Reconstruction of Natural Resource Management Institutions in Post-Conflict Situations

A framework for research

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This paper is the first in a series produced by the Marena Research Team, with draws together researchers from the University of Sussex, the Forum for Social Studies (FSS) in Addis Ababa, Ethiopia, and the Centro de Experimentação Florestal (CEF) in Maputo, Mozambique. The research is funded by the Natural Resources Policy Advice Department (NRPAD) of the UK Department for International Development (DFID). We would like to thank Samantha Jones, Tarakegn Yibabie and António Serra for their contributions to the development of this paper. All views expressed are those of the authors, and do not necessarily represent DFID policy. Comments are welcomed by the Marena Research
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The need to develop secure and sustainable livelihoods in Africa is widely recognised. Yet this is occurring at a time of increasing livelihood vulnerability, often associated with environmental degradation, conflict and population displacement. In some cases, violence has become so entrenched that conflict can no longer be seen as exceptional. It has resulted in the flight of millions of people as refugees or as internally-displaced people across the continent. This, in turn, has led various agencies to call for the need to develop more 'durable solutions' to the humanitarian crises resulting from war and displacement.

The last decade has seen growing interest in research which addresses the problems of carrying out development in the post-conflict situation and supports communities where peace has been achieved, making a return to conflict less likely. The World Bank and UNRISD have completed a number of studies into post-conflict repatriation and rehabilitation. Work at IDS in Sussex has also examined the problems of reconstruction in the Complex Political Emergency Programme (COPE), (Harvey, 1997). However, within this general concern with 'reconstruction' and 'rehabilitation', the renewable natural resource (RNR) sector has remained something of a side issue, despite the central importance of this sector in contributing to livelihoods.

The relationship between conflict, displacement and the environment is far from straightforward. This complexity is compounded by a scarcity of detailed studies of the relationship, and a lack of statistics about the environment or populations in conflict situations. Ground-level observations and intuition make a strong case for examining the link between conflict, displacement and increased environmental degradation, but more research is needed. Some areas have experienced direct harm from conflict, for example from the destruction wreaked by the firing or bombing of certain environments. Other negative effects result when conflict and displacement cause disruption to previously carried out certain communal agricultural practices. For example, fear of going to fields which are considered unsafe may result in 'corner-cutting' in agricultural practice, or the concentrated over-farming and over-exploitation of safe areas, and lead to soil erosion or deforestation, or both. There may be a loss of labour, particularly a shortage of male labour needed to invest in the land, and there may also be disruption in the organisation of work-groups which have previously carried out certain communal agricultural tasks. Conflict situations can also lead to disruption in established environmental management practices. For example, conservation structures such as terraces or irrigation structures may not be maintained and fall into disuse; the inability to go to the fields and collect seeds at the right time may lead to a breakdown in indigenous practices which promote bio-diversity.

It is not just the social organisation of work and environmental management techniques which is important and which can be disrupted through conflict, but crucially, conflict can also disrupt the social organisation of access to resources. This definition of rights to, and management of resources, is particularly important in the continued success of agricultural practice, and sustainable management of the environment. Work on indigenous agriculture and development projects has shown that the ability to define rights to resources, and sometimes to resolve conflict over those resources, can make the difference between successful and unsuccessful agriculture (see Adams, 1990, for review). Thus, social and cultural disruption can have a lasting impact on good environmental management and use of renewable natural resources.

1 In Sub-Saharan Africa in 1997, 7.84 million people were considered of concern to the UNHCR (UNHCR, 1997). Of concern includes refugees (38%), internally displaced people (21%), returnees (15%) and others (6%).
2 Black's (1998) Refugees, Environment and Development reviews the strong discourse that has developed among development agencies and governments, where, following a phrase first coined by Leach, refugees are considered as 'exceptional environmental degraders'. Black's work throws doubt on many of the premises behind this discourse, however, and points to a need to examine the relationship more critically.

3 For the purposes of this working paper, indigenous agriculture should be taken to be agriculture which is practiced, managed and controlled by local people. The key definitional aspect is that of control and power, rather than necessarily of age or anything related to origins of the technology, history or supposed autochthony of the local people.
4 Blaikie and Brookfield (1987) describe many forms of 'landesque capital' which are structures and practices which prevent land degradation, but which are also produced through the investment of significant amounts of labour. Large amounts of labour needed are often found through the use of work-groups.
Work on post-conflict reconstruction has often highlighted the importance of institutional change - including capacity building of government and civil society organisations - in providing a basis for sustainable growth in the post-war situation. In this working paper, we widen this definition of institutions to include work patterns, environmental management practices and regimes of rights and procedures governing access to natural resources. It is our contention that through such institutions, broadly defined, people intervene to manage the environment and renewable natural resources. Disruption of institutions can result in threats to the environment. Yet institutions can also provide a potential key for overcoming the environmental problems caused by war and displacement, and a resource to be used in post-conflict reconstruction.

The remainder of this paper is structured in three parts. First, we outline recent work on the role of institutions in RNR management, beyond the specific context of conflict or post-conflict situations. Then, in Section 3, we go on to consider insights into the role of institutions in conflict and post-conflict situations. Finally, we seek to draw these strands together and link to emerging literatures on discourse, social networks, and legitimacy, to outline a framework within which the reconstruction of RNR management institutions in post-conflict situations might be researched.

2 RNR and Institutions

In Africa, the most people are dependent for their livelihoods on access to, and use of, RNR - land, water, animals, plants and fisheries. For their livelihoods to be maintained or sustained, they must have continued access to sufficient RNR. For this reason, the sustainable management of RNR and the means through which access to RNR is determined is a crucial matter, directly related to the degree of vulnerability of resource users.

A major theme that has emerged in recent years in the study of RNR management is the key role of institutions. Institutions mediate between people and the environment and determine who has access to which RNR, to what extent, when, and what use they make of them.

The focus on the role of institutions has been developed in particular by Leach et al. (1997a; 1999). This approach, which they refer to as the 'Environmental Entitlements' (EE) framework moves away from a Malthusian understanding of people-environment relations in terms of notions such as carrying capacity. Building on this set of ideas, it can be argued that institutions determine who gains access to which kind of RNR and the use to which they can be put. In this way, institutions are crucial to an understanding of RNR use and, as has been discussed above, are central in the reconstruction process. It is therefore important to discuss what is meant by institutions and examine the assumptions that are implied by the use of the concept. From the outset it is worth stating that the notion of institutions is itself rather vague and also contested. This vagueness clearly makes it problematic, but like many other vague and hard-to-define concepts, like 'power' for instance, the vagueness or 'fuzziness' also gives it a strength and applicability to situations which are themselves also complex, multi-dimensional and to some extent full of contradictions.

2.1 Defining institutions

Recent conceptions of institutions have developed in particular from New Institutional Economics (NIE) or the New Institutionals (as they are sometimes described). Within NIE, institutions are understood in contrast to organisations, where "[i]f institutions are "the rules of the game in society" (North, 1990:3), then organisations may be thought of as the players, or "groups of individuals bound together by some common purpose to achieve objectives" (North, 1990: 5) (Leach et al., 1997a: 24). Leach et al. dismiss the need for this distinction, enabling 'institutions' to be used as a broad concept to encompass both sets of enduring ideas, rules (formal and informal) and practices (de jure and de facto) as well as bodies and decision-making groups. Thus they define institutions as 'regularised patterns of behaviour that emerge from underlying structures or sets of "rules in use" ... [where] rules are constantly made and remade through people's practices' (ibid., 1997a: 26).

It is worth returning to the New Institutionalist literature to clarify matters. Here a more detailed definition of institutions has developed to understand people-environmental relations and policy. For example, from O'Riordan and Jordan (1996):

The notion of institution applies both to structures of power and relationships as made manifest by organisations with leaders, members or clients, resources and knowledge; and also socialised ways of looking at the world as shaped by communication, information transfer, and the pattern of status and association ... [T]he notion of institution extends beyond organizational form, rules and relationships into more fundamental social and political factors that determine how people think, behave and devise rules through which they expect everyone else to play (1996: 65).

Institutions embody rules that govern practices and views of the world, but they are more than just sets of...
rules. Their very existence also makes possible certain practices and actions which could be seen strictly as against the rules. Scott’s Wapens of the Wark (1985) has shown, for example, how some poorer farmers are able to behave in ways other than those prescribed by the set of rules (which are upheld by the dominant and richer group in society) and that this ‘deviation’ is tolerated. Thus their alternative practices can also be understood as ‘institutionalised’, but in a different way (this is also discussed by Leach et al., 1997a).

Institutions are thus structures of ‘patterns of routinized behaviour’ (O’Riordan and Jordan, 1996: 68). They determine what is considered to be legitimate behaviour and they sanction unacceptable behaviour. In this way they are both ‘cognitive and normative structures which stabilise perceptions, interpretations and justifications’ (ibid.: 68). They are very powerful in shaping human action, but in keeping with recent conceptualisations of power (see Lukes, 1986) they are both constraining and enabling structures: limiting, but also making possible different forms of social action and organisation.

In addition, although these approaches credit such institutions as being powerful in shaping human action, they also make room for the power of human agency. In this way, they take much from the structurationist theories of Giddens and others. The institutions into which a person is born and through which he or she lives and understands the world constitute that person, but at the same time, the person is able to work and change the nature of these institutions. The institutions and the individual are thus mutually constitutive. Human actions are structured by the institutions, but there is also room for dynamism, for change and the processes of history.

Importantly, institutions are as much informal as formal. According to received wisdom, formal institutions are those vested in the state and other bodies subject to official legislature. In contrast, informal institutions encompass traditional, or customary organisations, rules and ideas. However, setting up an analysis in terms of informal vs. formal, where the formal is often considered to be more important and powerful than the informal is problematic. In the rural areas which are the main concern of RNR management, it is often the informal institutions which are more important and powerful, but these combine with other institutions of varying formality in complex and different ways. Formal and informal institutions are often inter-linked and related (Shipton and Goheen, 1992). Each institution should be understood in the way in which it is acting, rather than necessarily being characterised first as formal or informal. This suggests a more suitable approach would consider the institutions in terms of their own merits, and examine their spheres of interest in their own terms, at least in the beginning. Only later, perhaps, is it necessary to consider whether a distinction between formal and informal institutions is analytically helpful (see Box 1).

Thus our understanding of institutions is extremely broad. We understand them as patterns of practice, organisation or sets of rules which have ‘a degree of permanence and are relatively stable’ (O’Riordan and Jordan 1996, following Giddens, 1984). But it is here that the conceptual problems concerning institutions become more complex. These problems are inherited from the fact that the historically-dominant

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**Box 1: Formal and informal institutions?**

Harvey (1997) argues against the view put forward here. In his work on CPEs, he states that it is important to retain the distinction between the ‘more traditional, ascriptive and informal, such as kinship networks, traditional political institutions and ethnic groups’ (which would clearly all qualify as forms of institution under our definition) and the ‘more modern, voluntary, and formal organisations ... [because the former] seem to be better able to survive the destructive effects of conflict’ (Harvey, 1997: 13). He makes several different typologies of institution, his most important distinction being between the institutions of the state and civil society, but he also distinguishes between non-governmental organisations (NGOs) and community based organisations (CBOs) within civil society.

We argue against such labelling, because of the danger that drawing a distinction between formal and informal can promote an understanding of organisations built on essentialism and a projection of pre-determined categories. This gives no room for the fact that many of these forms of institution are actually overlapping and inter-related. Thus, we suggest a rejection of the use of formal/ informal, state/ non-state, modern/ traditional typologies as a starting point to structure analysis, and prefer to concentrate instead on the linkages, alliances and contests that are occurring between groups. However, research as part of the Marena project will probe this matter further. It may be that institutions such as the UNHCR and, for example, a council of elders, work in such different ways and have such different impacts, that ultimately a classification system of some kind is necessary.

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6 See Giddens (1984). However, the work of other writers, for
functionalist approach to institutions views them as holistic and unchanging, all-powerful and structuring the actions of social actors. In the RNR sector, this combines with the majority of work on indigenous agriculture which views indigenous agriculture through slightly ‘rose-tinted glasses’, as acting through institutions which are socially and culturally embedded and in harmony with the environment. Both approaches view such socially and culturally embedded institutions as ensuring that the agriculture practiced is ecologically-sound, and that it has mechanisms for distributing access to resources in some form of ‘moral economy’ and also for resolving any conflict that arises over these resources. Undoubtedly there is some truth in these accounts, but these approaches tend to view institutions unproblematically, holistically, and as unchanging. This tendency has persisted, despite some attention to the fact that African farmers are actively experimenting with farming techniques and are credited with being innovators (see, for example, de Boef et al., 1990).

In practice, much agriculture (and RNR management) in Africa is actually characterised by a great deal of change, and this change is often sudden and extreme. In addition, access to resources is rarely uncomplicated and harmonious, but more often characterised by conflict over resources and contestation. Citing Carney and harmonious, but more often characterised by conflict over resources and contestation. Citing Carney and Watts (1990), Leach (1994) and Moore (1993), Leach et al. make the point: “Rather than shared beliefs or interests, diverse and often conflicting values and resource priorities pervade social life and may be struggled and ‘bargained’ over” (Leach et al., 1997b: 5). Such conflict and contestation exists within ‘communities’ but also can be a result of new competition for a resources, for example as a result of colonial and commercial farmers making new claims on resources (Berry, 1992; 1993; Fortmann, 1995; 1996). Leach et al. attempt to deal with this fact by incorporating elements from Sen’s approach to famine to their EE framework, and it is to this approach that we now turn.

2.2 The ‘Environmental Entitlements’ approach

The EE approach suggests that an understanding of people-environment relations must take into account:

- the differential nature of access to, and use of, RNR;
- the fact that neither society nor the environment are unchanging.

According to the EE approach (see Box 2) endowments represent a person’s primary rights, whilst entitlements represent more secondary rights which are achieved as a result of use or exchange of endowments.

This process produces capabilities, but at the same time is dependent on capabilities. But this is where the model becomes complicated, because not only are endowments and entitlements both dependent on and defining of capabilities, but endowments and entitlements are also both relational and intertwined. Thus Leach et al. argue that endowments and entitlements are analytical constructs, the distinction between them depends on the empirical context and on time. Environmental entitlements analysis ... reflects a cyclical rather than a linear process, at different time scales. For a given social actor at a particular time period, entitlements represent the set of potential outcomes given the initial endowments set, depending on the actual constraints that that actor faces and the opportunities open to her. Those entitlements may in turn represent endowments at another time period, from which a new set of entitlements may be derived. There is nothing inherent in a particular environmental good or service that makes it a priori either an endowment or an entitlement. (ibid., 1997a: 17)

Such an explanation is reasonable, yet the process of entitlement and endowment ‘mapping’ recommended by Leach et al. does not lend itself easily to a reflection of this dynamism and the set of different levels referred to. This point has been made elsewhere, most notably by Gásper (1993), and is partially accepted by Leach et al. when they note:

Our analysis has led us away from a focus on the particular endowments, entitlements and capabilities of a given social actor at a given moment, since these represent only a snapshot in time. Instead, our analysis focuses principally on the dynamic mapping processes that underlie each of these static sets, which are mediated by various forms of institutions. (Leach et al., 1997a: 19).

We would argue that three main issues emerge from this discussion. First, given these comments, it is arguably more useful to collapse the distinction between endowments and entitlements, since it is more likely to cause more confusion than clarity. Certainly, the process of ‘mapping’ entitlements/endowments retains some usefulness. It is also important to remember that what might appear to be the same RNR - a tree for example - may still have different parts that are used by different social actors, or even the same parts used by different social actors at different times. These ‘bundles of rights’ and differential usages are defined and legitimised by the social institutions. Yet approaches to the tenure of land and trees and other RNR have shown that it is possible to incorporate such distinctions in practice, without reference to a distinction between ‘endowments’ and ‘entitlements’...
Secondly, although the EE framework has shown that there are many forms of (formal and informal) institutions operating at different inter-linked levels, there is a risk that in its diagrammatic representation (Figure 1), it downplays the extent to which they interact. In Figure 1, institutions are illustrated as three sets of boxes, as if they are capable of separate bounded existence. Yet in practice, they are interwoven, sometimes dependent on each other, and sometimes in conflict. This has to be taken into account, particularly where policy and the impact of policy is concerned.

Thirdly, it could be argued that the question of permanency and stability is still problematic within the EE framework. Obviously some degree of permanence is necessary in order for some kind of pattern to emerge, or for something to be considered institutionalised, but what level of permanence is required for something to be considered an institution? For Leach et al. (1999: 238), the process of institutional change can be considered at two levels:

Over time ... institutional change may occur. But owing to the embeddedness of informal institutions, institutional change in society may be a slow, "path-dependent" process, even if formal institutions, such as legal frameworks, macro-economic policies or political regimes, change quickly.

### Box 2: Endowments and Entitlements.

The EE approach is based in a process of "entitlement" and "endowment" mapping. The main concepts involved in this process are as follows:

**Endowments** refer to the rights and resources that social actors have. For example, land, labour skills and so on (Leach et al. 1997a: 17, their emphasis).

This is best understood as the rights and resources that a social actor has access to as defined by the social institutions at work in the society. In some way they represent primary rights to resources. They depend on the natural resources available from the environment, but they also depend on the capabilities of that social actor to make use of the resources. This in turn depends on their access to other resources such as labour, livestock, tools, time and knowledge.

**Entitlements** ... refer to legitimate effective command over alternative commodity bundles. More specifically, environmental entitlements refer to alternative sets of utilities derived from environmental goods and services over which social actors have legitimate effective command and which are instrumental in achieving wellbeing (Leach et al. 1997a: 17, their emphasis).

Endowments are the rights and resources that social actors have in principle, while entitlements derived from them are what the social actors actually get in practice. The difference between endowments and entitlements is best understood through the example that Leach et al. give: A cow which is owned by a particular social actor represents the endowment of that social actor. All subsequent use made of that cow, for example in terms of meat, blood or milk for food or sale or in any other way (as investment capital perhaps) constitutes the environmental entitlements of that social actor. These environmental entitlements are made possible by the fact of his or her endowment of the cow (and other factors). They give the social actor certain capabilities, but the entitlement and endowment itself is also a function of the person's capabilities.

Entitlements in turn, enhance people's **capabilities** which are what people can do or be with their entitlements (Leach et al. 1997a: 17, their emphasis).

The arrangement of the relations between the environmental resource-base, endowments, entitlements and capabilities is seen most clearly in Figure 1, taken from Leach et al., (1997a:20).

The beauty of this diagram is that it shows the importance of institutions and the way in which institutions exist at different levels and scales. It makes clear the way in which social institutions, operating at these different and interacting scales, define what are endowments from the available environmental resources (goods and services) and also, how social institutions operate and define what are entitlements. In addition it is very useful in that it shows the importance of the environmental resource-base, but also how that is dependent, and acted upon by, the capabilities of differentiated social actors.

(see Bruce, 1989).
There is a danger here that in focusing on embedded informal institutions, research can contribute towards essentialising these institutions, rather than stressing the mechanics of institutional development. We would argue that research needs to examine institutions not as a priori entities, but rather as rules, practices, organisations, etc. which have been, or are in the process of being institutionalised.

Such a perspective is especially important in the context of existing influential work on local institutions in RNR management, which has tended to identify the characteristics of local institutions, rather than the mechanisms through which these characteristics are developed. For example, Knudsen (1995) has sought to identify the characteristics of institutions that lead to them being robust, efficient or successful, and thus of interest to policy-makers wishing to promote good environmental management. However, although the generation of checklists (such as that provided in Box 3) is useful, the potential for dynamic change in institutional characteristics must be taken into account.

Overall, although there are some problems with the implementation of the EE approach, it does lead to a number of conclusions that are of great importance to management of RNR in particular, and people-environmental relations in general:

- The approach clearly illustrates that relations of people to the environment are socially and institutionally mediated.
- The approach helps to clarify a broad definition of institutions through which people-environmental relations are mediated, which does not give importance to the distinction between either formal or informal institutions, or give primacy to institutions as either organisations, rules or sets of ideas.

The approach shows how, although it is important to appreciate that people-environmental relations are socially and institutionally mediated, they are also dependent on the environment, and the material RNR that actually exist. Put simply, trees are not the same as animals or bodies of water. Any analysis must first take account of what RNR exist, through some form of 'mapping' - even if there might be grounds for scepticism over the need to separate the concepts of endowment and entitlement in this process.

- Importantly, the approach demonstrates that participation in resource use is differential, and that any understanding of use of RNR must take account of these characteristics.

### Box 3: Attributes of a "Robust Institution" (from Knudsen, 1995: 97)

- **Circumscription**: the existence of a user group that is identified by itself and others by way of its locale, descent, custom, etc.
- **Inclusion/Exclusion**: able to define who can and cannot use the resource
- **Resource boundaries**: able to establish the extent of territories under group jurisdiction
- **Legitimacy**: users have long-standing, historical claims to the resource
- **Homogeneity**: users share similar traits or identities, or are an interest group
- **Assurance**: provide confidence that legitimate users will comply with rules, restraining free-riding
- **Sanctions**: able to punish offenders through a graded system of penalties
- **Equity**: provide legitimate users with fair share of harvest
- **Monitoring**: able to avert incursion by other potential users, and supervise legitimate users
- **Security**: able to provide long-term stability by reducing risk of over-harvesting
account of this stratified participation in environmental use. Thus an understanding of power relations is central to any analysis.

- Finally, and most importantly, the approach illustrates that environment-people relations are dynamic. Any analysis must take into account the fact that both the social institutions mediating interaction with the environment and the environment itself are changing.

Following up the last point in particular, we would argue that it is especially important to adopt an overtly dynamic approach to institutions in the post-conflict situation, since it is one particularly characterised by processes of change and disruption. Linked to this, however, it is also our contention that as a result of these processes, the post-conflict situation is well suited to analysis of institutional change. It is to this context for analysis of institutional change in RNR management that we now turn.

3 The Post-conflict Situation, Social Change and ‘Community’

In the post-conflict situation people are emerging from a period during which many of their lives have been seriously disrupted. Not only have everyday livelihood strategies often been severely limited, or cannot be carried out at all, but family and productive units may also have been split up, and in many cases people have suffered human as well as other losses. For example, during the sixteen year civil war in northern Ethiopia, people were often prevented from farming during the day, for fear of strafing from government jets. Many families fighting on both sides experienced large casualties, and many were conscripted, even boys as young as fourteen years old (Africa Watch, 1991). In Mozambique, large areas of the country were emptied of people, whilst in other places, conscription and forced labour had dramatic effects on agricultural production and use of natural resources (Green and Mavie, 1994). In most wars, the direct toll of military activities on natural resources has also been highly significant.

Nonetheless, it is important to note that the effect of conflict on society and natural resources is not necessarily negative. One consequence of the conflict in Ethiopia was a changing role for women. Women fought as equals with men in the armies fighting in the north. They also played a crucial role in the indigenous governmental structures that were set up to administer the ‘rebel-held’ areas, both to mobilise the people and to carry out development and famine relief projects.

Displacement itself also has its own impact, particularly changing notions of identity and sense of self. Refugees are often treated by agencies, governments and other local people alike as a homogeneous group, without real identity. This loss of a sense of self can be a very dehumanising experience, combined with the suffering that may be encountered in the long treks that are sometimes necessary for a group to find refuge. A person who previously had an ethnic identity, or who was known as part of a family or clan, or perhaps as a professional or technical worker, becomes a simple refugee.

It seems facile to state that the post-conflict situation is a very difficult period indeed. Ngugi wa Thiongo’s classic text *A Grain of Wheat* describes the tension and crisis running through a community in the wake of the Mau Mau struggle. Underneath surface relations, people are concerned with feelings of guilt, loss, inadequacy and a need for retribution for unsettled scores. The post-conflict situation, like the refugee situation, may represent a post-traumatic situation, where people need to heal, both themselves and social divisions that have developed during war and conflict.

Paul Harvey’s work on complex political emergencies (CPEs) provides one very important and useful analysis of the nature and impact of conflict on society. He shows how, on the one hand, conflict can lead to a break down in the institutions which function in a society (social, cultural, political and economic), but simultaneously, it can also strengthen certain institutions and produce new ones. In his work on civil society he concludes that institutions are ‘undermined and contested during CPEs, [but] this is only part of the story. Despite attacks on it, and attempts to control and subvert it by warring parties, civil society institutions and organisations continue to exist and indeed to thrive at a local level’ (Harvey, 1997: 19). This argument is similar to that made by Black (1998) in the context of refugee-environment relations, and is worth relating in more detail, to lead to a better understanding of the complex impacts of conflict.

3.1 The ‘moral economy’ and ‘the community’

For Harvey, conflict has a particularly iniquitous impact on the ‘moral economy’. The moral economy can be understood in a narrow sense as ‘the range of redistributive processes which occur within communities’ (Swift, 1989), but must also be seen as institutional forms of behaviour and exchange which are deeply embedded in the social, cultural and political frameworks of a people and in their values. Harvey cites three ways in which conflict impacts on the moral economy:

Firstly, displacement splits up families and communities and takes individuals away from a context in which they can draw on reciprocal networks. Secondly, the looting of assets results in an overall lack of resources within communities, which undermines exchange networks. If even the
wealthier members of a community have been subject to looting they are less likely to assist weaker and poorer members. Thirdly military strategies of exemplary terror, such as dehumanising acts of torture and mutilation targeted at families and communities, results in the destruction of the social fabric that is the basis for the moral economy (Harvey, 1997: 18).

Harvey’s work also examines the way in which conflict often exacerbates existing divisions in the community. This is particularly important in the light of recent critiques of over-simple uses of the notion of community (Mosse 1994; Gujit and Shah 1998). Community-based development projects have been seen as a way through which a new, sustainable, people-oriented, appropriate development can be achieved. A great deal of money and energy has been expended on these kinds of projects, notably in southern Africa in the area of people-wildlife relations (Hulme and Murphree, 1999). But as Agrawal and Gibson (1999) note, many of these projects have failed to fulfil expectations. They conclude that this is due, at least in part, to the assumptions which are contained in the notion of “community”. They argue that there is likely to be disenchantment with community-based approaches if these are assumed to imply small spatial units, homogenous social structures and shared norms. Rather, we need to pay attention to multiple interests and actors within communities, and potential conflict between internal and external institutions.

In the conflict situation, these social divisions become exacerbated and more extreme. For example, existing social divisions become compounded by the different histories of different groups’ participation in the war. In a post-conflict situation these histories can take on central importance in social relations. Where displacement has taken place, old divisions may be overlain with conflict between different groups made up of those people who did not flee the conflict, and those who did. There is evidence to suggest that this is particularly important in terms of rights to resources. In the post-conflict situation it is particularly important to have an approach which takes into account this contested nature of resources for different and competing groups. We also need to take into account the fact that partly due to this contestation, RNR practices and all institutions are likely to be unstable.

In the context of conflict and post-conflict, gender divisions within communities may be an especially salient aspect of difference. Gender relations are played out not only in terms of access to resources and different agricultural and environmental practices (Fortmann and Bruce, 1991); women in particular also often bear the brunt of conflict as the targets of rape and sexual violence (Moussa, 1993; Byrne et al., 1996). They may also be ‘forced into coping strategies which transgress social norms’ (Harvey, 1997: 15). Citing the Taliban militia of Afghanistan, Harvey also argues that conflict can result in more conservative attitudes to women’s behaviour and the curtailment of their rights. The gender-specific impacts of conflict have become a particular point of concern to international organisations working in post-conflict situations (Date-Bah and Walsh, 1998).

3.2 Conflict and civil society

Thus far, the evidence would point to the fact that conflict leads to a breakdown or even a failure in institutions which have developed over time. In terms of RNR management this is likely to lead to a deregulation of formal or informal rules and practices which have developed to manage the environment and access to RNR, and this may result in environmental degradation. However, although a number of institutions may break down, others may also coalesce around different historical experiences, ideas and values, and old institutions acquire new strength, through exploiting certain opportunities presented by the conflict and post-conflict situation.

The example above of women being empowered by their role in the civil war in northern Ethiopia is a clear case of a group gaining new strength through the conflict situation and therefore of institutional change. Alternative trade networks may also thrive, to fill a vacuum left by the breakdown of existing economic ties, and also because of people using their new knowledge of areas, brought about because of their experiences of travel, either as refugees, or as soldiers. Richards (1996) found that in Sierra Leone the changing role of women and the emergence of new trade networks came together: Women from Bo in central Sierra Leone had discovered ways to handle the complex system of checkpoints on roads and were running a large palm oil trade.

New institutions may also emerge around religious ideals, which may appear particularly attractive amidst the apparent chaos and uncertainty of the conflict or post-conflict situation. The emergence of spirit-possession, a phenomenon which is often associated with periods of uncertainty and attempts to assert an identity and a sense of control (Lewis, 1966), such as that in Mozambique discussed by Honwana (1998), can be understood along these lines. New institutions and practices may emerge and be equally strong around global religious movements, and in the post-conflict situation, fundamentalist ideals, either Muslim or Christian, may be a powerful force for similar reasons. One example is the emergence of fundamentalist Islamic organisations in post-conflict Somalia. There is also evidence from Somalia and Afghanistan which suggests that in the conflict situation many traditional
institutions and forms of authority do not breakdown. Rather, they may gather strength and be supported, as they respond to new issues and problems (see Black and Sessay, 1998 on the strengthening of local RNR management institutions in refugee situations in Guinea and Senegal).

The emphasis of research on post-conflict and conflict situations has been placed largely on examination of the supposed problems of breakdown of institutions and institutional failure. This has meant that there has been relatively little attention given to cases of the emergence of new institutions. In contrast, Harvey’s work reveals the complexity of the conflict situation and the fact that institutions are ‘simultaneously emerging, being undermined, and contested’ (1997: 19). Harvey is keen to explore the possibility of using ‘civil society’ as an alternative set of institutions through which a new, healthy, bottom-up, democratic development can be achieved, in the absence of the state. He identifies a strong development discourse in which civil society is also credited with having the potential to open up channels of communication and promote accountability between the state and its citizens, and also encourage the development of a strong liberal economy.

Yet it is important not to get carried away by the potential of such civil society institutions. For example, in their review of the health sector in various post-conflict countries, Macrae et al. (1995) note the danger that a proliferation of NGOs contributes to a fragmentation of financing, an undermining of state legitimacy, and ultimately a collapse of state provision. For some, such a process may indeed be part of a deliberate policy of external donors to ‘liberalise’ centralised state economies (see Hanlon, 1991, on Mozambique).

Where Harvey’s work is more interesting and useful, perhaps, is in his use of the concept of social capital. He quotes Putnam’s definition of social capital as ‘features of social organisation, such as trust, norms and networks that can improve the efficiency of society by facilitating co-ordinated actions’ (Putnam et al., 1993: 167) and these are resources which can be harnessed to assist people. Social capital, therefore clearly qualifies as a form of institution, but it is particularly useful as it highlights one aspect and form of institution which is not very material, but which is nonetheless of crucial importance: that of trust. In conflict situations trust is broken down, in many places networks of trust are specifically targeted. This was seen in the attacks of Renamo on many rural areas in the recent Mozambican conflict, as violence and terror were used with a devastating impact on networks of trust. As Honwana (1998: 75) puts it: ‘Renamo in particular, developed a reputation for the ritualistic use of violence aimed at instilling incapacitating fear in rural communities’. In the post-conflict situation, it is necessary for networks of trust and the social fabric to be rebuilt.

In essence, this short review serves primarily to point out issues that still need to be examined through fieldwork: what have been the impacts of conflict, and have they had a lasting effect (or not)? What forms of institution have been eroded and which have been strengthened or have emerged? How have different institutions inter-related in their struggle, politically, socially and over RNR? In particular, locally-based fieldwork is required to examine approaches to reconstruction which can be described as community-based and those that have used participatory methods. How have they tried to incorporate the different groups in the community and to what extent have they been successful in their attempts to be inclusive? What problems and what successes have they encountered? The final section seeks to set out a framework within which these questions might be answered in the post-conflict context. However, before moving on to this framework, it is important to set out briefly what we mean by ‘post-conflict’ situations.

3.3 Defining ‘post-conflict’

So far, this paper has treated the notion of a ‘post-conflict’ situation relatively unproblematically, yet once again this is a complex concept. Although the end of the Cold War, and development of humanitarian and other interventions to reduce and eliminate conflict, brought hopes that the 1990s might be a ‘decade of repatriation’ for those displaced by conflict, in reality this has not been a straightforward process. During the 1990s, conflicts have formally ended, and significant repatriations of refugees have occurred in a number of countries across sub-Saharan Africa (Black and Koser, 1999). For example, in Ethiopia, up to one million refugees have repatriated since 1991, primarily from Djibouti, Somalia and Sudan, whilst in Mozambique, some 1.7 million refugees were repatriated between 1992 and 1996, from Malawi, Zimbabwe, South Africa, Djibouti, Somalia and Sudan, whilst in Mozambique, some 1.7 million refugees were repatriated between 1992 and 1996, from Malawi, Zimbabwe, South Africa, Swaziland, Tanzania and Zambia (UNHCR, 1997). Yet the trajectory of these two countries illustrates well the divergent paths that a ‘post-conflict’ situation can take. Whereas Mozambique has experienced a period of relative peace unknown since the 1960s, Ethiopia has plunged once again into war with its northern neighbour Eritrea, and insecurity and violence has grown in many parts of the country. Meanwhile, even within Mozambique, there have been isolated incidents of insecurity and conflict, as for example in Manica Province where the so-called ‘Chimwenji’ uprising made external project activities impossible in certain areas during 1996.
In practice, 'post-conflict' has come to be seen as a particular period of intervention by a number of international organisations. For some humanitarian relief operations, it has come to represent a short period after an emergency, in which programmes are phased out. For example, UNHCR's involvement in the post-conflict period is normally limited to short duration 'Quick Impact Projects' (QIPs) which are funded to kick-start development activities prior to UNHCR's withdrawal. For some other agencies orientated more towards development activities, the post-conflict transition represents a period in which external interventions can shift from a 'relief' to a 'development' focus, and in which the funding often generated by a high profile war can be mobilised for longer term objectives. Nonetheless, in general it seems there are no hard and fast rules as to how long this post-conflict period can or should last, or indeed what the indicators might be that the phase has started or finished. Indeed, some agencies shy away from use of the term 'post-conflict' altogether.

From an RNR management point of view, it may be that there are particular features of the immediate post-conflict period that are of conceptual significance, for example as a result of an absence of recognisable authority in rural areas. Thus in Mozambique, the period between the peace accord of 1992 and the election of a new government in 1994 was a time when the authority of Renamo and Frelimo was contested, and it was almost impossible to enforce official rules on RNR management. The situation appears to have been exacerbated by the fact that soldiers on both sides waiting to be disarmed and demobilised were able to take advantage of the situation to hunt animals for a quick profit. Agencies operating in the post-conflict transition phase may also face particular problems in their relationship with beneficiaries, as the practice of providing relief items free of charge gives way to development activities which often involve loans that must be paid back.

Despite these specific circumstances of transition from war to peace, it is perhaps helpful in general not to see 'post-conflict' so much as a period that can be accurately defined analytically. Nor perhaps in general is it a period in which special policies or special research approaches are necessarily appropriate, although this remains an open research question. Rather, this period is perhaps better conceptualised as one in which there is a relatively higher degree of change, in population patterns, institutions, and natural resource management practices, to which policy and research needs to adjust. From a research perspective, this means that the processes of institutionalisation referred to in Section 2 might be expected to be more salient, and hopefully more observable.

For example, with the return of refugees and displaced persons after conflict, new patterns of settlement (or contested returns to older patterns of settlement) create specific challenges for natural resource management. Some people will return to their previous home areas; but often, others settle in new areas, such as urban areas and along lines of communication. Such diverse patterns of return may present a threat to RNR management regimes, in which research is needed to investigate the challenges posed by (re)settlement and (re)integration. Despite the specific circumstances of this return process, however, it is argued that analysis of institutional change in such circumstances can tell us much about the evolution of RNR management institutions more generally.

4 A dynamic approach to RNR institutions in post-conflict situations

From the discussion in Section 3, it is clear that an approach is needed to institutions in the post-conflict situation that retains the ability to be applied to a situation which is very fluid and changing, and one in which there may be many different groups competing and contesting each other. It is suggested that rather than any strong model, it is preferable to base research around a number of key concepts and examine the way in which these concepts inter-relate and how the inter-relations are worked out in practice. Such an approach would emphasise the mechanics of the workings of institutions, and therefore examine institutions as that which has been institutionalised, rather than in any a priori form. This approach takes much from actor-network theory, from the sociology of science, and from an approach to discourse which has developed from the work of Foucault.

In summary, we are arguing for an approach that will:

- show the way in which institutions exist as that which has been institutionalised, rather than in any a priori form;
- show the way in which different institutions interact and gain dominance and success, but then also wane;
- maintain a critical purchase on the concept of community;
- interact with notions of policy;
- see policy not as independent process but part of the institutional matrix.

This approach will involve analysis of discourses, social networks and processes of legitimisation. In this analysis, discourse is understood in the broadest sense: it is not only taken to refer to written statements or spoken
debates, but also to refer to ideas, beliefs and practices. This follows Hajer’s definition of discourse as:

a specific ensemble of ideas, concepts and categorizations, that are produced, reproduced and transformed in a particular set of practices and through which meaning is given to physical and social realities (Hajer, 1995: 44).

Discourses have a ‘naturalising power’ (Barnes and Duncan, 1992: 9) and it is through this that they define truth and legitimate practices for particular people at particular places and times. It is through discourses that power is produced and transmitted (Mills, 1997). Not only are there discourses for each ‘realm of social action’, but there may also be different discourses held by different (and often competing) social groups or networks, as these different groups or networks relate differently to different discourses. Social actors do not exist outside of discourses, but it is through discourses that they practice and experience reality. Discourses also create and define identity. Thus the different groups which Leach et al. (1997b) describe as cross-cutting any ‘community’ differentiated by their different culture, racial, gender, class or regional identities and interests may have different discourses (Blakie, 1995).

In this sense, the world is made up of many different discourses, contesting, competing and negotiating with each other, or as Foucault (1979 100) puts it: ‘a multiplicity of discursive elements that can come into play in various strategies’. Social action - including processes such as the management of natural resources - can be seen as sites of discursive struggle (Foucault, 1979 MacKenzie, 1992; Mills, 1997). It is through the domination of different discourses and the control of these different discourses that social groups can become dominant over others (Escobar, 1995). The engagement of discourse is a lived reality, and one through which different groups, and even individuals, can play out different strategies to promote their interests.

So how does the concept of discourse relate to that of institutions? Discourses are constitutive of, and constituted by, institutions. As discourses become powerful, as their claims to represent what is considered and held to be true in a community, they become more institutionalised and powerful. Bringing the concept of discourse into our understanding of institutions therefore is powerful, because it presents the institutions themselves as constructs which are contested and dynamic, and also the site of power struggles between different groups in the community.

It is also useful to understand the different groups that become involved in the production of, and subscription to discourses, as social networks. Such a notion is slighthly broader than the concept of ‘group’, because it can contain both an element of a person’s identity, as well as the allegiances and networks to which a person belongs, through choice or by birth. Berry’s work discusses social identity as a main determinant of rights to land in Africa (Berry, 1992: 1993). Discourse will determine a person’s social identity and therefore the social networks in which they participate, but also social networks are key actors in the generation of different and new discourses which may challenge and change more established discourses. Social networks, like discourses, can also be seen to be forms of institution, some of which may be more institutionalised than others.

It is also more powerful analytically to understand a situation in terms of social networks in action rather than in terms of social groups, because a person can participate in more than one social network at a time. People have multiple identities, and also actively form allegiances and associations in order to fulfil their social, cultural, political and economic interests. Different networks may put forward and generate their own discourses and thus try to improve their position. The concepts of social networks and discourse can bring us closer therefore to understanding a highly fluid and differentiated society.

In addition, discourses are powerful through their claims to legitimacy. Thus different discourses compete in their claims for truth. This competition occurs largely through rhetorical means and through the use of narrative. Hajer (1995) discusses the importance of key story-lines which develop and generate momentum, and around which action coalesces. In the African context, Fortmann has clearly shown how rights to resources are determined by narratives which are held to be true, in particular narratives about original owners and about the ‘traditional’ (Fortmann, 1995). Narratives and story-lines are ways through which the truth is defined and discourses gain legitimacy. A group whose discourse is unchallenged can be considered to be hegemonic.

Hajer’s work is particularly interesting because he also discusses the way in which different social networks form alliances around certain key story-lines that they take to be important. In this way, he examines how ‘discourse coalitions’ are produced, and how this is one way in which policy becomes decided upon and enacted. In the context of management of RNR in post-conflict situations, it should be particularly interesting to see the way in which different social networks inter-relate, at different levels and scales, the way in which they listen to each other, and challenge each others’ discourses in the process of seeking legitimacy for their role in post-conflict reconstruction. Yet Hajer also moves slightly away from a Foucauldian perspective, by focusing on the way in which different social networks can also bolster each others’ discourses.
and borrow themes. A Foucauldian perspective would view the social networks and discourses as in competition, but Hajer’s work incorporates a more constructive and less adversarial dimension, where groups and discourses also form alliances for their shared perceived interests. It is also in this way that the link between what is happening within a community, and the policy decisions that are being made, can be understood.

It would be possible to carry on this discussion of these concepts to a much greater depth, however, here it is necessary only to point out that they provide a set of basic principles by which a process can be examined. Many of these principles also underlie the EE approach. Our approach would start also with mapping the resources in question, but also examine the

The reconstruction of natural resources in post-conflict situations poses complex challenges for both research and policy. Conflict itself is likely to have significant effects on natural resource management practices. At the same time, conflict is known to arise in Africa over natural resources. Thus, there can be a vicious circle of increasing environmental degradation and increasing conflict, as both population movements and conflicts are linked to competition over scarce resources and over-use. Breaking such a vicious circle is extremely important for reconstruction of post-war situations. Strengthening sustainable environmental management regimes, and preventing the likelihood of violent conflict linked to competition over resources, can provide a real contribution to preventing the escalation of conflict in Africa and to facilitating sustainable livelihoods.

This working paper has sought to set out relevant literature from across the social sciences that helps us to begin the process of addressing natural resource

| Box 4: An initial framework for field research |
|-----------------|-----------------|
| **Identify RNR of concern** | **Land - Water - Plants** |
|                     | **Animals - Fisheries** |
| **Identify historical processes of institutional development** and their relevance to RNR | **Formal - Informal** |
|                     | *(no distinction to be drawn at first)* |
| **Identify discourses** surrounding institutions and the use of RNR | **Hegemonic - Dominant - Minority** |
| **Identify social networks** and their relevance to RNR management | *(likely to be multiple and overlapping)* |
| **Identify claims to legitimacy** of different institutions and social networks in relation to RNR | **Narratives - Story-lines** |
| **Livelihood/resource use mapping** | **Entitlements - Endowments** |
|                     | *(no distinction to be drawn at first)* |
| Explore impact of conflict and post-conflict within broader dynamic historical context |
particular aspects of the post-conflict period, broadly understood, which can help us understand resource management institutions more generally. Refugee return, the disintegration and regeneration of institutions, and a shift from ‘relief’ to ‘development’ by international organisations, are all indicative of periods of intense change and rapid transition. These will have an important effect on the management of natural resources.

Second, the notion of ‘community’, problematic in any context, is clearly more so when we are dealing with situations of conflict and post-conflict. Communities are not neatly bounded and homogeneous entities. Internal divisions of gender, age, class and ethnicity may be accentuated or consolidated by the effects of conflict. Divisions within and between communities are often manifested through their institutional arrangements, and it is because of this that we have devoted a large part of this paper to the understanding and analysis of institutions.

We have argued that institutions should be understood broadly, as patterns of practices and sets of rules. Formal organisations are one manifestation of institutions, but importantly, institutions are as much informal as formal. The rules governing access to land, inheritance, and control over resources, are important examples of more informal institutions. Changes within them and the evolution of new ones will play a key role in the management of natural resources. In the context of conflict these processes may be particularly intense. In this paper we have chosen not to adopt an a priori categorisation of different institutions as formal or informal; such a categorisation can lead to a rather static and deterministic view which fails to encompass the dynamic nature of social change. Instead we argue for an examination of processes of institutionalisation and how this interacts with the strategies of individuals. As a result of such an examination in may emerge that, for example, the role of the state is an especially important variable. However, this should not be decided in advance.

This perspective informs our analysis of the Environmental Entitlements approach. This approach has contributed immensely to the understanding of environmental management, particularly in in its insights regarding the nature of institutions and the complexity of social relations. However, the rather rigid framework, and the risk that it leads simply towards a mechanistic ‘mapping’ of endowments and entitlements, is less useful; it militates against the more dynamic approach suggested above. We suggest the need to develop a framework which encompasses both the processes of institutionalisation and the decision making capacity and identity of individuals. This implies the adoption of a more disparate set of theoretical tools and perspectives, drawing as appropriate on discourse analysis, theories of legitimation and social networks.

Research drawing on this approach implies a heterodox methodology. Analysis of institutions at all levels in the policy process is important, but this means more than simply documenting different positions; of particular interest are the interactions between and changes in these institutions. Related to this, research into post-conflict management of natural resources should inform policy. For this to be useful is it vital that the policy making process itself is not seen as an independent variable, but as a central aspect of the research.

Policy making institutions (donors, the state, representatives of the ‘community’) are all key players in institutional change, and perhaps nowhere more so than during the process of ‘reconstruction’ of a country or region after violent conflict. But it is also necessary to combine exploration of what people understand and the meanings they attach to phenomena (story-lines, narratives etc), with analysis of the material conditions shaping these and how they change. Different people may have different perspectives on the problems of natural resources management, but these are also shaped by differential access to those resources. The post-conflict context, even if ill-defined, supplies not only an interesting focus for the exploration of these differences, but also potentially an opportunity to contribute to the process of institution-building itself.
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Annex 1: Case Studies in Mozambique

During a field visit to Manica Province in March-April 1999, and in collaboration with the local office of the Centro de Experimentação Florestal, we have identified a number of issues relevant for analysis in the context of our current project. Since the peace accords in 1992, the government's Forestry and Wildlife Department has been seeking to develop policy for management of its natural resources based on community participation in this management process. In this regard, Mozambique has drawn on experiences in neighbouring countries, especially Zimbabwe, and has sought to set up pilot projects for community-based management in several areas. There have also been a number of legislative changes, including the introduction of a new Environmental Law, a new Land Law, and proposals for new Forest and Local Authorities Laws that are likely to have a significant impact on NRM.

Within Manica Province, we have found it useful to distinguish three types of situation, in which the relationship between communities and their natural resources differ in important respects:

Type 1: In a first 'ideal type', it could be argued that threats to natural resources exist, and come primarily from communities themselves, for example through uncontrolled cutting or burning of forest for agricultural and other purposes. This type is illustrated by the example of Moribane listed below.

Type 2: In other areas, threats to natural resources can be more easily identified as relating to external pressures or external actors, such as the demand for timber or hunting concessions, or charcoal production for urban markets. This type is illustrated by the example of Pindanganga listed below.

Type 3: There are also areas of Manica Province where it could be argued that at present there are few major threats to NRM, but where potential threats might exist in the future, as a result of development - or indeed conservation-based ecotourism projects. This type is illustrated by the example of the proposed Chimanimani Transfrontier Conservation Area.

At present, it is our intention to focus on case studies that illustrate at least two of three types, with the possible addition of a study of forms of community management in an area where 'threats' are either limited, or highly complex. The example of Rotanda listed below provides an indication of the issues that might be involved in such a case study.

Forest Reserve of Moribane (Sussundenga District)

The Forest Reserve of Moribane was first gazetted by the Portuguese colonial government in 1950, covering an area of 53km². The purpose of the reserve was to protect a watershed area from deforestation. During the war between the government and Renamo, the Moribane area became an important Renamo base, and there was considerable fighting and displacement in the area. Since the war, some former Renamo soldiers and others brought into the area have remained inside the reserve to farm, whilst others who had fled during the war to government-controlled towns and nearby Zimbabwe have returned.

Currently, the major issues for the Forestry Service under which Moribane falls are what are seen as uncontrolled burning of forest (especially for hunting, but also for collection of honey and other purposes) and the opening of forest land for agriculture, both of which are seen as presenting a threat to biodiversity of the forest. For populations who remained inside the reserve after the war, a major issue has emerged concerning the destruction of fields and crops by elephants, who have also returned since the war. The reserve lies to the south of Sussundenga, an area of high agricultural potential that also appears to have attracted some new settlers in the post-war period (Sussundenga was also a major area of settlement by Portuguese farmers in the 1960s).

Currently, the provincial Forestry and Wildlife Service, working with CEF, are seeking to re-establish a management regime for the Moribane reserve, working with local communities. The reserve is seen as having suffered greatly both during the war and subsequently as state-sanctioned and traditional rules on management of the forest have been disregarded by forest dwellers. In practical terms, our research hopes to contribute to the development of a sustainable and participatory management regime in Moribane, by subjecting to critical scrutiny the assumptions on which this new community-based approach is founded. We will examine management and use of the forest in historical perspective, and the emergence of discourses on these processes at both community and state level. We are interested in the extent to which traditional forms of authority (principally the structure of chiefs, or règulos) have, or have sought legitimacy over RNR management.

Pindanganga (Gondola District)

The village of Pindanganga lies within Gondola District that lies on the edge of the so-called 'Beira Corridor' - a 'safe' area protected by government and Zimbabwean troops during the war in Mozambique. During colonial times, a forest reserve was proposed in the Pindanganga area, although it was never given legal status. Subsequently, there have been various pressures on the forests in this area. First, during the war, along the Beira corridor itself, a 3km strip of land was cleared of vegetation as a precaution against attack by Renamo forces.
In the post-war period, Pindanganga has witnessed the return of displaced populations, as well as pressure on its forests from the production of charcoal for the urban market of Chimoio.

Within the Pindanganga area, there is currently a pilot initiative to develop a resource management regime based on definition of a community area using participatory mapping. As part of a national initiative funded by the Dutch government via FAO, a training exercise in participatory mapping was undertaken in Pindanganga in February 1999, followed by the elaboration of a community map using GPS technology. This process aims to provide a technical annex to the new Land Law on how to define community areas for CBNRM projects. The community area defined in Pindanganga - which corresponds broadly to the area controlled by an individual regulo - is now awaiting approval by the government Geography and Mapping Service. Locally, a range of NGO's and government agencies were involved in the mapping process, which seeks to provide local communities with a basis to protect their resources against outside interests.

In addition, the NGO Concern has been working in Pindanganga since 1996, implementing an integrated rural development programme. This programme has included the development of community interest groups to promote economic activities. Groups have been established, including women’s groups, groups for the raising of livestock, and a group of charcoal producers. The latter group has obtained a group licence for charcoal production, although a number of individual producers continue to make and sell charcoal illegally.

Pindanganga appears to represent an area where there is considerable pressure on natural resources, both from population growth, and from demand for wood and charcoal for the urban market. Unlike Moribane, it has witnessed various outside interventions, from agencies that have engaged with ‘community’ structures in different ways. We plan to examine the process of interaction between external agencies and different forms of community institutions, paying particular attention to the felling of trees for firewood and charcoal.

**Chimanimani Transfrontier Conservation Area (Sussundenga District)**

The Chimanimani Transfrontier Conservation Area (TFCA) was first mooted towards the end of the war in 1991, as one of three areas where cross-border cooperation was desirable for management of areas adjacent to National Parks in neighbouring countries. Development of a plan for management of a TFCA, rather than a National Park, stems from the Mozambican government’s desire to promote multiple resource use and management by local communities. Preparatory work for the project has received funding from the Global Environmental Facility (GEF) and technical assistance from IUCN. The Ford Foundation has also been involved in capacity building with local agencies, in order to push forward this process. However, to date, a Conservation Area has not yet been defined, and data on existing resource management practices is still being analysed.

The area currently covered by the TCFA initiative is large, and includes two forest reserves, further areas proposed as Forest Reserves by the colonial government, as well as the Tsetseba mountains to the north. During the war, the southern part of this area was controlled by Renamo, whilst the north remained in the hands of the government. However, much of the proposed TCFA has remained effectively beyond government influence for some time, and access to the area remains extremely difficult as a result of the lack of passable roads. As a result, it is thought that the area remains rich in both flora and fauna, An IUCN mission in 1995 identified nearly 1,000 vascular plants in the area, of which 45 were considered to be endemic. Requests for timber concessions in the area have been turned down by the Provincial Forest and Wildlife Service in recognition of the plans to establish the TCFA.

It is not currently clear whether field research in the Chimanimani area by the Marena research team will be feasible or appropriate. In 1998, an extensive social and natural resource use survey of the area was conducted under the direction of the Provincial Forestry and Wildlife Service, although data from this survey is not yet available. The TCFA project itself represents an interesting, and perhaps unusual example of external intervention in NRM, but as the area is not yet legalised, it may be premature to assess its impact. Nonetheless, the TCFA appears to be an initiative of considerable importance, not just for the management of the Chimanimani area, but also through its knock-on effect on state and non-governmental agencies across the province. For this reason, the project will seek to follow the process of development of the TCFA at provincial and national level, even if work at community level is not pursued.

**Rotanda (Sussundenga District)**

Rotanda is suggested as a further field study site for the examination of different, overlapping NRM institutions and their history. Rotanda is an area with an indigenous irrigation system with committees of local water-users. It is a agriculturally rich area, but it is remote and has a problem in gaining access to markets. As a result, there are also some emerging institutions: groups of people joining together to buy agricultural inputs and transport goods, because they say ‘one
person alone can't do anything'. Although these groups are on one level 'informal institutions', they take names, have by-laws and individual officers within the group (including the President, Secretary and Treasurer - but also in one case a Head of Discipline!). Rotanda is on the border with Zimbabwe and this cross-border dynamic must be examined: many of the people participating in these local initiatives have spent time in Zimbabwe (either running from the war or to seek different opportunities, or both) where groups like these are more common. It is possible that the idea for this kind of organisation has come through this experience, and/or that it is facilitated by the local tradition of water-user committees and the conditions provided by irrigation.

These developments must also be understood in relation to the institutional history in the area. During the 1940s, the colonial period, the National Cereal Board (Instituto Nacional de Cereais) was very active in the area. It introduced wheat and also encouraged growing garlic and maize. It helped people gain access to seeds and also to markets. It seems likely that if the local population had a very productive experience when this Board was active, and that currently people may be organising themselves to try to recreate some of the same conditions.

In addition, Rotanda is interesting because it is an area where an input credit scheme is being piloted, under the auspices of the regional Department of Agriculture. This scheme has set up credit networks using local entrepreneurs, such as shop-keepers. The establishment of another set of institutional networks and links and is of great interest to the research project.

**Annex 2: Case Studies in Ethiopia**

During a field visit to Ethiopia in May-June 1999, and in collaboration with local research co-ordinators at Addis Ababa University we have identified a number of issues of relevance to this research project. The first and obvious issue, most problematic in the Ethiopian case, is that of the concept of the post-conflict situation. The recent return to war with Eritrea has shown how precarious and problematic is the notion of 'post-conflict', as was discussed in Section 3.4. Preliminary research indicates however, that there are issues of relevance to understanding NRM which are connected to the end of conflict in 1991. These issues include the fact that during the civil war the government of Ethiopia implemented several rather severe policies that came to an end with the over-throw of that government. For example, a villagization programme moved farmers from dispersed settlements to more easily accessible concentrated settlements, many of which were in the (often malarial) lowlands. Also, a resettlement programme took many people from the more drought-prone and war-stricken north, and resettled them in the east of the country. Opinion is divided as to the connection between these policies and the war itself, but with the end of the war in 1991, many people who had been resettled or villagized, returned to their previous residences. Such large-scale population movements have implications for NRM, and this suggests that the concept of a post-conflict situation may be analytically useful in this case.

In addition, the period immediately following the conflict was characterised in many areas by an 'institutional vacuum' at various levels. In Ethiopia, as in Mozambique, it is said that much damage was caused to the environment during this time.

In Ethiopia there is also an attempt to include the community in NRM and to introduce more 'bottom-up' forms of development and administration. In some places this has been connected to the decentralisation of the country along ethnic lines presently taking place. Ethiopia is a particularly interesting place to study community-based development initiatives, as in the past it has been characterised, probably more than any other African country, by a very stratified society with "top-down" forms of administration and management. The problems that are experienced by individuals and groups in introducing community-based management, and the way or the extent to which they over-come these problems, may have wider lessons.

At this stage, several places have been identified which would be suitable as field sites for research, two of which are listed below.

**Yagof (South Wollo), Northern Ethiopia**

Yagof is a mountain situated in the lowlands south of Kombolcha in South Wollo. It was set up as a forest reserve in 1984. As a forest reserve the local people are not allowed to use it in any way - even to take fuel wood or to graze their animals inside it. Previously there were people living in the forest on the mountain, but most of these were sent to the east of Ethiopia as part of the resettlement programme in the 1980s, or were moved as part of the villagization programme to the lowlands. The forest is in a poor condition, and this suggests that the concept of a post-conflict...
Yagof is a rich field site and research will examine the different kinds of renewable natural resources and the institutions that manage them: state (state forest) and indigenous institutions (water and grazing lands). It is particularly interesting because the mountain is divided into three different administrative regions, so that research can compare and contrast the different policies of these different regions, particularly in relation to the forest reserve. It will examine the interactions between the different kind of institutions. The research will also examine the dynamics of urban-rural interaction, which seems important in the exploitation of the forest. It will look particularly at the impact of households that have resettled and the livelihood strategies that they have employed, especially the networks that exist which are sometimes country-wide.

The NGO Concern is active in this area and has been carrying out some work setting up forest management committees. This has been hampered by the fact that such committees have no legal rights to resources. Comparative work may also be carried out with the activities of SOS Sahel. This NGO is pioneering community wood-lots in Meket administrative region, and seems to be having an impact in changing government policy towards incorporating community-level institutions.

Borena Region, Southern Ethiopia

Pastoralism is the dominant livelihood in Borena region and access to grazing lands and water are interrelated and of primary importance. Development agents, including the state (SORDU), GTZ, SCF-US, FAO, and the Catholic mission (to name only a few), have been engaged in top-down water and grazing-lands development projects for over forty years. Many of these projects have now been shown to be problematic, leading to over-grazing and bush-encroachment. Since 1991, and the establishment of Borena Zonal Administration, several groups have been trying to reverse some of the previous efforts, by encouraging community-based NRM. GTZ, in partnership with local government, and SCF-US have in particular been encouraging a return to use of indigenous institutions in managing the environment. SCF-US is slightly different in that as the indigenous institutions are all male, it has been 'adding women' to locally elected committees, which have been formed in co-operation with the indigenous institutions. These initiatives contrast with other development interventions which have encouraged the pastoralists to take up farming.

Research in Borena will examine these development processes, and the links between the different forms of institutions involved. It will do this in the context of two developments which have taken place since 1991, which are linked to the end of violent conflict, and which have implications for the NRM:

1. The UNHCR has been involved in resettling different groups of people in Borena. Many of these were refugees who fled to Kenya as a result of conflict in Somalia, or on the Somali-Ethiopia border. Bassi (1997) has shown how the UNHCR became manipulated in the historic power struggle over territory between different ethnic groups in the area: the Garri, the Borena and the Gabbra.

2. During the changeover of government there was much fighting between the different ethnic groups. Many lost livestock and have become destitute - they are now living in camps and are dependent on the state. There have been no restocking programmes in Borena, and some development agents have encouraged these groups to concentrate on farming - changing the land-use pattern in the area.

GTZ has shown some enthusiasm for the research and it is hoped some work can be carried out with their institutional support.