messy partnership'.

Participatory monitoring only provides some advantages as it replicates, at least in part, several of the questionable presuppositions of mainstream monitoring. The empirical material brings me to suggest that programme-logic based monitoring – whether as mainstream or participatory practice – might benefit from insights drawn from other theoretical areas.

9.1.4 Research Question 4. Learning from Theory

What insights are offered by studies on cognition and organisational learning that can help fill the theoretical gaps and overcome the practical challenges of learning-oriented monitoring?

Chapter 7 offers a set of ideas drawn from two fields: one, cognitive studies, that has not yet influenced monitoring practice in the development sector, and another, organisational learning, that is slowly being 'courted' as potentially interesting. Monitoring constitutes a deliberate and collective attempt to guide our 'knowing' or 'cognition' by seeking and processing information. Organisational learning examines how a group of people communicate and deal with information that is vital for the survival of their organisation, and in so doing draws on cognitive science. Thus both fields have potential to help reconsider beliefs about monitoring. Cognitive science offers four concepts with thought provoking potential: bounded rationality, correspondence and coherence, distributed cognition and cognitive dissonance. Organisational learning concepts that offer ideas for innovation in monitoring are: multi-ontological sense making; organisational mindfulness; and the social life of information.

The four ideas discussed in Chapter 7 can be summarised as follows. Messy partnerships must maintain coherence in their organisational and collective cognition, and correspondence with the external environment, two tasks in which monitoring plays an important role. Cognition in a messy partnership is distributed, which requires convergence in order to come to effective concerted action. Sense-making is critical for convergence for which different approaches are needed, depending on the complexity of the circumstances and issues faced. Cognitive dissonance, or 'surprise', is an important indicator of situations in which coherence or correspondence are awry. Monitoring systems could be more purposively designed based on valuing cognitive dissonance as an important trigger for learning, on the recognition of distributed cognition, and incorporating sense-making processes.

Monitoring is out of date and requires innovation if it is to deliver on the promise of enabling learning. Change starts by imagining a different future to move the development sector beyond the limitations of current practice (see Chapter 4). A shift is needed to monitoring seen as: dialogical (not only a singular rationality), multi-ontological (not only assuming an ordered universe), distributed (not centralized), functioning through relationships and heuristics (not only through data and the hope of omniscience), essential for impact (not just a contractual obligation), sustaining collective cognition (not

only the tracking of implementation), and seeking surprise (not only documenting the anticipated).

9.1.5 Research Question 5. Towards Monitoring that Feeds Learning

Given these empirical and theoretical insights, what would an alternative monitoring approach require so that it can trigger the forms of learning needed to ensure adaptive and collaborative rural resource management?

Chapter 8 integrates the empirical and theoretical strands of the thesis by suggesting a set of eight *design principles* that I argue to be more likely to lead to the kind of collective learning that is considered desirable and necessary for adaptive rural resource management. These design principles have been identified to offset the limitations found in the dominant paradigm of mainstream monitoring and in participatory monitoring. This section articulates eight design principles that address the problems identified in this thesis and that build on theoretical insights. These principles constitute a response to the limitations of mainstream and participatory monitoring as articulated in the thesis. Therefore, they are not a comprehensive set of design principles for learning-oriented monitoring. The first three principles relate to the purpose of monitoring, the next three principles relate to operational concerns, and the last two relate to sustaining monitoring practice.

1. Understand *the nature of institutional transformation* being pursued as a social change process, in order to know the degree of complexity one is dealing with, and the extent to which information needs can be anticipated and learning functions will be significant (see also principle 3).
2. Recognise the nature of *actors and partnerships* on monitoring, by analysing the commitment of partners to concerted action, governance structures and decision-making processes of each partner, allocation of responsibilities in the partnership, degree of overlap of information needs, way in which information is shared, and monitoring capacities. The reality of 'messy partnerships' in development forces a questioning of a hierarchical, intra-organisational model that underpins mainstream monitoring.
3. Specify distinct monitoring processes in terms of *learning purposes* to enable a more precise definition of tasks, protocols and responsibilities. For institutional transformation on the basis of deliberate concerted action undertaken by a messy partnership, nine learning purposes are likely to be relevant (though not all necessarily simultaneously or equally prominently). Five of these pertain directly to management of the development intervention: financial accountability; operational improvement; strategic adjustment; contextual understanding; and capacity strengthening. Four learning purposes can also be part of the development interventions themselves: deepening understanding (research); building and maintaining trust; lobbying and advocacy; and sensitisation for action.

4. Plan for *sense-making* as well as information. The sense-making process must be appropriate for the type of situation and issue being considered (*i.e.* multi-ontological). Seek to understand what is needed for critical reflection to be possible among and between the partners and how insights are best communicated, which capacities must be built to make this possible, which additional communication processes are needed, and allocating resources to this end.
5. Balance *formal* protocols and *informal* processes, incorporating everyday interactions of sharing and debate into the monitoring system, and linking the informal sphere to formal processes and channels. Informal processes are not only crucial for ongoing sense-making but also a source of information sharing.
6. Value and seek diverse types of *information*, related specifically to the nature of development (principle 1) and the learning function (principle 3) that has to be met, and understand which processes exist and/or are needed to ensure that such information is shared and debated and informs decisions.
7. Ensure the *institutionalisation* of learning-oriented monitoring. Concerted efforts are needed to ensure that policies, practices, methodologies, responsibilities, and incentives are all helping make such monitoring possible.
8. Approach monitoring as an *evolving practice*, thus allowing it to become a dynamic knowledge production process, which when subjected to regular critical reviews and adaptations retains relevance and usefulness.

9.2 Implications for Key Actors

So given these challenges and insights, what are the implications for the key actors in rural resource management? While the design principles suggested in Chapter 8 remain the backbone of my argument, translating these into practice will require closer scrutiny of the different roles of key actors. In this final section, the implications for implementers, facilitators, funding agencies and academics will be briefly discussed. Important, however, is the recognition that the boundaries between these roles are increasingly blurred. Development NGOs are funders in the eyes of community-based organisations, facilitators can come across as academic for those in the thick of it, activists may well take on facilitation roles from time to time, and so forth. The state is another obvious actor. It is not separately considered here as it too straddles a range of roles in development – implementation, facilitation and funding. In considering how to deal with the implications of this thesis, it is important to be conscious of the different types of relationships that may simultaneously be at play and the conflicting interests and tensions to which this may lead.

9.2.1 Implications for Those ‘in the Thick of it’ – Implementers

A common problem for those who are ‘in the thick of it’ is to stick to doing. The urgency of issues being tackled and the pressure to make an immediate difference result in a focus on action. Stopping to reflect is considered an irresponsible luxury. This does not mean that learning does not occur. Innovations do occur but are not always the product of a conscious and efficient learning strategy. Implementers have their own monitoring and learning processes, through informal connections, as part of everyday action. The downside of what can be called an ‘activist learning style’ is often the unsystematic pursuit of learning and seeing monitoring more as an instrument for lobby (or a contractual obligation), than as having potential to enable internal strategic reflection.

This thesis offers three ideas of particular importance for implementers engaged in institutional transformation.

Be conscious of the design principles (see Chapter 8), in particular defining monitoring processes in terms of different learning purposes. This will facilitate the conscious and systematic development of information systems and reflection processes on one’s own terms, rather than relying on the protocols set down by funding agencies which are often largely driven more by concern for upward financial reporting than by other learning needs and are not oriented to a ‘messy partnership’ domain of application.

Pursue evidence about one’s own performance. While the core business of those engaged on a daily basis in battling injustice is to challenge adversaries on their behaviour, norms and performance vis-à-vis subjugated groups, a systematic look at the outcomes of one’s own activities can help to cull ineffective strategies, identify gaps and improve actions. Accountability towards one’s constituents and scrutinising unquestioned strategic assumptions is not an option in ‘messy partnerships’ and monitoring can provide the structure to make this operational.

Seek cognitive dissonance (see Chapter 7). Surprises, discomfort, shocks can be useful to leave familiar territory and venture into new discussions, consider alternative options, form new partnerships, and take on board new ideas. Develop a process of scanning experiences for surprises and discuss the underlying beliefs that might need revising.

9.2.2 Implications for Facilitators, the Evaluation Profession and Other ‘Intermediaries’

M&E is big business for the evaluation profession and (organisational) learning facilitators, who are charged with the task of helping develop systems

that make monitoring, and through that, learning, possible. Intermediaries have a supportive role in local development processes and can be individual facilitators or evaluators, but can also be organisations, such as local NGOs who sit between international funding agencies and CBOS. How can intermediary organisations deal with the tensions of donor-driven frameworks and timelines for monitoring and learning about institutional transformation and the need to respect the often very different realities on the ground?

This thesis offers five ideas of particular importance for professionals or intermediaries that play a facilitative role in institutional transformation.

Take monitoring seriously but extend its definition (see this thesis). Thus far, in the 'M&E' duo, evaluation has received by far the most attention conceptually, practically and methodologically. Monitoring, as a topic of study, area of innovation or concern that needs support, has been underappreciated and inadequately resourced. Yet it holds the potential to catalyse a serious attempt at institutionalising learning – as long as monitoring is viewed as an analytical process and not just as data collection.

Work consciously with clarity about what learning constitutes and what learning purposes monitoring must serve. As in the case of implementers (see 9.2.1), use learning purposes as the entry into facilitating a design process rather than the relatively meaningless term 'monitoring'. Seek to develop parallel strands and processes rather than opting for a single system that is expected to integrate all learning functions.

Articulate one's own 'theory of change' and align values (Chapter 8, Design Principles 1). As facilitators and potential methodological innovators, intermediaries must scrutinise how they contribute to perpetuating problems. This requires clarity about one's own worldview and paradigms about development and the role of monitoring and learning in that. What interests and agendas are being furthered by the way in which monitoring processes are constructed and by the choice of methodology? Are the methodology and methods (potentially) manipulable by users who are pursuing their interests and agendas? Rather than seeking to fulfil the criteria and standards that currently hamper learning and do not do justice to rural resource management in all its diversity and complexity, the task involves designing processes that respect and further the values that are embedded in the initiative around which the messy partnership has formed.

Facilitate up and down the aid chain. Intermediaries are bridge builders in the aid nexus. At one moment, they interact with community groups and CSOs, and at another with funding agencies. In each arena, the challenge is

different. At the local level, the focus may be on ensuring that exclusion and discrimination are not inadvertently perpetuated, and on being critical about the power relationships in knowledge production and the processes that engage participants. When working with funding agencies, the need may be for dialogue about how to address the internal contradictions between wishing to fund institutional transformation and imposing systems of assessment and learning that disregard some of the defining features of such work.

Contribute to the methodological development of monitoring for diverse organisational configurations. Mainstream monitoring approaches (and even the more innovative ones) have invariably taken as their focus a single organisation, project or programme. Effective ways to institutionalise learning need to be defined with greater precision for diverse organisational configurations (alliances, large NGOs, social movements, membership organisations, formal and informal networks, etc.). As ‘messy partnerships’ become more common as the vehicle for development, methodological innovation is needed to accommodate the different challenges of such socio-institutional configurations.

9.2.3 Implications for Funding Agencies

Funding for rural resource management is dispersed by foundations, bilaterals, multilaterals, NGOs and even CBOS, usually with specific requirements for accounting for the spent money. Notwithstanding the use of a discourse that refers to ‘critical reflection’ and ‘learning’, funding agencies, by and large, favour a mode of monitoring (and evaluation) that is rooted in fears of non-compliance with agreements based on a ‘development-as-project’ model (see Chapter 1). Among funding agencies in the development sector, an odd and oddly persistent type of cognitive dissonance is at work in relation to M&E. While acknowledging the severe limitations of a programme-logic based, count-and-control system, development agencies inevitably continue to succumb to its familiarity and to operate by its principles (see Chapter 4).

This dissonance, in the face of much discomfort and evidence of the need for a serious overhaul, is echoed by Beinhocker (2005) for economics and by Hamel (2007) for the business sector. Both scholars argue that the underlying assumptions that have driven these sectors are not useful. Hamel (2007) says that the future of management lies in throwing out obsolete assumptions about the private sector that hinder innovation. Today’s business works in a different environment for which dangerously ineffective ‘managerial DNA’ must be shed. Beinhocker goes one step further in saying that the assumptions on which economists have built their entire discipline

were never useful as they were based on an erroneous understanding of human behaviour. And yet, while ‘many economists admit the validity of criticisms against perfect rationality’ they continue to use these assumptions in the absence of an alternative model.

Development aid agencies must examine the sources of dissonance that occur when applying the expectations and protocols of programme-logic based monitoring to rural resource management that focuses on institutional transformation and is implemented through messy partnerships. I argue that resolving this dissonance means letting go of dominant mainstream approaches. Most funding agencies find this an almost insurmountable challenge as it means rethinking the principles on which they base their models of assessment and learning:

‘It requires them to loosen their focus on pre-planned interventions that lay out years ahead of time what is to be achieved, how and by when. It requires them to open their minds to the possibility of change happening in non-linear and unpredictable ways, and that social change occurs perhaps more slowly than they thought. It means allowing trust in the underlying principles of a methodology and a partnership to guide funding arrangements through bumpy patches.’ (Reilly 2007)

As discussed in Chapter 7, Patel (2007) suggests that important features of a new mode of assessment and learning asks the agencies to trust, take risks, research ‘the real architecture of impact’, allow narratives, and align protocols with development values.

One implication merits special attention, that of consistency (or ‘correspondence, see Chapter 7). Funding agencies must seek to align their espoused values with the systems they use. Funding agencies consider they are pro-poor, think they appreciate that development is complex and context-specific, and certainly see the need to support a diversity of efforts at different levels. Many recognise the deeply political nature of the work they support. Yet, by and large, their procedures and protocols do not align with these values. If there is only one task that is taken up by funding agencies, then it lies in the creation of far greater consistency than is currently the case between the formal development goals they uphold and the mechanisms and processes they have created to support the realisation of such goals.

9.2.4 Challenges for Academics

This thesis suggests a significant research agenda for academics in support of rural resource management. This concerns not only what is examined but also how research takes place.

Help translate innovations from cognitive science and business management to the field of monitoring. As Chapter 7 argues, there is much afoot in the two fields that challenges our 'monitoring DNA' in very fundamental ways. Can less information be better? But how then to avoid missing what is important because we do not yet know that it is important? Can the discomfort of cognitive dissonance be a harbinger of insight? Perhaps coherence of our monitoring processes is not the only way to ensure quality? Have reporting and control been overrated and are we heading for dialogue- and trust-based systems? If so, what do they look like? Should investment be in relationships rather than in databases? These and other questions provide exciting frontiers for updating the assumptions on which monitoring is based.

Theorizing about the theories of change in methodology. Academics are good at theorizing, indeed, are expected to theorize. Can they also be asked to theorize about how to theorize about one's theories of change? Two of the design principles suggest the key role of theories of change – about development and about M&E itself. However, the development sector is not strong at articulating its theories of change and related assumptions on either level. How can academics support a return to theory, a reclaiming of theory by development practitioners? This might include taking surprise seriously. Very little research has been undertaken on the notion of 'surprise'. This thesis suggests that cognitive dissonance may be an importance source of reconsideration but it requires grounding in the development sector and explicit linkage to M&E.

Work alongside practitioners to construct inspiring examples of innovative practice. Critical is for academics to engage more pro-actively and constructively with practitioners. This is not a new call – action research, for example, has been around for quite some time now – and I will not be the last to refer to it. Steyaert and Jiggins (2007) articulate a detailed and practical agenda for researchers engaged in social learning around rural resource management. By placing researchers 'inside' the phenomena observed, this enables them and practitioners to develop 'a new kind of socio-technical democracy, i.e. in the development of grass-roots scientific literacy, and the co-creation of knowledge and understanding' (ibid:584). Reflective practitioners and grounded academics are critical for the challenges of rural resource management as outlined in this thesis. This can lead to insights that help redefine our 'monitoring DNA' in ways that provide a better fit with the real-world context in which monitoring is meant to operate.

9.3 Final Reflections

This thesis started with the image of 'tiririca', the pernicious weed in Brazil that sprouts the more it is cut back. My own 'tiririca' was the quest to understand monitoring better – why it did not go as well as hoped in Brazil, why IFAD projects found it so hard to implement monitoring suggested by theory and, therefore, how to create opportunities to learn systematically and effectively. Choosing to examine my unease about how monitoring was expected to foster collective learning led to emergence of issues and questions that I had not anticipated. It is the surprising layering of questioning that has excited me about the discovery process. And questions remain. My 'tiririca' has not yet been expunged, not all 'surprises' have been resolved yet.

I have, however, arrived at a point in my quest where I am strongly convinced of the power of revealing presuppositions and of reconsidering entrenched assumptions about the methodologies that guide the development sector. I have chosen to focus on monitoring, as one such methodology, seeking to break through our rigid adherence to a set of assumptions that I hope to have exposed as, at best, flawed. My thesis has sought to articulate ideas that can foster learning-oriented monitoring in messy partnerships working on transformation the institutions that perpetuate inequity and unsustainability. I am helping to create a discussion on the theory of monitoring and outline ideas for practice. In so doing, I fulfil the requirements of the 'developing research' tradition as outlined in Chapter 2.

The issues discussed in this thesis have wide relevance, far wider than for those approaches and practices that can formally be labelled as being about 'adaptive management', 'collaborative resource management' or 'sustainable rural livelihoods'. And their relevance is far wider than only IFAD-supported projects or the messy partnerships in Brazil. The notion of development-as-project is being replaced by the recognition that shifting institutionalised injustice requires the adoption of a more diverse understanding of societal transformation. The idea of development as delivered contractually by organisations is being replaced by the understanding that messy partnerships and other types of alliances are the new configurations within which institutional transformation unfold. As Leach *et al.* (2007:24) write:

'Conventional approaches may sustain a myth of a world manageable through neat state-civil society-international institutions and distinctions, through scientific expertise and through uniform approaches to problem and risk assessment based on singular views of evidence. But the melee of real-life dynamics and interactions and of everyday practice amongst ci-

tizens, bureaucrats, and people crossing public-private boundaries suggests a far more dynamic, complex and messy world in which knowledge and notions of the problem are contested. Analytically, we need concepts and approaches that can capture critical dimensions of these processes that bear on the construction of pathways to Sustainability.'

The ideas in this thesis underpin suggestions for such concepts and approaches, relating directly to the need for more clarity and real-life relevance about how information is noted, shared and transformed into actionable agreements. Monitoring, when conceived as a socially negotiated, evolving methodology for structuring information flows and use, offers an approach to help construct 'pathways to sustainability'. However, we need to significantly revise mainstream beliefs and practices about how monitoring can create feedback. It requires more than new methods for data collection or analysis and cannot be dismissed as a ploy to allow lazy thinking and dismiss evidence-based practice. It is not about guesswork but rather about considered reassessment of the epistemic and ontological perspectives and principles that underpin monitoring, and determine its feasibility, relevance and ultimately, usefulness. It is high time that monitoring is taken seriously if those involved in rural resource management are to benefit from the potential of feedback loops to further sustainability and equity.

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ANNEX 1. ABBREVIATIONS

ADIP	Agricultural Diversification and Intensification Project
APPTDP	Andhra Pradesh Participatory Tribal Development Project
AS-PTA	Assessoria e Serviços a Projetos em Agricultura Alternativa
CCDB	Christian Commission for Development
CPT	Pastoral Land Commission
CRM	collaborative resource management
CTA-ZM	Centro de Tecnologias Apropriadas-Zona da Mata
DANIDA	Danish International Development Agency
DDSP	District Development Support Programme
DFID	Department for International Development (United Kingdom)
EISCDP	Eastern Island Smallholder Cashew Development Project
EMBRAPA	Empresa Brasileira de Pesquisa Agropecuária (Brazilian Agricultural Research Corporation)
HRO	high reliability organisations
IFAD	International Fund for Agricultural Development
IIED	International Institute for Environment and Development
LFA	logical framework approach
M&E	monitoring and evaluation
NGO	non-government organisation
P4K	Income Generating Project for Marginal Farmers and Landless
PADEMER	Rural Micro-Enterprises Development Programme
PAR	Participatory Action Research
PDRTT	Integrated Rural Development Project in Taorirt-Taforalt
PRA	Participatory Rural Appraisal
PM&E	participatory monitoring and evaluation
RIMISP	Latin American Center for Rural Development
SPARC	Society for the Promotion of Area Resource Centres
S(R)L(A)	sustainable (rural)livelihoods (approach)
STR	Sindicato de Trabalhadores Rurais
TANWA	Tamil Nadu Women in Agriculture Project
TEPP	Tihama Environmental Protection Project
UFV	Federal University of Viçosa
UNDP	United Nations Development Program

ANNEX 2. LIST OF PUBLICATIONS RELATED TO THE EMPIRICAL MATERIAL IN THIS THESIS

Books

- Guijt, I. (Ed). 2007. *Negotiated Learning: Collaborative Monitoring in Resource Management*. Resources for the Future, Washington DC.
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ANNEX 3. IFAD PROJECTS VISITED IN 2001 FOR DEVELOPING THE IFAD GUIDE

1. Agricultural Diversification and Intensification Project (ADIP), Bangladesh
2. Agricultural and Environmental Management Project (KAEMP), Tanzania
3. Andhra Pradesh Participatory Tribal Development Project (APPTDP), India
4. Community Development Project for the Rio Gavião Region (PROGAVIAO), Brazil
5. Cuchumatanes Highlands Rural Development Project, Guatemala
6. District Development Support Programme (DDSP), Uganda
7. Eastern Island Smallholder Cashew Development Project (EISCDP), Indonesia
8. Eastern Islands Smallholder Farming System and Livestock Development Project (EISFLDP), Indonesia
9. Economic Development of Poor Rural Communities Project (PRODECOP), Venezuela
10. Income Diversification Programme in the Mali Sud Area (PDR-SAN), Mali
11. Income Generating Project for Marginal Farmers and Landless (P4K), Indonesia
12. Integrated Rural Development Project in Taorirt-Taforalt (PDRTT), Morocco
13. Livestock and Pasture Development (PDPEO), Morocco
14. Management of Natural Resources in the Southern Highlands Project (MARENASS), Peru
15. Maharashtra Rural Credit Project, India
16. Micro-finance and Commercialisation Project (PROMIC), Benin
17. Northwest Agricultural Services Project, Armenia
18. Participatory Integrated Development in Rainfed Areas (PIDRA), Indonesia
19. Participatory Irrigation Development Project (PIDP), Tanzania
20. Project for the Capitalization of Small Farmers in the Tropisec Area of the Segovias – Region 1 (TROPISSEC), Nicaragua
21. Project for the Development of Indigenous and Afro-Ecuadorian Communities (PRODEPINE), Ecuador
22. Raymah Area Development Project (RADP), Yemen
23. Rehabilitation and Development Project of Areas Affected by Conflict in the Department of Chalatenango (PROCHALATE), El Salvador
24. Root and Tuber Improvement Programme (RTIP), Ghana
25. Rural Enterprises Project (REP), Ghana
26. Rural Micro-Enterprises Development Programme (PADEMER), Colombia
27. Rural Women's Development and Empowerment Project (RWDEP), India
28. Sahelian Areas Development Fund Programme (FODESA), Mali
29. Smallholder Agricultural Improvement Project (SAIP), Bangladesh
30. Support Project for Small Producers in the Semi-arid Zones of Falcon and Lara States (PROSALAF), Venezuela
31. Tamil Nadu Women's Development Project (TNWDP), India (no longer IFAD-supported in 2001)
32. Tihama Environmental Protection Project (TEPP), Yemen
33. Upper East Region Land Conservation and Smallholder Rehabilitation Project (LACOSREP), Ghana

ANNEX 4. INTERVIEW GUIDE IFAD FIELDWORK (AS AGREED AT TEAM MEETING, APRIL 19-22 2001, ROME)

Overview of M&E

- Overall, what is happening with M&E?
How is M&E structured in the project?
When and how was M&E system initiated, and when was it effective?
What is the perception of the role of M&E by senior management?
What is the level of commitment for M&E as they perceive it?
Are they aware of LFA – have they ever introduced it in project management?
Who is involved in M&E systems, when and where?
Where does M&E rank in the hierarchy, and how is this reflected in:
- requesting M&E (as an institution) in major decisions?
 - time accorded by top management for M&E?
 - budgetary support, staffing, mobility, software & hardware, etc?
- What is the degree of adherence to IFAD procedures?
What have been the changes to M&E approaches in the project?

Overview of project management

- Who decides what, and what information is used in management?
Has the M&E manager ever changed, and why (how many of them over the project life)?
Is the M&E manager satisfied with: role; recognition and support; resources; performance; use in decision-making/flexible design?
What is the degree of competence/experience of M&E manager and staff?
What is the role of other specialised management units in M&E?
Verification of data/information provided by management units (without the involvement of M&E).

Capacity for M&E

- What is staff capacity for M&E?
What is the experience of staff from review/evaluation missions?
What M&E guides do they know of/use?
Is there knowledge of projects/organisations with good M&E?
What is the education/training/background of those in the programme management unit (PMU)?

Work reports and M&E links

- Does the project have a work plan?
Does the work plan have milestones/targets?
Is the work plan progressing according to schedule – how do they know?
How does (does not) the M&E system link into the Annual Work Plans and budgets?

Specific M&E tools and examples

- What are specific methods of beneficiary involvement?
How is the practice of 'self' evaluation?
What is the reporting format of M&E?
What M&E tools are being used?
What indicators have been developed, and which ones are being used, and for those which are not – why?
To what extent is learning happening, and what facilitates and constrains this?

Information management systems (IMS)

- What IMS is in place – software, mapping?

Relationships

What is the nature of collaboration with other organisations re M&E approaches?

How are the relationships with different actors influencing M&E?

What is your relationship with cooperating institutions, and how does this contribute to learning?

What is the 'hierarchy' of stakeholders, related to M&E?

Learning examples

Examples of stakeholder initiatives/suggestions adopted

Has the project been revised – why/why not?

What processes of adaptation and change are evident in the project?

What is the extent of flexibility of project design – can management change the project, did management think or request such change in the past, and was M&E useful in that process?

If change has been requested/implemented, in response to whose demand (beneficiaries, project impact, done by whom, M&E contribution to the process of change)?

Incentive constraints

What incentives/disincentives for better M&E exist (for different actors)?

What do staff think is needed to improve M&E?

What are the key constraints to improved M&E?

M&E needs

What are the expressed M&E needs of the different actors?

What are the prospects for self/internal evaluation?

Who makes demands for what information and when?

Costs/financial budgets

What are the financial sources for M&E, and what are the costs?

How has M&E been budgeted?

Role of consultants and technical assistance

How do consultants contribute to learning of PMU (pros/cons)?

For technical assistance – how are they involved in the M&E process and when?

- if specialist, what is the communication channel, how do they participate in data collection, analysis and reporting?
- Does this give M&E more recognition by project management, donors, cooperating institution, supervision?
- Who do they think are the beneficiaries?

Project context

What cultural factors influence M&E and in what ways?

Is the subject matter reflected in the M&E?

Cross cutting issues

What gender and poverty specific M&E is in place?

ACTOR SPECIFIC:

For project participants

What do you do with this (M&E) information?

Are you involved in gathering/contributing information to the project, how and when?

Do you get information from the project – types/quality/quantity?

Are you involved in designing M&E?

For co-financers

What are the strengths/weaknesses of project document/information?

What kinds of information do you get from the project?

What kinds of information from the project is most/least helpful?

What kinds of information do you need from the project – why, forms, quality?

Do you use project information for decision-making, communication, other)?

For cooperating institutions (CI)

How would you use/view a guide?

What information on M&E does the CI use (to advise/judge project M&E)?

How do you use information from project to provide support?

What kinds of guidance/support do you receive from IFAD/others?

What kinds of materials/information from project are helpful/not helpful?

How does material/information from project influence decisions?

What kinds of information do you need from the project – why/forms/quality?

What are the links/relationships with project/IFAD/others?

What kinds of information do you receive from project?

To look for in documents

Where is the M&E focused – activities/other?

How input oriented is the system?

Is impact being addressed in the project document – quality/quantity (indicators)?

Is there a baseline study and how is it used?

SUMMARY

Commonsense says that monitoring systems should be able to provide feedback that can help correct ineffective actions. But practice shows that when dealing with complex rural development issues that involve collaborative action by a changing configuration of stakeholders, monitoring practice often falls short of its potential. In this thesis, I describe my search to understand why practice is so limited and what might be needed to design monitoring processes that foster learning in concerted action around equitable and sustainable development. I examine the contradiction between monitoring as the basis for learning in 'messy partnerships' and the reality of monitoring driven by a concern for upward financial accountability.

The environment – natural, organisational and socio-political – constantly gives feedback. But feedback needs to be perceived and interpreted for learning in rural resource management. Monitoring can be viewed as designing and implementing the feedback loops necessary to ensure that collective learning is fed by ongoing information flows within and among members of 'messy partnerships' and enables concerted action.

However, neither monitoring nor learning are, by and large, described in neither comprehensive nor precise enough terms for implementation as part of sustainable resource management. The promising potential of more participatory approaches, if based on the same logic as mainstream M&E as is commonly the case, does not provide sufficient innovation.

In *Chapter 1*, I introduce the focus of the thesis via a metaphor that emerged during fieldwork in Brazil – 'tiririca' (*Cyperus rotundus*) a pernicious weed that sprouts back more ferociously the more it is cut back. 'Tiririca' represents the complexity of developing a learning process based on monitoring concerted action, as well as the need for structural solutions. In this chapter, I introduce concepts – institutional transformation, messy partnerships, monitoring and (collective) learning – that have spawned my quest for monitoring alternatives. I outline the growing relevance of the topic, which brings me to my research questions:

1. How is 'monitoring' viewed by rural development and resource management discourses that advocate more adaptive forms of rural resource management? On what assumptions and presuppositions about processes of monitoring, collective learning and improved action are these discourses based? What practical orientation do they give for learning-oriented monitoring?
2. What is the underlying logic – with related presuppositions – of mainstream monitoring approaches and hence what is the monitoring theory that is expected to guide practice?
3. What can practical experience from small scale rural change processes in Brazil and from a large rural development organisation show about what is needed for monitoring to contribute to collective learning?
4. What insights are offered by studies on cognition and organisational learning that can help fill the theoretical gaps and overcome the practical challenges of learning-oriented monitoring?

5. Given these empirical and theoretical insights, what would an alternative monitoring approach require so that it can trigger the forms of learning needed to ensure adaptive and collaborative rural resource management?

In *Chapter 2*, I explain how the thesis evolved from questions emerging from my involvement from 1994 to date in diverse interventions and organisations. I have sought to fuse the strands of experience into a cohesive argument by discussing the key experiences and theories on which I draw in this thesis, and the methodologies used. I make use of four aspects of theory to interpret experiences: contextualising discourses, the espoused theory and theory-in-use of monitoring, theoretical building blocks, and methodological theory.

In *Chapter 3*, I argue why the focus of this thesis is so critical. I examine three key discourses that are currently guiding much of the thinking and practice in rural resource management – adaptive management, collaborative resource management, and sustainable rural livelihoods. These discourses are concerned with adaptive behaviour, collective learning and interactive decision-making. They are value-driven and focus on environmental conservation, equitable resource use, and poverty alleviation.

The *adaptive management discourse* highlights four features in monitoring for resource management: the hypothesis-refining effect of models by using simulated monitoring data; the role of indicators to make tangible the visions, targets and resource states; the importance of investing in long-term data collection and deliberative processes on that data; and the focus on scientific experimentation and surprise. However, in practice various problems occur, including the time and expense of the necessary data; inadequate ecological monitoring; difficulty of agreeing on what merits experimentation and should be monitored; and naivety about the challenges of jointly designing monitoring systems and information analysis.

For *collaborative resource management (CRM)*, monitoring efforts should combine a logic model perspective and hypothesis testing. The logic model perspective is used to plan initiatives and structure their monitoring. Such models focus on monitoring indicators for specific pre-determined results to prove progress and ensure accountability. Joint articulation and continual assessment of indicators is central to monitoring CRM. Criticism of CRM includes: naivety about ‘community’ and consensus and simplifying the complexity of collective monitoring.

The *sustainable rural livelihoods approach (SLA)*, or framework, calls for an M&E system, with accompanying indicators, to assess progress towards livelihood sustainability. Livelihood approaches rely on mainstream M&E practice, which, in the case of externally-driven/initiated development interventions, means using programme logic models. The role of monitoring is couched in general terms, such as using the livelihoods framework to structure M&E processes. The livelihoods literature offers a set of desirable monitoring practices, which constitutes an idealised and overly simplified perspective, and refers uncritically to existing methods and approaches that perpetuate the problems they bring and no guidance on integrated use.

Notwithstanding the mentioned limitations, ‘learning’ with and by stakeholders is an important principle in all three approaches and is expected to help identify actions

that, in turn, are expected to be more effective for goal achievement. Such learning is assumed to require systematic seeking and sharing of information, hence the need for feedback loops for which monitoring is considered the prime vehicle.

However, none of the discourses identifies how these feedback loops need to be constructed. Monitoring is expected to provide raw data and spaces for reflection to create insights. How learning should occur is articulated mainly in terms of intentions and principles, with practical references being made towards existing logic models or hypothesis-testing approaches and to participatory methods. The discourses rely on an unclear mix of monitoring as a research process and monitoring of set objectives based on programme logic models.

In *Chapter 4*, I discuss programme-logic based monitoring by drawing on several monitoring guidelines, representative of those widely used in the development sector. I identify 13 presuppositions that underpin the espoused theory of mainstream monitoring. These presuppositions relate to: the definitional boundaries of monitoring, how information is viewed, and how monitoring processes are perceived to be constructed and implemented.

A definitional boundary is created between ‘monitoring’ and ‘evaluation’, presumed to be a useful enough distinction to construct feedback mechanisms and information systems (Presupposition 1). A link is assumed to exist between monitoring and how it is to serve management (Presupposition 2). Strategic analysis and sense-making are presumed to not require explicit inclusion when developing a monitoring process (Presupposition 3).

The second cluster of presuppositions relate to how information is viewed. Monitoring systems are designed to fill information needs, rather to interpret information (Presupposition 4). Stakeholders are expected to be able to anticipate their information needs adequately, in terms of a comprehensive and fairly stable set of indicators, with related methods and processes, irrespective of the diversity of actors or issues at stake (Presupposition 5). Monitoring guidelines overwhelmingly ignore processes to analyse, reflect critically, interpret, and communicate information (Presupposition 6). Indicators are considered an appropriate form in which to express and convey a balanced picture of information that enables learning (Presuppositions 7 and 8).

The third set of presuppositions relate to how monitoring processes are expected to be constructed and implemented, which are summarised as a series of standardised steps. Stakeholders are presumed to have sufficient time, expertise, clarity and willingness to follow the basic steps in sufficient detail for effective results (Presupposition 9). Mainstream monitoring presumes that the steps have a generic validity, irrespective of socio-cultural context (Presupposition 10). Power relations between those involved in monitoring are ignored other than, at most, to say they matter (Presupposition 11). Mainstream monitoring presumes that people will know how to deal with and effectively use informal monitoring that occurs through daily interactions outside the prescribed formal processes and channels (Presupposition 12). Monitoring systems are not viewed as needing to learn from, or adapt to, the environment in which they are being implemented (Presupposition 13).

Mainstream monitoring based on these presuppositions is expected to provide the feedback or information that is supposed to trigger learning in development initiatives.

No distinction is made in terms of the validity of this model of monitoring for different types of development processes or for different types of organisational configurations.

Empirical material is discussed in *Chapters 4, 5 and 6*: M&E efforts in 33 IFAD projects operating on the basis of mainstream monitoring, and a three-year action research project with a 'messy partnership' in Brazil based on participatory monitoring as a possible alternative.

Evidence from the IFAD projects indicates that the presuppositions on which mainstream monitoring is premised are problematic. Two types of difference can be found: between the monitoring theory about the operational context and the surrounding realities, and between monitoring theory and monitoring practice. Difficulties result from insufficient attention is given to the 'fit' of monitoring processes and their underlying logic with the operational contexts of IFAD projects. Furthermore, the linear cause-effect perspective and procedural focus on how to construct and implement monitoring does not recognise the reality of dynamic partnerships having to construct a shared understanding of the initial intentions of development intervention. Finally, monitoring practice is not based on a clear understanding of what learning is, how it can be designed and how it occurs in relation to monitoring.

The action research work in Brazil showed that participatory monitoring is not necessarily the answer. Five important issues need to be addressed if more participatory forms of monitoring are to contribute to collective learning. First, learning must be seen to result from the process of developing monitoring and from the data. Valuing both is important for 'messy partnerships', who must continually articulate, refine and (re)align understandings and priorities. Second, messy partnerships require finding an interpretation of 'participation' that fosters concerted action, yet respects the uniqueness of partners and their own cultures and rhythms of reflection. Third, dialogue between partners is critically important if data are to be useful. Therefore, participatory monitoring requires shifting from a view of monitoring as a data system to monitoring as a communication process. Fourth, approaching all monitoring through one type of data process (i.e. indicators stacked in an objective hierarchy) and a static image of partnership in concerted action does not fulfil the need for diverse learning processes that occur in institutional transformation (e.g., technical innovation, dissemination, organisational change). Finally, setting up the participatory monitoring process proved more costly and less sustainable than initially expected. The dynamics within and between the partners, and the shift in strategic focus as understanding emerged (in part as a result of monitoring) mean that activities come and go, and so does the related monitoring.

Participatory monitoring only provides some advantages as it replicates, at least in part, several of the questionable presuppositions of mainstream monitoring. The empirical material brings me to suggest that programme-logic based monitoring – whether as mainstream or participatory practice – might benefit from insights drawn from other theoretical areas.

Chapter 7 offers a set of ideas drawn from two fields: one, cognitive studies, that has not yet influenced monitoring practice in the development sector, and another, organisational learning, that is slowly being 'courted' as potentially interesting. Monitoring constitutes a deliberate and collective attempt to guide our 'knowing' or 'cognition' by seeking and processing information. Organisational learning examines

how a group of people communicate and deal with information that is vital for the survival of their organisation, and in so doing draws on cognitive science. Therefore, both fields have potential to help reconsider beliefs about monitoring.

Drawing insights from the two fields together brings me to four ideas with thought-provoking potential for rethinking monitoring: (1) messy partnerships as collective cognitive agents; (2) distributed cognition; (3) sense-making; and (4) cognitive dissonance. The ideas can be summarised as follows. Messy partnerships must maintain coherence in their organisational and collective cognition, and correspondence with the external environment. Cognition in a messy partnership is distributed, which requires convergence in order to come to effective concerted action. Sense-making is critical for convergence for which different approaches are needed, depending on the complexity of the circumstances and issues faced. Cognitive dissonance, or 'surprise', is an important indicator where coherence or correspondence are awry. Monitoring systems could be more purposively designed based on valuing cognitive dissonance as an important trigger for learning.

Monitoring requires innovation if it is to contribute to its much lauded potential to enable learning. A shift is needed to see monitoring as: dialogical (not only a singular rationality), multi-ontological (not only assuming an ordered universe), distributed (not centralized), functioning through relationships and heuristics (not only through data and the hope of omniscience), essential for impact (not just a contractual obligation), sustaining collective cognition (not only the tracking of implementation), and seeking surprise (not only documenting the anticipated).

Chapter 8 integrates the empirical and theoretical strands of the thesis by suggesting a set of eight design principles that are needed for collective learning in adaptive rural resource management. These design principles have been identified to offset the identified limitations found in the dominant paradigm of mainstream monitoring and in participatory monitoring. They are not a comprehensive set of design principles for learning-oriented monitoring. The first three principles relate to the purpose of monitoring, the next three principles relate to operational concerns, and the last two relate to sustaining monitoring practice:

1. Understand the nature of institutional transformation being pursued as a social change process, in order to know the degree of complexity one is dealing with, and the extent to which information needs can be anticipated and learning functions will be significant.
2. Recognise the nature of actors and partnerships on monitoring, by analysing the commitment of partners to concerted action, governance structures and decision-making processes of each partner, allocation of responsibilities in the partnership, degree of overlap of information needs, way in which information is shared, and monitoring capacities. The reality of 'messy partnerships' forces a questioning of a hierarchical, intra-organisational model that underpins mainstream monitoring.
3. Specify distinct monitoring processes in terms of learning purposes to enable a more precise definition of tasks, protocols, responsibilities, time frames, formality and degree of 'collectiveness'. For institutional transformation on the basis of deliberate concerted action undertaken by a messy partnership, nine learning purposes are likely to be relevant (though not all necessarily simultaneously or equally prominently): financial accountability; operational improvement; strategic adjustment; contextual understand-

ding; capacity strengthening; research; self-auditing; advocacy; and sensitisation.

4. Plan for *sense-making* as well as information. The sense-making process must be appropriate for the type of situation and issue being considered (i.e. multi-ontological). Seek to understand what is needed for critical reflection to be possible among and between the partners and how insights are best communicated, which capacities must be built to make this possible, which additional communication processes are needed, and allocating resources to this end.
5. Balance *formal* protocols and *informal* processes, incorporating everyday interactions of sharing and debate into the monitoring system, and linking the informal sphere to formal processes and channels. Informal processes are not only crucial for ongoing sense-making but also a source of information sharing.
6. Value and seek diverse types of *information*, related specifically to the nature of development (principle 1) and the learning function (principle 3) that has to be met, and understand which processes exist and/or are needed to ensure that such information is shared and debated and informs decisions.
7. Ensure the *institutionalisation* of learning-oriented monitoring. Concerted efforts are needed to ensure that policies, practices, methodologies, responsibilities, and incentives are all helping make monitoring as discussed in this thesis possible.
8. Approach monitoring as an *evolving practice*, thus allowing it to become a dynamic knowledge production process, which when subjected to regular critical reviews and adaptations retains relevance and usefulness.

These design principles must be translated into practice by the key actors in development if the future of monitoring is to be more useful. Development implementers, facilitators, funding agencies and academics have distinct roles to play in the transformation of the 'DNA' of monitoring.

The issues discussed in this thesis relevance far beyond the approaches and initiatives discussed in this thesis. The notion of development-as-project is being replaced by the recognition that shifting institutionalised injustice means focusing on institutional transformation. 'Messy partnerships' and other types of alliances are the new configurations through which institutional transformation increasingly must unfold.

Monitoring, when conceived as a socially negotiated, evolving methodology for structuring information flows and knowledge production and use, offers an approach to help construct 'pathways to sustainability'. However, we need to significantly revise mainstream beliefs and practices about how monitoring can create feedback to harness its potential to deepen and sustain the learning that societies need to deal with 'wicked problems'. This requires reassessing the epistemic and ontological perspectives and principles that underpin monitoring, and determine its feasibility, relevance and ultimately, usefulness.

RESUMO

O senso comum diz que o monitoramento deve ser capaz de oferecer realimentação que ajude a corrigir ações ineficientes. Mas a prática mostra que ao lidar com objetos complexos, como os de desenvolvimento rural, que envolvem ações colaborativas de atores diversos e dinâmicos, as práticas de monitoramento nem sempre desempenham bem o seu potencial. Nesta tese procuro entender porque as práticas são tão limitadas e o que é necessário para desenhar processos de monitoramento que apóiem aprendizados em ações concertadas sobre desenvolvimento equitativo e sustentável. Eu examino a contradição entre monitoramento como a base para aprendizado em ‘*messy partnerships*’ (parcerias igualitárias entre entidades baseadas em valores comuns, mas sem uma hierarquia de controle) e a realidade do monitoramento dirigido por uma preocupação crescente com a contabilidade financeira.

O ambiente – natural, organizacional e sócio-político – constantemente oferecem subsídios para realimentar o processo. Mas esta realimentação necessita ser percebida e interpretada para aprendizados no manejo de recurso rural. O monitoramento pode ser visto como o desenho e a implementação dos ciclos de realimentação necessária para assegurar que o aprendizado coletivo seja alimentado por fluxos de informações dinâmicas dentro e entre os grupos de parcerias igualitárias que favorecem ações concertadas.

Entretanto, nem o monitoramento nem o aprendizado são largamente descritos em termos suficientemente compreensivos ou precisos, para implementação como parte do manejo sustentável dos recursos. O potencial promissor de uma metodologia mais participativa, se baseada na mesma lógica como é normalmente o caso dos M&A (monitoramento e avaliação) convencionais, não oferece inovações suficientes.

No capítulo 1 introduzo o foco da tese utilizando a metáfora que surgiu durante o trabalho de campo no Brasil – ‘*tiririca*’ (*Cyperus rotundus*) uma erva daninha perniciososa que quando cortada germina com mais ferocidade. ‘Tiririca’ representa a complexidade no desenvolvimento de um processo de aprendizado baseado em ações concertadas, assim como a necessidade de soluções estruturais. Neste capítulo eu introduzo conceitos – transformação institucional, parcerias igualitárias, monitoramento e aprendizado (coletivo) –, que fizeram eclodir minha pergunta sobre monitoramento alternativo. Eu delinheio a crescente relevância do tópico, o qual leva às minhas questões de pesquisa:

1. Como o monitoramento é visto pelos discursos do manejo e desenvolvimento rural que advogam formas mais adaptadas de manejo dos recursos rurais? Em que pressuposições sobre os processos de monitoramento, aprendizado coletivo e ações aperfeiçoadas baseiam estes discursos? Qual a orientação prática eles oferecem para o monitoramento orientado pelo aprendizado?
2. Qual é a lógica que sublinha – com as pressuposições referentes – as principais metodologias de monitoramento e por sua vez qual é a teoria que espera-se guiará a prática?

3. O que podem as experiências práticas de um processo de mudança rural em pequena escala no Brasil e de uma grande entidade de desenvolvimento rural mostrar sobre o que é necessário para o monitoramento contribuir para o aprendizado coletivo?
4. Quais são os insights oferecidos pelos estudos em cognição e aprendizado organizacional que ajudam a preencher os vazios teóricos e superar os desafios práticos no processo de monitoramento orientado pelo aprendizado?
5. Dados estes insights teóricos e empíricos, o que requer uma metodologia de monitoramento alternativo para que ele dispare as formas de aprendizados necessários para assegurar o manejo dos recursos rurais de forma adaptativa e colaborativa?

No capítulo 2 eu explano como a tese desenvolve a partir de questões que emergiram do meu envolvimento com diversas intervenções e organizações, de 1994 até o presente. E procuro fundir os fios da experiência com argumentos coesos ao discutir experiências e teorias chave nas quais eu elaborei esta tese e as metodologias utilizadas. Eu utilizo quatro aspectos da teoria para interpretar as experiências: discurso contextualizado; a teoria aceita e a teoria em uso de monitoramento; teorias inspiradoras e teoria metodológica.

No capítulo 3 argumento porque o foco desta tese é tão crítico. Examinou três discursos chave que atualmente guiam muito o pensamento e a prática no manejo do desenvolvimento rural – manejo adaptativo, manejo colaborativo dos recursos, e modo de vida (*'livelihoods'*) rural sustentável. Estes discursos estão preocupados com o comportamento adaptativo, aprendizado coletivo e tomada de decisão iterativa. Estes são os valores que dirigem o foco da conservação ambiental, uso equitativo dos recursos e redução da pobreza.

O discurso do manejo adaptativo acentua quatro características do monitoramento para manejo dos recursos: o efeito da hipótese do refinamento de modelos, utilizando dados de monitoramento simulado; o papel dos indicadores para fazer tangível as visões, alvos e a qualidade dos recursos; a importância de investigar coleção de dados de longa duração e processos deliberativos baseados nestes dados; e o foco na experimentação científica e surpresas. Entretanto, na prática, vários problemas ocorreram, incluindo o tempo e os gastos para coleta dos dados necessários; monitoramento ecológico inadequado; dificuldade em acordar quais os méritos da experimentação deveriam ser monitorados; e ingenuidade sobre os desafios de desenhar sistemas de monitoramento e análise de informações em conjunto.

Para o manejo colaborativo dos recursos (CRM – sigla em inglês), esforços de monitoramento devem combinar uma perspectiva de modelo lógico e teste de hipótese. A perspectiva de modelo lógico é usada para planejar iniciativas e estruturar monitoramentos. Tais modelos focam no monitoramento de indicadores de resultados pré-determinado e específicos, para provar progresso e assegurar contabilidade social. Articulação conjunta e acesso continuado dos indicadores são centrais no monitoramento CRM. Críticas ao CRM incluem: ingenuidade sobre a comunidade e consensos e simplificação da complexidade do monitoramento coletivo.

A metodologia do modo de vida rural sustentável (*livelihoods*) (SLA – sigla em inglês) remete a um sistema de M&A, com indicadores acompanhantes, para acessar o progresso em direção a sustentabilidade do modo de vida. SLA sustenta-se nas principais práticas de M&A, o que, no caso de direcionamento externo/intervenções iniciadas de

desenvolvimento, significa usar modelos de programa lógico. O papel do monitoramento é apoiado em termos gerais, tais como o de usar a idéia de SLA para estruturar processos de M&A. A literatura sobre modo de vida oferece um conjunto de práticas desejáveis de monitoramento, as quais constituem uma perspectiva idealizada e muito simplificada, e refere de forma não crítica aos métodos e arcabouços existentes que perpetuam os problemas que eles trazem e não apontam para um uso integrado.

Apesar das limitações mencionadas, o aprendizado com e pelos atores é um princípio importante em todos os três discursos e espera-se que ajude na identificação de ações que, por sua vez, imagina-se mais efetivas para alcançar os objetivos esperados. Assume-se que tal aprendizado requer sistemática procura e compartilhamento de informações, o que necessita portanto de ciclos de realimentação para os quais o monitoramento é considerado um veículo essencial.

Entretanto, nenhum dos discursos identifica como estes ciclos de realimentação podem ser construídos. Espera-se do monitoramento o fornecimento de dados brutos (não trabalhados) e espaços para reflexão para criar insights. Como o aprendizado deve ocorrer é articulado principalmente em termos de intenção e princípios, com referências práticas sendo feitas em direção aos modelos lógicos existentes ou à metodologia de testes de hipóteses e com métodos participativos. O discurso sustenta-se em um tanto obscuro e misto de monitoramento como um processo de pesquisa e monitoramento de objetivos baseados em modelos de programas lógicos.

No capítulo 4 discuto o monitoramento baseado no programa lógico, utilizando muitos guias de monitoramento, representativos daqueles amplamente utilizados no setor de desenvolvimento. Identifico 13 pressuposições que reforçam a teoria aceita como a principal no monitoramento. Estas pressuposições relacionam-se: a definição dos limites do monitoramento, como as informações são vistas e como os processos de monitoramento são percebidos para serem então construídos e implementados.

Uma definição limite é criada entre monitoramento e avaliação e pressupõe-se que esta é uma distinção suficientemente útil para construir mecanismos de realimentação e sistemas de informação (Pressuposição 1). Assume-se existir uma ligação entre monitoramento e como ele serve ao manejo (Pressuposição 2). Presume-se que a análise estratégica e interpretação não requerem ser incluídos explicitamente no desenvolvimento de um processo de monitoramento (Pressuposição 3).

O segundo grupo de pressuposições refere-se à maneira de enxergar as informações. Sistemas de monitoramento são desenhados mais para fornecer informações necessárias, do que interpretar informações (Pressuposição 4). Espera-se dos atores a capacidade de antecipar suas informações adequadamente, em termos de compreensão e de um conjunto bastante estável de indicadores, independente da diversidade dos atores ou temas em jogo (Pressuposição 5). Guias de monitoramento ignoram os processos de análise, reflexão crítica, interpretação e comunicação de informação de forma gritante (Pressuposição 6). Indicadores são considerados uma forma apropriada de expressar e partilhar informações balanceadas que possibilitem aprendizados (Pressuposições 7 e 8).

O terceiro conjunto de pressuposições refere-se em como acredita-se devem ser construídos e implementados os processos de monitoramento, os quais são resumidos em uma série de passos padrão. Presume-se que os atores possuem tempo suficiente,

conhecimento, clareza e vontade de seguir os passos básicos com detalhes suficientes para alcançar resultados efetivos (Pressuposição 9). Os monitoramentos convencionais presumem que os passos possuem validade genérica, independente do contexto sócio-cultural (Pressuposição 10). Relação de poder entre aqueles envolvidos no monitoramento são ignoradas se não mais, pelo menos no que se refere ao assunto (Pressuposição 11). Os monitoramentos convencionais presumem que as pessoas saberão como lidar com e efetivamente usar o monitoramento informal que ocorre através de interações diárias fora dos canais e processos formais descritos (Pressuposição 12). Sistemas de monitoramentos não são vistos como uma necessidade de aprender do, ou adaptado para, o ambiente no qual eles estão sendo implementados (Pressuposição 13).

Espera-se que os monitoramentos convencionais, baseados nestas pressuposições, forneçam realimentação ou informação que supõe-se irão desencadear aprendizados em iniciativas de desenvolvimento. Nenhuma distinção é feita em termos de validade deste modelo de monitoramento para diferentes tipos de processos de desenvolvimento ou para diferentes tipos de configuração de organizações.

Material empírico é discutido nos capítulos 4, 5 e 6: esforços de M&A nos 33 projetos apoiados pelo FIDA (Fundo Internacional de Desenvolvimento Agrícola) realizados com base em monitoramento convencional, e em um projeto de três anos de pesquisa-ação com parcerias igualitárias no Brasil, baseado em monitoramento participativo como uma alternativa possível.

Evidência dos 33 projetos do FIDA indicam que as pressuposições do monitoramento convencional são problemáticas. Dois tipos de diferenças podem ser encontradas: entre a teoria do monitoramento sobre o contexto operacional e a realidade do entorno, e entre a teoria e prática do monitoramento. As dificuldades resultam de atenção insuficiente dada ao adequado processo de monitoramento e a sua realçada lógica com o contexto operacional dos projetos do FIDA. Além disto, uma perspectiva linear de causa-efeito e foco processual em como construir e implementar monitoramento não reconhecem a realidade de parcerias dinâmicas na construção e socialização de entendimentos de intenções iniciais de desenvolvimento de intervenções. Finalmente, a prática de monitoramento não é baseada em um entendimento claro de como é o aprendizado, como ele pode ser desenhado e como ele ocorre em relação ao monitoramento.

A pesquisa-ação realizada no Brasil mostrou que o monitoramento participativo não é necessariamente uma resposta. Para que as formas de monitoramento participativo possam contribuir mais com o aprendizado coletivo é necessário referir-se a cinco temas importantes. Primeiro, aprendizado deve ser visto como o resultado do processo de desenvolvimento de monitoramento e não dos dados. Valorizar ambos é importante para a parceria igualitária, que deve continuamente articular, refinar e (re)alinhar entendimentos e prioridades. Segundo, a parceria igualitária requer encontrar uma interpretação de participação que apóia ações concertadas, e que ainda respeite as particularidades dos parceiros e suas próprias culturas e ritmos de reflexão. Terceiro, diálogo entre os parceiros é criticamente importante para os dados serem úteis. Entretanto, monitoramento participativo requer mudança da visão do monitoramento como um sistema de dados para a visão de monitoramento como um

processo de comunicação. Quarto, referir-se a todo o monitoramento através de um tipo de processo de dados (i.e. indicadores são arranjados em um hierarquia de objetivos) e uma imagem estática da parceria, em ação concertada, não preenchem as diversas necessidades do processo de aprendizado que ocorre em transformações institucionais (e.g., inovação técnica, difusão das inovações, processos organizacionais). Finalmente, organizar o processo de monitoramento participativo foi mais caro e menos sustentável que inicialmente esperado. A dinâmica entre e dentro dos grupos de parceiros, e o entendimento que mudanças no foco da estratégia acontecem (em parte como o resultado do monitoramento) significa que atividades vêm e vão e assim o referido monitoramento.

O monitoramento participativo somente possui vantagens quando ele repete, pelo menos em parte, muitas das questionáveis pressuposições do monitoramento convencional. O material empírico faz-me sugerir que o monitoramento baseado em marco lógico – seja prática convencional ou participativa – deve beneficiar-se de *insights* retirados de outras áreas teóricas.

O capítulo 7 oferece um conjunto de idéias retirado de dois campos: um, estudos cognitivos, que ainda não influenciou as práticas do monitoramento no setor do desenvolvimento e outro, aprendizado organizacional, que está lentamente sendo cortejado como potencialmente interessante. Monitoramento constitui em tentativa deliberada e coletiva de guiar nosso saber e cognição ao procurar e processar informações. Aprendizado organizacional examina como um grupo de pessoas comunica e lida com informação que é vital para a sobrevivência de sua organização, e faz isto usando a ciência cognitiva. Entretanto, ambos conhecimentos têm o potencial de ajudar a reconsiderar as crenças sobre o monitoramento.

Desenhando *insights* dos dois campos juntos dão-me quatro idéias com potencial de provocar a reflexão para repensar o monitoramento: (1) parcerias igualitárias como um agente coletivo de cognição; (2) cognição distribuída; (3) *sensemaking* (o processo de interpretação e integração de informação) e (4) cognição dissonante. As idéias são sumarizadas a seguir: parcerias igualitárias devem manter coerência na cognição coletiva e organizacional, e correspondência com o ambiente externo. Cognição em uma parceira confusa é distribuída, o que requer convergência para alcançar efetiva ação concertada. O *sensemaking* é crítico para convergência para a qual diferentes abordagens são necessárias, dependendo da complexidade e das circunstâncias associadas ao tema. A dissonância cognitiva ou surpresa, é um importante indicador de onde a coerência ou correspondência estão incorretas. Sistema de monitoramento pode ser desenhado mais propositivamente, com base na valorização da dissonância cognitiva como um importante disparo para o aprendizado.

O monitoramento requer inovação para contribuir com o seu grande potencial para propiciar aprendizados. Mudanças são necessárias para ver o monitoramento como: dialógica (não somente com uma racionalidade singular), multi-ontológica (não somente assumindo um universo ordenado), distribuído (não centralizado), funcionando através de relações heurísticas (não somente através de dados e de esperanças de omnisciência), essencial para causar impacto (não apenas uma obrigação contratual), sustentando cognição coletiva (não somente um caminho para implementação) e a procura de surpresas (não somente documentando o antecipado).

O capítulo 8 integra os fios empíricos e teóricos da tese, ao sugerir um conjunto de oito princípios de desenho necessários ao aprendizado coletivo no manejo adaptativo do recurso rural. Estes princípios de desenho têm sido identificados para compensar as limitações identificadas no paradigma dominante dos monitoramentos convencional e participativo. Eles não são um conjunto compreensivo de princípios de desenhos para monitoramento orientado no aprendizado. O primeiro dos três princípios refere-se ao propósito de monitoramento, os três próximos princípios referem-se às preocupações operacionais e os dois últimos referem-se sustentação das práticas de monitoramento.

1. Entender a *natureza da transformação institucional* perseguida como um processo de mudança social, para saber o grau de complexidade com o qual está lidando, e a extensão que a informação necessária pode ser antecipada e funções aprendidas pode ser significativa.
2. Reconhecer a natureza dos *atores e parceiros* no monitoramento, analisando o vínculo dos parceiros com a ação concertada, a estrutura de governança e os processos de tomada de decisão de cada parceiro, a alocação de responsabilidades na parceria, o grau de superposição da informação necessária, os caminhos pelos quais cada informação é partilhada e a capacidade de monitoramento. A realidade da parcerias igualitárias força o questionamento do modelo hierárquico e intra-organizacional realçados pelo monitoramento convencional.
3. Especificar processos de monitoramento distintos em termos de *propósitos de aprendizado* para possibilitar uma definição mais precisa de tarefas, protocolos, responsabilidades, tempo necessário, formalidades e grau de coletividade. Para atingir transformações institucionais com base em deliberadas ações concertadas desenvolvidas por parcerias igualitárias, nove propósitos de aprendizados parecem ser relevantes (embora nem todos sejam necessariamente simultâneos ou igualmente proeminentes): contabilidade financeira; melhoria operacional; ajustamento estratégico; entendimento contextual; capacidade de fortalecimento; pesquisa; criar e manter confiança; advocacia e sensibilização.
4. Planejar para o *sensemaking* tanto quanto informação. O processo de *sensemaking* deve ser apropriado ao tipo de situação e tema considerado (i.e. multi-ontológica). Procurar o entendimento necessário para que a reflexão crítica possa ser possível entre parceiros e para que os insights possam ser melhor comunicados, quais as capacidades devem ser construídas para fazer isto possível, quais os processos de comunicação adicional são necessários e alocar recursos para este fim.
5. Balancear os protocolos *formais* e os processos *informais*, incorporando interações diárias de compartilhamento e debate no sistema de monitoramento, e ligar as esferas informais aos processos e canais formais. Processos informais não são somente cruciais para o *sensemaking*, mas também como fonte de informações para o compartilhamento.
6. Valorizar e buscar *diversos tipos de informação*, relacionados especificamente à natureza do desenvolvimento (princípio 1) e funções de aprendizado (princípio 3) que devem ser encontradas, e entender quais processos existem e/ou são necessários para assegurar que tais informações sejam compartilhadas e debatidas em decisões formais.
7. Assegurar a *institucionalização do monitoramento* orientado para o aprendizado. Esforços concertados são necessários para assegurar que as políticas, práticas, metodologias, responsabilidades e incentivos possam ajudar a fazer o monitoramento, como discutido

nesta tese, possível.

8. Ver o monitoramento como *uma prática evolutiva*, assim permitindo que ele se torne um processo de produção de conhecimento dinâmico per si, que quando sujeito a revisões e adaptações críticas regulares retenha a relevância e a utilidade.

Estes princípios de desenho devem ser traduzidos em práticas por atores chave de desenvolvimento, se quisermos um futuro mais útil para o monitoramento. Os implementadores de desenvolvimento, os facilitadores, os financiadores e a academia possuem papéis distintos a jogar na transformação do 'DNA' do monitoramento.

A relevância do tema discutido nesta tese vai além dos métodos e iniciativas aqui discutidos. A noção do 'desenvolvimento como projeto' está sendo trocada pelo reconhecimento de que mudar a injustiça institucionalizada significa focar em transformação institucional. Parcerias igualitárias e outros tipos de alianças são as novas configurações através das quais transformações institucionais devem desvendar de forma crescente.

Monitoramento, quando concebido como socialmente negociável, envolvendo metodologia para estruturar fluxos de informações e produção de conhecimento e uso, oferece uma arcabouço para ajudar a construir 'caminhos para a sustentabilidade'. Entretanto, nós precisamos revisar significativamente nossas crenças e práticas convencionais sobre como o monitoramento pode criar realimentações para assegurar seu potencial de aprofundar e sustentar o aprendizado que as sociedades necessitam para lidar com seus 'problemas perversos'. Isto requer re-acessar as perspectivas e princípios epistemológicos e ontológicos que reforçam o monitoramento, e determinam sua viabilidade, relevância e, por último, sua utilidade.

SAMENVATTING

Monitoringsystemen zouden logischerwijs in staat moeten zijn om feedback te genereren waarmee ineffectief handelen kan worden gecorrigeerd. De praktijk leert echter, dat monitoring deze belofte niet waarmaakt bij complexe plattelandsontwikkelingsprocessen waarin steeds wisselende groepen stakeholders moeten samenwerken. In dit proefschrift beschrijf ik mijn zoektocht om te begrijpen wat de praktijk zo beperkt maakt, en hoe je monitoringsystemen kunt ontwikkelen die collectieve leerprocessen stimuleren in samenwerkingsverbanden voor rechtvaardige en duurzame ontwikkeling. Ik onderzoek de tegenstelling tussen monitoring als basis van leren in *messy partnerships* (losse samenwerkingsverbanden tussen groepen en organisaties die niet contractueel aan elkaar gebonden zijn maar wel dezelfde visie delen), en de realiteit waarin monitoring gedreven wordt door het toegenomen belang van financiële verantwoording.

De natuurlijke, de organisationele en de sociopolitieke omgeving geven voortdurend feedback. Maar die feedback moet wel waargenomen en geïnterpreteerd worden om leren in duurzame plattelandsontwikkeling mogelijk te maken. Monitoring kan beschouwd worden als het ontwerpen en implementeren van feedback loops die ervoor zorgen dat het collectieve leerproces gevoed wordt door de gestage informatiestroom binnen en tussen groepen stakeholders in *messy partnerships*, en dat dit leerproces vervolgens tot eensgezind handelen leidt.

Monitoring en leren worden echter meestal niet omschreven in termen die uitvoerig en precies genoeg zijn om ze (met succes) te kunnen toepassen in duurzame plattelandsontwikkeling. Benaderingen die een grotere nadruk op participatie leggen, zijn veelbelovend maar niet vernieuwend genoeg als ze op dezelfde logica gebaseerd zijn als gangbare monitoring- en evaluatiesystemen (M&E systemen).

In Hoofdstuk 1 introduceer ik het centrale thema van mijn proefschrift met een metafoer die tijdens veldwerk in Brazilië bij me opkwam – ‘*tiririca*’ (*Cyperus rotundus*), een kwaadaardig onkruid dat met elke poging om het terug te dringen, steeds sneller en hoger groeit. ‘*Tiririca*’ staat voor de complexiteit van het ontwikkelen van een leerproces dat gebaseerd is op het monitoren van samenwerkingsverbanden, als ook voor de noodzaak van structurele oplossingen. In dit hoofdstuk introduceer ik de concepten – institutionele verandering, *messy partnerships*, monitoring en (collectief) leren – waaruit mijn zoektocht naar alternatieve vormen van monitoring is voortgekomen. Ik schets het groeiende belang van het onderwerp, en dat brengt me tot de volgende onderzoeksvragen:

1. Welke plaats heeft monitoring in de verschillende benaderingen van duurzame plattelandsontwikkeling die adaptieve strategieën voorstaan? Welke aannames en vooronderstellingen hebben deze benaderingen, ten aanzien van monitoringprocessen, collectief leren en effectiever handelen? Wat voor praktische invulling geven zij aan *learning-oriented monitoring* (monitoring gericht op leren)?
2. Wat is de onderliggende logica – en de daarbij behorende vooronderstellingen – van gangbare monitoringmethoden, en wat is derhalve de theorie die monitoring in de prak-

tijk moet leiden?

3. Wat leert de praktijk – in kleinschalige rurale veranderingsprocessen in Brazilië, en in een grote plattelandsontwikkelingsorganisatie – over hoe monitoring kan bijdragen aan collectieve leerprocessen?
4. Welke inzichten komen voort uit onderzoek naar cognitie en *organizational learning* (leerprocessen binnen organisaties), die monitoringtheorie kunnen aanvullen en het hoofd helpen bieden aan de praktische uitdagingen van *learning-oriented monitoring* ?
5. Gegeven die empirische en theoretische inzichten, wat zou een alternatief monitoringproces in zich moeten hebben om manieren van leren te bevorderen die adaptieve vormen en samenwerkingsvormen van duurzame plattelandsontwikkeling mogelijk maken?

In *Hoofdstuk 2* leg ik uit hoe mijn proefschrift is ontstaan uit vragen die naar voren zijn komen tijdens mijn betrokkenheid bij diverse interventies en organisaties, van 1994 tot heden. Ik heb getracht om mijn praktijkervaringen te verweven tot een samenhangende redenering, door de belangrijkste ervaringen, methoden en theorieën waarop ik me in dit proefschrift baseer, uiteen te zetten. Ik gebruik theorie op vier manieren om mijn ervaringen te interpreteren: het contextualiseren van de thematiek, de beleden versus de toegepaste theorie van monitoring, theoretische bouwstenen, en methodologische theorie.

In *Hoofdstuk 3* bepleit ik het grote belang van het thema van dit proefschrift. Ik onderzoek de drie overheersende benaderingen die het denken en de praktijk in duurzame plattelandsontwikkeling grotendeels bepalen - *adaptive management*, *collaborative resource management*, en *sustainable rural livelihoods*. Deze benaderingen hebben betrekking op adaptief gedrag, collectieve leerprocessen, en interactieve besluitvorming. Ze richten zich op milieubehoud, het rechtvaardig gebruik van hulpbronnen, en armoedevermindering.

De *adaptive management* benadering benadrukt vier elementen in het monitoren van hulpbronbeheer: het gebruik van modellen en gesimuleerde data om hypothesen aan te scherpen; de rol van indicatoren om de visies, de doelen, en de staat van hulpbronnen tastbaar te maken; het belang om te investeren in het verzamelen van gegevens op de lange termijn, en in de interpretatie ervan; en de focus op wetenschappelijke experimenten en onverwachte uitkomsten. In de praktijk dienen zich echter diverse problemen aan: het kost veel tijd en geld om de benodigde gegevens te verzamelen; de monitoring van ecologische aspecten is ontoereikend; er zijn vaak meningsverschillen over welke onderwerpen voor experimenten en monitoring in aanmerking komen; en men beseft vaak niet hoe moeilijk het is om samen monitoringsystemen te ontwerpen en informatie te analyseren.

Monitoring in *collaborative resource management (CRM)* combineert het testen van hypothesen met het *logical framework* model. Het *logical framework* is een gangbare methode om ontwikkelingsprojecten te ontwerpen en de voortgang ervan te monitoren en evalueren. Dergelijke modellen richten zich op indicatoren van specifieke, van te voren bepaalde resultaten, om voortgang aan te tonen en verantwoording zeker te stellen. Het gezamenlijk vaststellen van indicatoren en de constante monitoring van de gekozen indicatoren vormt de kern van CRM monitoring. De kritiek op CRM is onder andere dat er te simpel gedacht wordt over *community* en consensus, en over de complexiteit van collectieve monitoringprocessen.

De *sustainable rural livelihoods* aanpak (SLA) vereist een M&E systeem – met bijbehorende indicatoren – waarmee de voortgang richting *livelihood sustainability* beoordeeld kan worden. Deze benadering vertrouwt op de gangbare M&E praktijk: bij ontwikkelingsinterventies die van buitenaf geïnitieerd zijn, wordt het *logical framework* gebruikt. De rol van monitoring wordt slechts in algemene termen geformuleerd, zoals het gebruik van het *livelihood* schema om M&E processen te structureren. De literatuur biedt een aantal gewenste monitoringmethoden en plaatst die in een geïdealiseerd en gesimplificeerd perspectief, waarin zonder enige kritiek wordt verwezen naar bestaande methodes en benaderingen die geen oplossing bieden voor de bijbehorende problemen; een leidraad voor geïntegreerd gebruik ontbreekt.

Ondanks de genoemde beperkingen is het ‘leren’ met en door stakeholders een belangrijk beginsel van alle drie de benaderingen. Dit leren zou moeten leiden tot effectiever handelen en het bereiken van gestelde doelen. Zulke leerprocessen vereisen een systematisch zoeken en delen van informatie, zo wordt verondersteld; vandaar de behoefte aan feedback, zoals die met name door monitoring gegenereerd kan worden.

Geen van de drie benaderingen stelt echter vast hoe deze feedback loops gemaakt zouden moeten worden. Monitoring moet de ruwe gegevens en ruimte voor reflectieprocessen leveren waarmee inzichten verworven kunnen worden. Hoe het leren zou moeten plaatsvinden, wordt voornamelijk in termen van intenties en beginselen uitgelegd, met praktische verwijzingen naar participatieve methoden, logische modellen zoals het *logical framework*, en manieren om hypothesen te testen. De drie benaderingen berusten op een vage combinatie van monitoring als onderzoeksproces, en monitoring van doelen die vooraf in logische modellen zijn vastgelegd.

In *Hoofdstuk 4* bespreek ik monitoringsystemen die gebaseerd zijn op logische modellen zoals het *logical framework*. Ik maak hierbij gebruik van verschillende handleidingen, zoals die in de ontwikkelingssector veel gebruikt worden. Daaruit leid ik dertien vooronderstellingen af die de grondslag vormen van de theorie achter gangbare monitoring. Deze vooronderstellingen hebben betrekking op: (1) het afbakenen van de definitie van monitoring; (2) de visie op informatie; en (3) het ontwerp en de uitvoering van monitoringprocessen.

De definitiegrens die getrokken wordt tussen ‘monitoring’ en ‘evaluatie’, wordt verondersteld duidelijk genoeg te zijn om feedbackmechanismen en informatiesystemen te kunnen construeren (Vooronderstelling 1). Het wordt als vanzelfsprekend geacht dat monitoring managementdoeleinden kan dienen (Vooronderstelling 2). Het wordt niet noodzakelijk geacht om strategische analyse en *sense-making* (het complexe, collectieve proces van betekenis geven aan data en consequenties verbinden aan de uitkomsten) expliciet in het monitoringproces in te bouwen (Vooronderstelling 3).

De tweede groep vooronderstellingen heeft betrekking op hoe informatie wordt gezien. Monitoringsystemen worden ontworpen om in informatiebehoefte te voorzien, in plaats van om informatie te interpreteren (Vooronderstelling 4). Van stakeholders wordt verwacht dat ze adequaat kunnen anticiperen op hun informatiebehoefte in termen van een uitgebreide en relatief constante set indicatoren, met de daarbij behorende methoden en processen, ongeacht de diversiteit van de spelers of van de problemen in kwestie (Vooronderstelling 5). Monitoringhandleidingen besteden geen enkele aandacht aan de processen van analyse, interpretatie, en communicatie van

informatie, en de kritische reflectie op informatie (Vooronderstelling 6). Indicatoren worden geacht een voldoende evenwichtig beeld van informatie te geven, dat leren mogelijk maakt (Vooronderstellingen 7 en 8).

De derde groep vooronderstellingen heeft betrekking op de gangbare manier van ontwerpen en uitvoeren van monitoringprocessen, in de vorm van een reeks gestandaardiseerde stappen. Er wordt aangenomen dat stakeholders over voldoende tijd, expertise, analytisch vermogen en bereidwilligheid beschikken om alle stappen in voldoende detail af te leggen voor een effectief resultaat (Vooronderstelling 9). Gangbare monitoring veronderstelt dat deze stappen een generieke waarde hebben, onafhankelijk van de sociaal-culturele context (Vooronderstelling 10). Machtsrelaties tussen de verschillende partijen die bij monitoring betrokken zijn, worden buiten beschouwing gelaten, of er wordt hooguit over vermeld dat ze van belang zijn (Vooronderstelling 11). Gangbare monitoring veronderstelt dat mensen weten hoe ze effectief gebruik kunnen maken van informele monitoring, die plaatsvindt via dagelijkse interacties, buiten de voorgeschreven processen en formele kanalen om (Vooronderstelling 12). Van monitoringsystemen worden niet verwacht dat ze moeten leren van de omgeving waarin ze worden toegepast, of dat ze zich aan die omgeving moeten aanpassen (Vooronderstelling 13).

Gangbare monitoring, die gebaseerd is op deze vooronderstellingen, zou de feedback of informatie moeten leveren die het leerproces in ontwikkelingsinitiatieven zou moeten stimuleren. Voor de validiteit van dit model wordt geen onderscheid gemaakt tussen de verschillende typen ontwikkelingsprocessen of de mogelijke configuraties van betrokken organisaties.

In Hoofdstukken 4, 5 en 6 worden empirische gegevens besproken: praktijkervaringen met gangbare monitoring en evaluatie in 33 projecten van het *International Fund for Agricultural Development* (IFAD), en ervaringen in een driejarig actieonderzoek met een *messy partnership* in Brazilië, waarin participatieve monitoring als een mogelijk alternatief voor gangbare monitoring onderzocht is.

Uit de 33 IFAD -projecten blijkt dat de vooronderstellingen waarop gangbare monitoring gebaseerd is, problematisch zijn. Er is een discrepantie tussen de theorie en de praktijk van monitoring, en tussen de theoretische en werkelijke operationele context. Moeilijkheden ontstaan door onvoldoende aandacht voor de 'inpassing' van monitoringprocessen en hun onderliggende logica in de operationele context van IFAD-projecten. De realiteit van dynamische samenwerkingsverbanden, waarin overeenstemming ontwikkeld moet worden over de intenties van een ontwikkelingsinterventie, wordt bovendien niet onderkend door het lineaire 'oorzaak-gevolg' denken en de focus op ontwerp- en toepassingsprocedures. En tenslotte is de monitoringpraktijk niet gebaseerd op een duidelijk beeld van wat leren precies is, hoe leren kan worden vormgegeven, en hoe leren plaatsvindt in relatie tot monitoring.

Uit het actieonderzoek in Brazilië is gebleken dat participatieve monitoring niet noodzakelijkerwijs de oplossing is. Er moeten vijf belangrijke problemen worden aangepakt voordat participatieve monitoring een wezenlijke bijdrage kan leveren aan collectief leren. Ten eerste moet onderkend worden dat mensen niet alleen leren van de gegevens die een monitoringsysteem voortbrengt, maar ook van het proces waarin zij het monitoringsysteem ontwikkelen. Beide moeten op waarde worden geschat in *messy partnerships*, waarin opvattingen en prioriteiten steeds opnieuw geformuleerd,

bijgeschaafd, en op één lijn gebracht moeten worden. Ten tweede vereist een *messy partnership* dat 'participatie' geïnterpreteerd wordt als het koesteren van samenwerking én als het respecteren van de uniekheid, de cultuur en het reflectieritme van de betrokkenen. Ten derde is dialoog tussen de partners van doorslaggevend belang voor de bruikbaarheid van de gegevens. Participatieve monitoring vereist dus dat monitoring niet zozeer als een datasysteem wordt gezien, maar als een communicatieproces. Ten vierde, als voor elke vorm van monitoring hetzelfde dataproces gehanteerd wordt (indicatoren die gegroepeerd zijn in een objectief hiërarchisch model) en als samenwerkingsverbanden als statisch worden gezien, dan is er geen plaats voor de uiteenlopende leerprocessen die institutionele verandering met zich meebrengt (zoals technische innovatie en de disseminatie ervan, en organisatieprocessen). En tenslotte, het is gebleken dat het opzetten van participatieve monitoring een kostbaar proces is, dat ook minder duurzaam is dan verwacht. De dynamiek binnen en tussen groepen partners, en de verschuiving van de strategische focus naarmate het inzicht groeit (deels als een resultaat van monitoring), betekent een zekere mate van verloop van activiteiten, en de daarmee samenhangende monitoring.

In feite biedt participatieve monitoring maar weinig voordelen, omdat er dezelfde problematische vooronderstellingen aan ten grondslag liggen als bij gangbare monitoring. Op grond van de empirische gegevens suggereer ik dat monitoringsystemen die op logische modellen zijn gebaseerd – in gangbare dan wel participatieve vorm –, zouden kunnen profiteren van inzichten uit andere vakgebieden.

In *Hoofdstuk 7* maak ik gebruik van een aantal ideeën afkomstig uit twee vakgebieden: (1) cognitieve wetenschap, een vakgebied dat nog geen invloed heeft gehad op de monitoringpraktijk in de ontwikkelingssector, en (2) *organisational learning*, een vakgebied waar de sector al voorzichtig aan geroken heeft. Monitoring is een bewuste en collectieve poging om ons 'weten', onze 'cognitie', te leiden door het verzamelen en verwerken van informatie. Voortbouwend op cognitieve wetenschap, onderzoekt *organisational learning* hoe een groep mensen communiceert en omgaat met informatie die cruciaal is voor het voortbestaan van hun organisatie. Beide vakgebieden kunnen dus potentieel bijdragen aan het herzien van de visie op monitoring.

Door inzichten uit deze twee vakgebieden bij elkaar te brengen zijn er bij mij vier ideeën ontstaan, die uitnodigen tot een nieuwe visie op monitoring: (1) het *messy partnership* als collectieve cognitieve actor; (2) gedistribueerde cognitie; (3) *sense-making*; en (4) cognitieve dissonantie. Deze ideeën kunnen als volgt worden samengevat. *Messy partnerships* moeten de coherentie van hun cognitie (gevoelens, denken, handelen, en informatie) in stand houden, zowel binnen als tussen de betrokken organisaties. Ook moet hun cognitie corresponderen met de buitenwereld. In een *messy partnership* is cognitie gedistribueerd; effectieve samenwerking is dus alleen mogelijk als stakeholders en hun cognities convergeren. *Sense-making* is van cruciaal belang voor convergentie. Hiervoor zijn verschillende benaderingen nodig, die bepaald worden door de complexiteit van de omstandigheden en de problemen in kwestie. Cognitieve dissonantie, of 'het onverwachte', is een belangrijke indicator van gebrekkige coherentie of haperende aansluiting op de buitenwereld. Monitoringsystemen kunnen doelgericht ontworpen worden indien cognitieve dissonantie erkend wordt als een belangrijke prikkel tot leren.

Monitoring moet zich vernieuwen, wil het de belofte waarmaken dat monitoring mensen in staat stelt om te leren; en de visie op monitoring moet veranderen. Monitoring moet gezien worden als: dialogisch (dus niet als een op zichzelf staande rationaliteit), multi-ontologisch (dus niet alleen uitgaand van een geordende wereld), gedistribueerd (dus niet gecentraliseerd), functionerend via menselijke relaties en heuristisch (dus niet slechts via data en de hoop op alwetendheid), essentieel voor resultaat (dus niet alleen een contractuele verplichting), van belang voor het behoud van collectieve cognitie (dus niet alleen om de projectuitvoering te volgen), en nieuwsgierig naar het onverwachte (dus niet alleen gericht op verwachte uitkomsten).

In Hoofdstuk 8 worden de empirische en theoretische lijnen van dit proefschrift met elkaar verbonden in een voorstel van acht ontwerpbeginselen voor collectief leren in adaptieve duurzame plattelandontwikkeling. Deze principes zijn vastgesteld om de eerdergenoemde beperkingen van gangbare en participatieve monitoring te ondervangen. Het is echter geen volledige set ontwerpbeginselen voor *learning-oriented* monitoring. De eerste drie principes gaan over het doel van monitoring, de volgende drie gaan over operationele kwesties, en de laatste twee gaan over het ondersteunen van de monitoringpraktijk.

1. Zie in dat *institutionele verandering* in wezen een maatschappelijk veranderingsproces is. Zo kun je de complexiteit ervan beter op waarde schatten; beter de aard van de informatiebehoefte beoordelen; en beter inschatten hoe groot het belang van de verschillende leerdoelen zal zijn (beginsel 3).
2. Herken de aard van *actoren en samenwerkingsverbanden* in relatie tot monitoring. Analyseer de betrokkenheid van de samenwerkingspartners; onderzoek de besluitvormingsprocessen bij elk van de partners; ga na hoe verantwoordelijkheden binnen het samenwerkingsverband verdeeld worden; en kijk naar de mate waarin informatiebehoeften elkaar overlappen, de manier waarop informatie wordt uitgewisseld, en de monitoringcapaciteit. De realiteit van *messy partnerships* dwingt tot een kritische beschouwing van het hiërarchische, intra-organisatiele model waarop gangbare monitoring is gebaseerd.
3. Maak een precieze omschrijving van de verschillende monitoringprocessen in termen van *leerdoelen*. Zo kunnen taken, protocollen, verantwoordelijkheden, tijdschema's, en de mate van nauwkeurigheid en participatie beter gedefinieerd worden. Om institutionele verandering te bewerkstelligen via doelgerichte samenwerking in *messy partnerships*, zijn de volgende negen leerdoelen mogelijk relevant (niet noodzakelijkerwijs allemaal tegelijk, of in gelijke mate): financiële verantwoording; operationele verbetering; strategische aanpassing; op de hoogte blijven van de operationele context; capaciteitsversterking; onderzoek; opbouwen en behouden van vertrouwen; lobbywerk; en bewustwording en motivatie.
4. Zet zowel *sense-making* als informatie op de agenda. Zorg dat het proces van *sense-making* toegesneden is op de situatie en het probleem in kwestie (m.a.w. het proces moet multi-ontologisch zijn). Onderzoek hoe kritische reflectie binnen en tussen betrokken partijen gestimuleerd kan worden; hoe inzichten het best gecommuniceerd kunnen worden; welke capaciteiten daarvoor ontwikkeld moeten worden; en welke communicatieprocessen er nog ontbreken. Zorg dat hiervoor voldoende tijd, geld en capaciteit is.
5. Zorg dat het monitoringsysteem niet alleen uit *formele* protocollen bestaat, maar ook voldoende ruimte biedt voor *informele* processen, zoals dagelijkse interacties. Informele

processen zijn essentieel voor het voortdurende proces van *sense-making*, en voor informatie-uitwisseling.

6. Ga op zoek naar verschillende soorten *informatie*, rekening houdend met de aard van ontwikkeling (beginsel 1) en de gestelde leerdoelen (beginsel 3). Zorg dat je een goed beeld hebt van de bestaande en/of vereiste processen, zodat deze informatie kan worden gedeeld en besproken, en tot besluiten kan leiden.
7. Zorg voor de *institutionalisering* van *learning-oriented* monitoring. Het vereist een gezamenlijke inspanning om te zorgen dat beleid, praktijk, methodologieën, verantwoordelijkheden, en stimulerende maatregelen tezamen bijdragen aan het verwezenlijken van de manier van monitoring die ik in mijn proefschrift voorstel.
8. Beschouw monitoring als een *evoluerende werkwijze*. Zo kan het een dynamisch proces van kennisvermeerdering worden, dat relevant en nuttig blijft mits het proces regelmatig getoetst en aangepast wordt.

Om te zorgen dat monitoring in de toekomst meer gebruikswaarde heeft, moeten de bovengenoemde ontwerpbeginselen naar de praktijk vertaald worden door de belangrijkste spelers in ontwikkelingssamenwerking. Ontwikkelingswerkers, faciliterende partijen, donoren en academici hebben ieder een duidelijke rol in het veranderen van het 'DNA' van monitoring.

De relevantie van de vraagstukken die in dit proefschrift behandeld zijn, reikt veel verder dan de aangehaalde benaderingen en projecten. De notie van 'ontwikkeling-als-project' wordt vervangen door de erkenning dat geïnstitutionaliseerd onrecht pas bestreden kan worden als er wordt ingezet op institutionele verandering. Deze institutionele verandering zal steeds vaker via *messy partnerships* en andere coalitievormen gestalte moeten krijgen.

Als monitoring gezien wordt als een evoluerende, in samenspraak ontworpen methodologie voor het structureren van informatiestromen, kennisvermeerdering en kennistoepassing, dan kan deze benadering een wezenlijke bijdrage leveren aan duurzaamheid. Monitoring heeft de potentie om de leerprocessen die samenlevingen nodig hebben voor het oplossen van complexe problemen, te ondersteunen en te verdiepen. Die potentie kan echter alleen benut worden als de heersende werkwijzen en opvattingen over monitoring als feedback-systeem grondig worden herzien. Dat vraagt om een herbeoordeling van de epistemologische en ontologische gezichtspunten en beginselen die aan monitoring ten grondslag liggen, en die bepalend zijn voor de haalbaarheid, de relevantie, en het uiteindelijke nut ervan.

CURRICULUM VITAE

Irene Maria Guijt was born on 23 June, 1963 in Zoetermeer, The Netherlands. She studied Tropical Land and Water Use Engineering at Wageningen University where she graduated in 1989. Subsequently, she worked at the International Institute for Environment and Development as a researcher in the Sustainable Agriculture Programme. While there, she undertook action research on participatory monitoring in Brazil. In 1997 and 1998, Irene was a visiting lecturer at the Department of Forestry at the Australian National University. Her tasks there included developing a new course on Participatory Resource Management and research on Australian agroforestry. In 1999, she started the PhD with the Communication and Innovation Studies Group on a (very) part-time basis.

Since 1999, Irene also worked as an independent researcher and (process) facilitator focusing on learning processes and systems in rural development and natural resource management, particularly where this involves collective action. Work with organisations like RIMISP, IUCN, IFAD, ActionAid International, the Institute of Development Studies (UK), and various Dutch development NGOs has focused largely on how to ensure more critical reflective thinking can take place that can strengthen pro-poor development. Key publications include: *Participatory Learning and Action: A Trainer's Guide* (co-author 1995), *The Myth of Community: Gender Issues in Participatory Development* (editor with M. K. Shah 1998), and *Negotiating Learning: Collaborative Monitoring in Forest Resource Management* (editor 2007).

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An aerial photograph of a dense forest covered in snow. The trees are mostly bare, with their branches creating a complex, white, and brown pattern against the ground. A solid blue horizontal band runs across the center of the image, containing the text 'Seeking Surprise' in white. The overall scene is bright and wintry.

Seeking Surprise