CHAPTER: 1

TOWARDS IMPROVING FULBE JELGOBE FOOD SECURITY

1:1 INTRODUCTION

Sahelian pastoral livelihood prospects are bleak. Pastoralists living in hostile ecological zones or in urban ‘bidon villes’ are increasingly classed among the absolute poor (Green 1991). Their traditional movement patterns are hindered in rangelands ‘colonised’ by agriculturalists (Landais and Lhoste 1990). Pastoral livelihoods are being rendered more vulnerable by development strategies that are urban and agriculturally biased (Green 1989) and policies that do not adequately appreciate the opportunistic nature of pastoral rangeland and water resource management. At times pastoralists have been conveniently accused of irrational accumulation of animals, of being primary agents in desertification, of cultural and physical isolation and of technical stagnation. They are, in fact, ‘relational’ (that is, adept at establishing strategic relations with agriculturalists, markets and urban societies) and extremely adept at coping in uncertain environments.

Footnote 1

Food security has been variously defined since its emergence as a concept in the 1960’s and 1970’s. I have used two definitions to guide my exploration of food security. Firstly, Maxwell (1990: 3) proposes that, ‘a country and people are food secure when their food system operates efficiently in such a way as to remove the fear that their will not be enough to eat. In particular, food security will be achieved when the poor and vulnerable, particularly women, children and those living in marginal areas, have secure access to the food they want. Food security will be achieved when equitable growth ensures that these groups have sustainable livelihoods, ...’ The second definition is that of the Life Sciences Research Office of the Federation of American Societies for Experimental Biology. They define Food security as ‘access by all people at all times to enough food for an active, healthy life and includes as a minimum: a) the ready availability of nutritionally adequate and safe foods, and b) the assured ability to acquire acceptable foods in socially acceptable ways (e.g., without resorting to emergency food supplies, scavenging, stealing, and other coping strategies) Food insecurity exists whenever a) or b) is limited or uncertain (Anderson ed 1990: 1560).
When their food security is threatened, pastoralists such as the Fulbe Jelgobe act skillfully on the basis of local knowledge in employing a complex array of coping responses that seek to meet immediate food needs while preserving a base for future livelihood activity. Such strategies involve the manipulation of household asset portfolios, modifying household consumption patterns, access to common property resources and the activation of networks of social relationships. Capacity to cope is by no means uniform. The coping behaviour that some peoples reserve for short-term food insecurity shocks is normal livelihood behaviour for others.

Food insecurity situations are immediate and complex ones. They involve a complex web of interactions between the local food production system and its surrounding physical and social environments. An enriched methodological portfolio is required to understand and respond to such complex and dynamic food insecurity situations. In my choice of a methodology to effectively respond to Fulbe Jelgobe food insecurity I was guided by a need to understand the situations in their complexity, accommodate social difference and generate social energy in responding to immediate issues and needs. I chose Participatory Action Research as a methodological framework to guide a persistent learning approach to improving food security. In the section that follows I outline the rationale of this choice and provide a brief outline of this thesis.

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2 The Fulbe people are called Fulani in the English language and Peuhl in French. The former is derived from the plural fulbe meaning the ethnic group itself and is usually accompanied by a reference to an area of origin or habitual rangeland (for example, the fulbe Jelgobe or fulbe Lipitako). The latter is derived from the singular pullo which means an individual (for example pullo gorko - Fulani man or pullo debbo - Fulani woman).
1:2 THESIS ARGUMENT

Uncertainty, variability and vulnerability to food security are central themes in Sahelian pastoral/agro-pastoral lifeworlds (Scoones 1996a, Swift 1989). Pastoralists such as the Fulbe Jelgobe are adaptive ‘bricoleurs’\(^3\) exhibiting heterogeneity in livelihood praxis and are knowledgeable and capable of coping under extreme conditions. Facilitating sustainable improvements in food security in the African Sahel is not a matter of finding better ways to facilitate the adoption of a whole backlog of supposedly promising production innovations formulated by outsiders. The challenge is one of developing adaptive approaches that are capable of accommodating uncertainty and facilitating the collaboration of rural people as knowledgeable and capable agents in their own livelihood improvement.

Traditional approaches to development and food security in Sahelian West Africa generally, and among the Fulbe Jelgobe specifically, have failed to embrace the uncertainty and heterogeneity of lived experience and have devalued pastoral opportunistic management strategies (Sanford 1983, Scoones 1996a, Swift 1989). This is largely because they have been informed by inappropriate development theories that have not adequately recognised the Fulbe as active ‘agents’ who cope with livelihood problems and change, and who negotiate strategic relationships and access to resources.

Participatory Action Research (Whyte 1984) is seen as a flexible and contextual methodology that accommodates the notion of agency reflexively in research and

\(^3\) The French term ‘bricoleur’ is used in this context to mean that people seek to overcome problem situations by creative improvisation using local resources and knowledge.
development interventions. Both pastoralist and researcher are conceived of as agents mutually shaping the research encounter. I report in this thesis on two experiences of making Participatory Action Research available to Fulbe Jelgobe agro-pastoralists in northern Burkina Faso as a means to help them explore situations of food insecurity holistically and reinforce their capacity to cope with such food insecurity. I also critically evaluate Participatory Action Research as a credible research and intervention methodology for improving livelihood security in complex, dynamic and vulnerable livelihood contexts.

The research process is viewed as an emergent and persistent learning process that recognises that knowledge is never complete in dynamic and rapidly evolving food insecurity problem situations, and that action is always necessary. The process is initiated by action informed by ‘optimal ignorance’ (Chambers 1992) of livelihood situations, and sustained by iterative processes of action and reflection that progressively expose higher order problems.

The action research process involved two groups of Fulbe in their communities. They went through a facilitated process that cycled between planning, action and reflection as a means of exploring and reinforcing local subsistence coping strategies.

While Participatory Action Research is perceived of as useful in such vulnerable livelihood contexts, I would contend that it is often necessarily far more partisan than purist adherents to such an approach would accept. Rather than a process aimed at consensual agreement it is better seen as a continual negotiation and re-negotiation of ‘cooperation pacts’ (Weiskopf and Laske 1996) with relevant local stakeholders having diverse and conflicting interests. The aim is to facilitate stakeholder
participation in a heuristic research/development process that seeks to hold a diversity of common and conflicting interests in creative tension. Participation is as Schaeffer (1992:10) maintains, a process phenomenon that is ‘fraught with difficulties, risks, disappointments and unkept promises’.

The two Participatory Action Research experiences occurred in the provincial town of Djibo in the Province of Soum, northern Burkina Faso4 (Fig 1:1 below) and the Fulbe Jelgobe village of Monnde So some twelve kilometres north of Djibo (see maps in Chapters 7and 8). The research took place over the final three and a half years of a fourteen-year period spent living amongst the Fulbe. All program activities were conducted in the local Fulbe language (Jelgobe dialect) and on occasions in French. Translation into the Mossi language (Moore) was necessary on occasions in Djibo. I was working for SIM International5, which is involved in medical, rural development and literacy activities in numerous provinces in Burkina Faso. The activities around Djibo involved rural development, food relief and literacy work.

It is not practical to include all local stakeholders as co-Participatory Action Researchers. It was therefore necessary to choose action research groups in each location. As far as possible these groups reflected the social diversity evident in each location. A group of eight men in Djibo and a group of four men and one woman in Monnde So were initially chosen to participate in making sense of the food insecurity situations and designing relevant responses. A third group comprising one public

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4 See Appendix 1 for a brief description of Burkina Faso.
5 The Society for International Ministries (SIM) is an interdenominational mission group that has worked in Burkina Faso for nearly fifty years. Its goal is to minister to the whole person. SIM thus seeks to emphasise literacy, health care and rural development as well as its religious activities. It is a partner in the Federation des Eglises et Missions Evangeliques (FEME) of Burkina Faso. FEME is a non-government development organisation registered with the Burkinabe authorities.
servant from Djibo and one man each from Hubere So and Dadungal acted as a forum for critique of the overall Action Research program. As I was making a new inquiry framework available to these people, I strongly influenced the process during the initial few months. After this I used the third or general action research group to help me facilitate the co-management of the inquiry process in each location.

Fig (1:1) BURKINA FASO (From Sharp 1990: 6)
1:3 THESIS OUTLINE

Following the introduction in Chapter One, I use Chapter Two to situate Participatory Action research as a flexible agency\(^6\) approach in my quest for a more adaptive approach to improving food security in the Sahel. A complete understanding of the complex and dynamic problems associated with food insecurity is difficult, if not impossible, but action in response to livelihood vulnerability is always necessary. The problem situations are complex and thus better understood and improved by enrolling a diversity of stakeholders in a learning process. However the notion of stakeholder participation is seen as problematic. The critique of participation in the chapter shows a need for participatory approaches such as Participatory Action Research to focus critically on process as much as practical outcomes.

Food insecurity situations involve complex interactions between livelihood activity and the surrounding ecological environment. I therefore briefly look at the personal and impersonal ways people view, and relate to their surrounding environment. People such as the Fulbe are also knowledgable about their local environment and ways of adapting livelihood activity to cope with food insecurity. I thus also unpack the notion of local knowledge and assess its importance for participatory approaches.

Sustainable livelihood activity is the end goal of improving food security. Chamber’s (1988b) notion of sustainable livelihoods is a useful organising concept in improving food security. It stresses the links between household food security, the local

\(^6\) Agency is used here following Gidden’s (1984) sense of people possessing the knowledgeability and capability to intervene in the flow of events and cope with change. The notion of agency in action research is applied reflexively to the researcher who actively shapes the research encounter.
production systems and the ecological environment in which livelihood activity occurs. Attaching the notion of sustainability to livelihood activity is viewed as problematic. Just what is sustainable livelihood activity is open to multiple interpretations and very much about issues of control and power.

In the second chapter I also seek to situate the use of Participatory Action Research in the current shift in from blueprint research and extension approaches towards adaptive learning ones. Emerging ‘Beyond Farmer First’ (Scoones and Thompson ed 1994) approaches acknowledge the agency of both the researcher and diverse local stakeholders in shaping the participatory process. Such approaches picture the intervention as an iterative and reflexive learning process.

I end Chapter two by surveying literature on food security and coping strategies. This section provides the theoretical framework that informed my Participatory Action Research on improving food security. Sen’s (1987) work on entitlements, though much critiqued in debate on food security, and despite its problematic terminology, is viewed as an important foundation for understanding food insecurity. The reinforcing of local coping options is argued as being an important means of combating food insecurity when it is linked to longer-term changes to food procuring activities.

Since I have chosen to view food insecurity as a livelihood problem, I use Chapter Three to describe and analyse pastoral and agro-pastoral livelihoods as well as alternatives to conventional blueprint planning and intervention approaches. I outline and confirm pastoral adaptation and relational skills and look at trends in approaches to pastoral development that value local knowledge and acknowledge pastoralists as
valued participants in any inquiry process. Emerging approaches value pastoral flexibility and responsiveness in uncertain environments. They seek to embrace and value the flexibility of pastoral associations, institutions and organisations as well as the complexity of relationships between pastoralists and other people within their environment and the shifts in these relationships over time.

The discussion in Chapter Three emphasises that pastoralists live with uncertainty. Rather than seeking ‘standardised’ farming systems such as ‘mixed farming’ (Winrock 1992) it is preferable to value diversity and improve local stakeholder capability to deal with ever changing food security scenarios. Action research is viewed as a flexible and emergent approach that can accommodate diversity and preserve the ‘efficiency of opportunism’ in dynamic and patchy environments. Agro-pastoralism is examined as an important concept and Bonfiglioli’s (1991) framework is adapted to portray it as a dynamic adaptation strategy whereby people move between different agro-pastoral configurations. These configurations involve different balances of pastoral and agricultural activities.

Chapter Four describes and analyses Fulbe Jelgobe livelihoods in detail. I describe the social life of the Jelgobe, the ‘complex patchiness’ and diminishing rainfall of their local landscape (the Jelgoji) and their seasonal activities. It also describes the Jelgobe’s pastoral and dry-grain farming activities. I also analyse in detail the Fulbe notion of pulaaaku or Fulaniness and its implications for collaboration in inquiry.

Pulaaku is characterised by the taste or ndaku for cows and an intimate knowledge of cattle husbandry, self-control over physical needs and impulses, and the choice of stimulation over comfort. Fulbe enact pulaaaku during social interactions in their own
milieu. When outside this milieu they are more relaxed and open to revealing their concerns. Thus there are formal and informal ways of interacting with the Fulbe that are important in a participatory inquiry process. Fulbe have a keen sense of helping others but do not readily understand our concept of cooperation for the common good. All effort or work is done for oneself or someone else, not for the community in general. This is an aspect of social life that must be considered in a collaborative approach to improving food security.

Chapter Five focuses on participatory action research as a methodology made available to local Fulbe Jelgobe stakeholders. It portrays action research as a participatory, emergent and heuristic process that sees changing/improving situations as a valuable means of understanding them. The chapter outlines the organisation of the intervention and data gathering techniques. The action researcher is viewed as social agent, whose capacity to facilitate a recursive flow of learning and action in a particular problem situation improves through critical reflection on experience.

Chapters Six and Seven report on two action research processes that I facilitated over a period of three and one half years. Both processes involved the use of locally designed food-for-work programs to reinforce coping options and provide space for more sustainable changes to the local mix of food procuring activities. I analyse and critique the processes and practical outcomes in each situation. In between Chapters six and seven I have included a photo-essay that illustrates the intervention process. The pictures illustrate the Fulbe’s livelihood and landscape as well as different moments from the intervention process.
The Sixth Chapter outlines work undertaken in the provincial centre of Djibo in northern Burkina Faso. The intervention was concerned with re-invigorating an association of some 80 gardeners using valuable lakeside land for dry-season. The focus was on improving members’ resilience to food insecurity while simultaneously facilitating the emergence of a more flexible organisation that had local legitimacy and improved capacity to interface with various development organisations. Some form of recognised association was needed to ensure tenure of the gardens. The loose association of people was eventually registered as a legal entity with the provincial authorities under the name of Dewral.

Chapter Seven describes an intervention at a Fulbe Village called Monnde So 12 kilometres north of Djibo. It looks at negotiating cooperation between Maccube and Fulbe in order to use valuable lakeside commons land for dry-season gardening. The chapter looks at the various incentives and disincentives to the participation of local Fulbe in the program. It also looks at the influence of embedded social conflict on the participatory process. A food-for-work program was organised and planned locally to improve food security, establish gardens and model improvements to local dry-grain millet farming.

Chapter Eight critically reflects on the two case studies and participatory action research processes in general. It reflects on Participatory Action Research’s ability to collaboratively understand and improve local food security. The focus on consensus in participatory development literature is viewed as problematic. Uneven power relations and social difference are viewed as key factors in any community. Thus, rather than prolonging dialogue to facilitate a consensus the participatory inquiry
process is better viewed as the continual re-negotiation of cooperation pacts through critical dialogue. Diversity in knowledge, capacity and interest is viewed as a resource in an iterative learning process. The emphasis is thus on the facilitation skills of the action researcher as he/she links critical reflection to action in the food security problem situation. From reflection on the two processes I argue that a locally managed action research process used to create an infrastructure for dry-season gardening and reinforce non-erosive coping options is a credible way to improve local livelihood security. A focus on coping treats food insecurity as a holistic livelihood problem and places emphasis on people’s agency in responding to food stresses and shocks. However, such a focus is not intended to lock people into coping behavior. A locally designed and co-managed food-for-work program that factors in social difference and variations in coping capacity creates space for local people to pursue more sustainable changes in livelihood activity.
CHAPTER TWO

A LEARNING APPROACH TO IMPROVING FOOD SECURITY

2.1 INTRODUCTION

Sahelian agro-pastoralists such as the Fulbe manage ‘highly sensitive livelihood systems’ (Davies 1993). These systems are often prone to complex food security shocks and stresses. For varying periods and reasons, people’s ‘capacity’ (Anderson and Woodrow 1989:1) to manage and cope with food insecurity can be overwhelmed. Any attempt at sustainable improvement in household ‘resilience’ (Bayliss-Smith 1991) to food insecurity cannot envisage a linear progress towards sustainable livelihood activity. Instead, it is a complex process punctuated by shocks and seasonal stresses where the focus is often on short-term rehabilitation responses. An intervention aimed at improving food security must link short-term responses with longer-term strategies of risk management in a reflexive learning process.

A learning process is needed because one cannot arrive at a complete understanding of the complex and dynamic webs of causality that give rise to food insecurity before action is required. Knowledge about food insecurity cannot be complete but action is always necessary. It is preferable to ‘act incrementally and initiate a learning process that monitors experience and feeds back lessons’ (Scoones 1996b: 6).

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1 In this thesis I am using Chambers and Conway’s (1989: 7) working definition of sustainable livelihoods. They view a livelihood as comprising ‘the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress 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 the local and global levels and in the short and long term’.

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In this process local sources of vulnerability to food insecurity are understood and reduced, and capacity to cope with food insecurity is improved. The emphasis is therefore on the Fulbe’s capacity to cope and adapt. The Fulbe are viewed as local agents who are capable of coping with food insecurity and who have varied portfolios of skills, local resources and knowledge that enable them to make use of livelihood opportunities. The important aspect of a learning process approach is the capacity of Fulbe to continually learn about changing conditions so that they can act to adapt and change existing livelihood activities.

Participatory Action Research is the methodological framework that provides the best option for facilitating a learning response to food insecurity. As an agency approach, it recognises that local Fulbe stakeholders have the knowledge and capacity to transform their existing livelihood activities in the face of changing socio-ecological situations. It is a methodology placed at the disposal of local Fulbe, in order that their capacity to understand changing situations and link that understanding to the negotiation and implementation of relevant change options is improved.

A focus on coping strategies recognises people’s agency and ‘resilience’ (Bayliss-Smith 1991) in responding to food insecurity rather than seeing them as passive victims. This chapter seeks to unpack the notion of agency. Any sustainable improvement in food security cannot be attempted without the participation of Fulbe stakeholders as ‘situated agents’ (Bebbington 1994: 89) and an adequate understanding of their diverse views and perspectives. In this chapter I also examine participation as a component of an inquiry approach.
As situated agents the Fulbe possess local knowledge about their environment and have particular ways relating their livelihood activity to changing ecological environments. It is thus important in seeking to improve food security to look at the concept of local knowledge and to explore the way people relate to their environment and interpret it in terms of what it can afford or provide for livelihood security. These two themes are examined in this chapter.

Sustainable Fulbe livelihood practice is the ultimate goal of a Participatory Action research process aimed at improvement in food security. Just what constitutes sustainable practice in the context of uncertain and dynamic food security scenarios in the Sahel is problematic. Sustainable practice is not a package of technology and techniques. It is the emergent quality of a learning process where Fulbe use their capabilities and local knowledge to respond to changing food security situations. The concept of sustainability as related to a focus on food security is also discussed in this chapter.

I chose Participatory Action Research as a methodological framework to guide learning approach to improving food security. The participation of local Fulbe is a fundamental component of this process of inquiry and incremental change. Such an inquiry process is, however, political. It involves accessing multiple sources of knowledge, resolving conflict among divergent interests and negotiating involvement in action. These themes are consistent with a number of emerging approaches to rural development that are outlined also in this chapter.
The Fulbe use what Scott (1976) calls the ‘moral economy’, with its local array of ‘coping strategies’ (Fafchamps 1992, Watts 1983) or ‘portfolio’ of coping options (Davies 1993) to cope with food insecurity. These short-term coping options are used in parallel with longer-term responses. Many coping strategies may however, as De Waal (1989) points out, may erode or compromise the base for future responses. In this chapter I also survey relevant theory on food security and coping strategies to provide a theoretical underpinning for the Participatory Action Research focus on food security.

In summary then I contend that improving Fulbe food security necessitates a persistent and emergent learning process. This process aims at an evolving understanding of the complex and dynamic ecological and social interactions in situations of food insecurity. This evolving understanding informs increasingly relevant action to improve food security. Participation of diverse Fulbe stakeholders in both inquiry and action is an essential component of this learning process. Participatory Action Research is the methodological framework that guides this process of learning combined with action.

2.2 THE RECOGNITION OF AGENCY

Power and knowledge form important parts of the populist participatory approach discourse which aims at empowering rural people (Chambers, 1983, Kronenberg 1986) through the wise use of ‘people’s science’ (Richards 1985) and ‘local
intermediate organisations' (Esman and Uphoff 1984, Korten 1984) in facilitating
development from 'within' or 'below'. Populist approaches have often
underestimated the heterogeneity of power and knowledge processes and the
embedded conflict over resources and access to discourse. Development interventions
are often 'battlefields of knowledge' and involve ongoing processes of resistance,
negotiation and compromise as the 'lifeworlds interlock' (Long and Long 1992).

The local 'political economy of expertise' (Appadurai 1990) is expressed through
various social networks that change and evolve over time. Both knowledge and power
emerge from social interactions and need to be considered relationally not as
transportable commodities diffusable between various 'rigid hierarchical'
communities through 'disembodied processes' (Long and Villareal 1994). One is
better off trying to understand how various actors and/or networks of actors create
and negotiate space for their own interests and change (Long 1984). Social processes
are not just open to some sort of 'injection' of power or knowledge by outsiders.

Approaches to understanding development have long been divided between those
who emphasise structure, system and class as shaping people's lives and those with a
human agency perspective who see people/communities as knowledgeable and
capable of shaping their own lives and coping with change. As Long (1977, 1989,
1992) suggests, while the former structural approaches are ideologically different
from each other, they are similar in conceiving of development and its attendant
processes as emanating from centres of political and economic power and following
determined paths. These paths are 'signposted' by 'stages of development' or
successive dominant 'modes of production'. There was no appreciation of human
agency (in Giddens’s sense of knowledgeability and capability) expressed by the ability to influence, resist or strategically comply with (Scott 1976, 1985) development policy and processes.

It is pertinent at this point to unpack the notion of agency. Long (1989) and others draw heavily on Giddens’s (1984) notion of agency. A social agent is one who has the knowledgeability and capability to intervene creatively in the flow of surrounding events. As with Long, rather than emphasising the commonality of people’s lifeworlds the focus on agency in this thesis stresses both the individual’s and various association’s capacity to make a difference, especially those formerly considered vulnerable and powerless. Agency is expressed in organising capacity and the ability to strategically manipulate a network of social relations. It concerns, as Latour (1986: 264) argues, the ability to enrol other actors ‘in a given political and social scheme’.

There is however no universal interpretation of agency and one must arrive at a local conception of agency. However knowledgeability and capability are variously attached to people according to the cultural context. Strathern, (1985: 65) using African and Melanesian examples, points out that there is a need to reveal an ‘indigenous theory of agency’. She argues that power and knowledge are attached differently to the concept of person. In Africa, she claims, personhood is linked to ‘office’ and people, after undergoing appropriate initiation ‘occupy’ a status or play a ‘role’ and influence others by virtue of that position. In Fulbe society, as will be seen later in this thesis, positions of power and prestige are more open to negotiation. Social agents have varying capacities to form and manipulate networks of social relations.
Strategic action is inherent to the notion of agency. Strategic action, as Nuijten (1992) argues, emanates from ‘everyday practical consciousness’ and enables local agents to ‘cope’ with change and uncertainty. Decision-making and strategising are thus not just voluntaristic but shaped by wider influences as Bourdieu (1981) suggests in his notion of ‘habitus’ or ‘everyday practical consciousness’. Agency cannot be considered in isolation. Consideration must also be given to understanding how larger-level structures constrain and enable the activity of social agents.

To understand development activity it is necessary to somehow combine both theoretical perspectives. Both Giddens (1984) and Habermas (1984) have pursued this aim. Long (1984:7) in his ‘actor oriented approach’ also saw the need to ‘combine a structural analysis of political and economic processes with an actor-oriented approach that aims to understand how specific individuals and social classes responded to processes of intervention’. As a complement to structural analysis, Long proffers a more dynamic approach to understanding social change that stresses agency, knowledge and power. While modernisation and structural approaches stressed the commonality of ‘lifeworlds’, Long focuses on the potential for difference and the heterogeneity of communities. His ‘actor-oriented approach’ is concerned about varying responses to development interventions in similar structural circumstances.

Rural development interventions are seen as ‘encounters at the interface’ (Long 1989) where there are ‘discrepancies in values, interests, knowledge and power’ (Long and Villareal 1994). The ‘interface’ concept, as Drinkwater (1992a) in his critique of
Long notes, is not unproblematic. Interfaces are where different levels of social order (the local and broader structural contexts) interact. They are also ‘face-to-face’ (Long 1984:10) encounters where different individuals or associations representing different interests and supported by different resources interact. Thus the broader structural context is localised through representative individuals and associations that represent themselves or household, caste, clan, community, province, national, regional or international level entities. The interface is the arena where the localised interaction of structural levels can be analysed.

Thus at interface encounters, individuals and their various coalitions or networks represent different structural levels as well as the local and broader structural contexts. As Drinkwater (1992) argues, while structure is a factor in any encounter and while stakeholders may represent different structural levels it cannot be said that the interface encounter is an articulation of the local and structural context. Similarly the analysis of such encounters cannot be said to represent a combination of actor oriented and structural approaches.

According to Drinkwater (1992) it is preferable to conceive of agency and structure, not as different levels but as ontologically different perspectives. Habermas (1984: xxvi) characterises the difference as interpreting and understanding people’s actions from ‘internalist’ and ‘externalist’ viewpoints. An agency perspective as Giddens (1987:59) views it, attempts to view the world from the participant’s perspective while the structuralist view focuses on the influence or impact of the social institutions upon the participants and their context. Thus the process of research and
intervention is important. Long (1989) himself is cognisant of this in his elaboration of approaches appropriate to an actor-oriented analysis.

In seeking to appreciate both agency and structural perspectives as one seeks to encompass the horizons of others, it is helpful to refer to Giddens. He stresses that structure is ‘instantiated in social practice’ (1984: 25) and is both a ‘medium and outcome of human activities which it recursively organises’. In other words social structure is internal to the activities of situated social agents within their social system. Drinkwater (1992), in referring to Giddens, argues that a structural account can only be depicted by using structural concepts in describing the activities of a group of social actors. According to Giddens, a structural account can only be validated through engagement in the situated activities of social actors.

Engagement is necessary for a real understanding of the encounter context. A real appreciation of local and broader level influences and contexts is achieved through a process of ‘dialectical tacking’ (Geertz 1979:239). Geertz describes a process of tacking between ‘the most of local detail and the most of global structure in such a way as to bring both into view simultaneously’ (1979: 279). Intervention then, becomes a matter of enacting a ‘learning spiral’ (Drinkwater 1992) by alternative immersion in local learning and critical reflection on that learning in order to question previous assumptions and situate such local learning within a larger whole context. Thus any intervention is as much about paying critical attention to process as it is about content and practical outcomes.
While acknowledging the importance of local individual and association’s agency, Long (1989) does not apply it reflexively to the researcher. In Drinkwater’s (1992) terms, the researcher is visible and active in shaping any encounter. An intervention thus becomes a matter of intersecting ‘lifeworlds’, where both participant and researcher are social agents with different agenda, values and perspectives. Recognition of mutual agency in shaping any engagement should then foster simultaneous processes of pursuing the engagement and critical reflection on the process of that engagement. It should be necessary for all parties to ‘situate’ themselves within the research context.

The notion of agency leads us to consider the notion of empowerment. Popular approaches linked power and participation in conveying the idea that powerful outsiders could ‘transfer’ power to locals and enable them to transcend or transform their present situation. As Wright and Nelson (1995) suggest, there are both ‘power-to’ and ‘power-over’ models. Most popular approaches envisage a ‘power-to’ model of empowerment and suggest that power can grow or develop. Freire (1972) and Fals Borda (1988) look to a transformation of understanding through dialogue that leads to more symmetrical power relationships. Nelson and Wright (1995) argue that empowerment processes have three aspects: a process of enablement where individual competency and confidence is developed; an ability to negotiate and influence close relationships; and a using of networks to become more influential. ‘Power-over’ models focus on access to political decision making and resources. Power is conceived of as a ‘thing’. Empowerment revolves around a re-arrangement of a fixed amount of power within a closed system on a zero-sum game basis. Power is evidenced by preventing access to decision-making dialogue (Bachrach and Baratz
1970) or where the dominant party’s interests were assumed to be ‘natural’ (Lukes 1974).

Viewing outsiders and locals as social agents means that the ‘powerful outsider’/ ‘powerless local’ dichotomy evident in some development literature is simplistic. Similarly one can not simply ‘transfer’ power through various NGO and Government alliances with local communities nor would such a transfer follow straightforward patterns. Neither power nor knowledge can be unproblematically transferred. A zero-sum model of power relations is also misplaced. Any process of empowerment by outside facilitators using ‘local intermediate organisations’ (Esman and Uphoff 1984), unless truly reflexive, is open to manipulation. Empowerment is more a complex process of creating space for locals as ‘participants’ to use their capability and power to negotiate relevant local change and form relevant and appropriate alliances with more powerful partners.

Power and knowledge processes are complex and embedded in the local ‘social system’ (Giddens 1984: 25) which legitimises them. Power, like knowledge, is seen to emerge from the complex social interactions and negotiations that are part of the situated and knowledgeable activities of social agents. It is not a commodity to be injected by outsiders in order to promote activity from below where there is a supposed absence of power. People are never completely powerless. No matter how vulnerable they are, they find the capacity to resist and make space to manoeuvre in the situations that confront them through strategic alliances with various networks. Local practical knowledge dictates to what degree they can influence social processes or shape what is expected from them.
Stress on agency within the context of Participatory Action Research means that one would seek to initiate a process whereby local knowledge and power networks are uncovered through dialogue and reflection on action. These local networks are complex and dynamic and the emergent participatory process negotiated between researcher and local stakeholders is potentially conflictual. In order for the process to be effective it must be reflexive, as researcher and local agents continually reshape and re-negotiate the encounter.

A number of themes important for the Participatory Action Research process emerge from this consideration of the notion of agency. These themes involve the need to engage with situated agents and their activities, to focus on process and the necessity of the researcher (as a social agent) to be reflexively aware of his/her role and activity in shaping the encounter. The participation of local agents is an essential aspect of an inquiry process that leads to debate about change. Aspects of participation as a component of an inquiry process are discussed in this next section.

2:3 PARTICIPATION

Participatory Action Research aims to provide a framework for participation with local people in the production of knowledge and action that is directly useful to the community. However the notion of participation is open to various meanings. It is seen as a means of devolving power away from outsiders and oppressive insiders through conscientisation (Freire, 1972). Alternatively it is viewed as a strategy that
supports interactive and reflexive analysis and learning (Chambers 1992, Oakley 1991). Organisationally it is viewed as being effective in sustaining development action through associations modelled on either local or ‘outsider’ culture.

Methodologically it is seen as a way of blurring the distinction between researcher, extension agent and farmer. However people, including researchers, can be virtual or full participants (Habermas 1984) on a continuum between mere involvement and real participation. Full participants are those engaged in local communicative practice and ‘cooperative processes of interpretation’ in order to pursue and coordinate ‘aims of action’ (Habermas 1984).

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<td>Delegated power</td>
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<td>6</td>
<td>Partnership</td>
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<td>5</td>
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<td>4</td>
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<td>2</td>
<td>Therapy</td>
</tr>
<tr>
<td>1</td>
<td>Manipulation</td>
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</tbody>
</table>

(Fig. 2: 1) **Eight Rungs on a Ladder of Citizen Participation**

(From: Arnstein 1969: 217)

The participative process is an emergent one. Participation is both a goal and a quality of the research and intervention relationships over time and is not something that can be mandated when initiating a research process. Arnstein (1969), from research in an
urban renewal context, provides a conceptual framework for analysing and critically reflecting on participation. It offers a typology of participation (Fig 2:1) and ‘non-participation’ ranging from manipulation through degrees of tokenism to citizen control. It is a useful tool for critical reflection for those immersed in a participatory process and ultimately for evaluation of that process. The style and degree of participation in ‘finding out’ and ‘taking action’ varies over time and with context. Participation is no panacea or guarantee of the effectiveness of the intervention.

Participatory programs often raise extra problems, such as deciding who participates, the nature of their various roles and what constitutes valid public knowledge for the participatory forum. As Aronson (1985) notes, participation in development, as expressed in the concern that decision making regarding intervention, conceptualisation and management should be widely shared and that ‘change should proceed from the aggregated will of individuals’, is a ‘culture-bound’ value. It is tied to western concerns for democracy and the value of individualism. Such values are not directly translatable into pastoral cultures even though pastoralists often tend to be somewhat more egalitarian than many farming cultures. Pastoralists engaged in participatory development processes do so as an aggregation of coalitions and networks. People are rarely free to pursue self-development without reference to the networks in which they are involved.

Proponents of participatory approaches often seem to assume that participation is a ‘costless means of expressing preferences’ (Pagano 1985). People with the most vulnerable livelihoods rarely have the time to join in meetings. They are not used to being consulted or expressing their agenda in a public forum. This is especially so for
women. Moreover, the link between participation and benefit is not always obvious whereas the person’s traditional ways of coping bring about more immediate benefits.

Notions of popular participation also inadequately conceptualise how empowerment to cope and meet practical needs is linked to the realisation of strategic needs (Molyneux 1985). Participative approaches can also impose organisational models that require facilities nonexistent in societies or marginalised groups dominated by scarcity, vulnerability and distrust (Brett 1992). They can also produce opportunist groups that operate as ‘disguised fronts for the private business ventures’ of community gatekeepers (de Connick 1991:3). Effective participation in support of sustainable agricultural praxis is an operational synergy between participative approach concepts, the interactive learning context and the institutional support that underpins the intervention (Pretty and Chambers 1993).

Critical reflection is an important component of the participatory process. The process is an emergent one as it takes time, competency in facilitation and an awareness of local power structures to develop genuine participation. Critical reflection aims at developing an appreciation of which groups and networks are participating in the inquiry process, their respective influence on the process and the nature of their participation. The nature of their participation can vary from information giving to interactive decision making and control of the process. y process and decision making within this process. It is equally important to appreciate what motivates different individuals and groups to support, modify or resist different stages of the inquiry and action processes. An understanding of motivation is
necessary in order to fully appreciate how, and under what conditions, participation might be intensified or re-negotiated.

2.4 ENVIRONMENT/PEOPLE/COMMUNITY RELATIONSHIPS

Environmental degradation is often characterised as a result of communities being out of harmony with their environment’s capacity to provide their livelihood needs. Population increases, innovations in technology, the breakdown of traditional customs regulating natural resource access, and state policy are the culprits often referred to. The remedy is seen to lie in supporting introduced or traditional community institutions\(^2\) that mediate the local community’s attempts to restore some form of harmony between their livelihood needs and the capacity of the local landscape. The accompanying notions of people/community/environment relationships are somewhat problematic as is outlined in the rest of this section. Rather than viewing sustainability problems in terms of population pressure or overgrazing impinging on an undifferentiated community’s livelihood, we should acknowledge the role ‘of diverse institutions in mediating the relationships between different social actors, and different components of local ecologies’ (Leach et al 1997: 6).

Development, until now, has privileged the notion of environment as ontologically separate from ourselves with ‘humans sometimes exploiting it, sometimes being

\(^2\) Literature suggesting that what is now called ‘sustainable development’ should be based on local or ‘grass-roots’ community initiatives is extensive and dates back to the early 1970’s—Bruntland et al (1987), Conroy and Litvinoff (1988), Pretty and Gujtf (1992) and Uphoff (1992).
controlled by it or humans exploiting each other by means of available resources’ (Croll and Parkin 1992c: 28). This should be understood as contextual to the ‘ impersonality postulate’ (Banuri 1990b: 83) of modernism and western culture. As such it is only one view of the relationship between the environment and development. Central to Banuri’s (1990b: 78) concept is the privileging of impersonal ‘cultural maps’ over personal ones. The impersonal emphasises individualist ontology, positivist epistemology and instrumentalist cosmology over the personal that emphasises holism, a relational epistemology and a communicative cosmology. The impersonal/personal contrast has close analogies with Habermas’s (1984) rational purposive action versus communicative action. The impersonal sees the non-human environment as capable of appropriation and categorisation in the interest of rationality and certainty. The local conceptual apparatus is ignored in description, which is couched in terms of outsider resource exploitation.

A valid alternative is to view ecology as including human agents (Bateson 1972) and recognising that ‘persons and environment are mutually constitutive components of

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3 Geertz (1973: 50) considers culture to be a superstructural system of significant symbols that fills the information gap between what our bodies tell us and what we have to know in order to function. Banuri (1990b: 76-92) likens this system of symbols to a map or design for living which enables us to integrate our values, choices and actions. These maps can either be impersonal or personal. Ontologically the impersonal map emphasises individualism in providing a sense of identity independent of relationships and based on more abstract notions such as rights and preferences. The personal map on the other hand emphasises holism where society as a whole is valued with every person seeing themselves being at the nexus of a web of relationships. Cosmologically the impersonal map values instrumentalism and sees the land, the home and trees, for example, primarily as sources of gratification. The personal map sees those entities in a relational context. For example, the home is not just a current abode but an integral part of one’s history and future. As far as epistemology is concerned, the impersonal values positivism and sees valid knowledge as being derived from the separation of the observer and from the object of knowledge. The personal view is that valid knowledge is derived from identification with the object of knowledge through a relationship between observer and observed. The distinction between impersonal/personal epistemology is like that between Habermas’s (1984: 157-185, 186-215) rational-purposive action and communicative action. The latter seeks legitimacy, sincerity and comprehensibility rather than ‘truth’. Both maps are seen by Banuri (1990b) to exist in all societies the distinction being one of each society’s emphasis.
the same world' (Ingold 1992). This conception has affinity with the more personal
cultural maps of Sahelian societies. As Ingold (1992) notes, the person/environment
dialectic should be understood in terms of a dichotomy, not between culture and
nature but, effectivities and affordances - between people's action capabilities and the
possibilities for action that the environment affords. Ingold uses Gibson's (1979)
notion of direct perception in that our 'immediate perception of the environment is in
terms of what it affords for the pursuit of the action in which we are currently
engaged' (Ingold 1992: 44).

People then experience the environment as a set of affordances in the context of
practical action that is mediated by social values and institutions. This practical action
takes place within the 'productive infrastructure' (Ingold 1980:8) which is an
interaction between the social system and local ecosystem which in turn fashions the
'cultural infrastructure'. Ingold's 1980 work implies that in the quest for sustainable
development the focus should be on the social system rather than tinkering with
technology. In Ingold's model technology belongs to the 'cultural superstructure' and
as such is a product of practical action in the context of social system and ecosystem
interaction.

Richards' (1986) emphasis on the notion of coping, with reference to West African
rice farmers, is important here. His approach is neither culturally nor environmentally
deterministic. He sees farmers as knowledgeable and flexible experimenters who are
the main agents in shaping their own destiny by adapting to changing environmental
conditions and needs. They make rational decisions regarding cropping packages that
are perceived as relevant to their needs. They do experience environmental shocks
such as droughts, but these are not necessarily indicative of obsolete techniques or impotence in the face of problems.

In the quest for sustainable development, the focus needs to be on the way different social actors access and derive wellbeing from their local environment or landscape and in so doing change it. Different formal and informal institutions shape these processes and the course of ecological change. As people interact in normal and crisis situations these institutions may be reinforced or changed. These institutions are ‘regularised patterns of behaviour between individuals and groups in a society’ (Mearns 1995:103) but may not necessarily be at a community level. They may even be a ‘temporary unity of situation, interest or purpose among particular groups of social actors’ (Leach et al 1997:11).

The ‘community’, in much sustainable development literature, is viewed as the appropriate vehicle to care for local natural resources and restore a balance with nature’s capacity ‘while satisfying livelihood needs’ (Pretty and Guijt 1992:22). It is assumed that these communities are bounded and homogenous entities oriented to social consensus and solidarity. However these communities are dynamic and diverse and are composed of active people and associations that actively monitor, interpret and intervene in the local flux of events. These social actors vary in their values, knowledge, resource priorities and power. Rather than bounded entities, aspects of social identity such as gender, caste and lineage permeate the supposed boundary and facilitate linkages with higher order social structures.
Social difference therefore needs to be acknowledged in a quest for sustainable development. But that is not all. Different social actors see different components of dynamic and variable local ecologies as resources at different times and possess different capabilities to access their ‘environmental entitlements’. As Leach and her colleagues in their analysis of ‘environmental entitlements’ contend, a view of ecology is needed that stresses spatial and temporal variability and dynamic histories of disturbance events. The local environment is a ‘landscape that is transforming, not simply degrading, and one which is emerging as a product of both social and ecological history’ (Leach et al 1997:14).

The picture then is one of social actors with varying capabilities accessing, controlling and changing their local landscape through diverse institutions. Intervention approaches intending to ameliorate both landscape and livelihood need therefore to elicit a plurality of perspectives and negotiate cooperation in action through processes that may be conflictual.

2:5 LOCAL KNOWLEDGE

Knowledge concerns the way people in diverse socio-ecological environments interpret and apply meaning to their experiences. Various knowledge systems, or ways of knowing, differ, according to Marglin (1990: 232), in four main aspects: epistemology, transmission, innovation and power. Each way of knowing has a theory as to what counts as valid knowledge (epistemology), the means whereby this knowledge is distributed and received (transmission), the way what is collectively
known changes over time (innovation), and finally the political relationships that
shape the knowledge community (power). The use of the word system does usefully
highlight the fact that these four characteristics interact. However it is doubtful, as
Arce and Long (1992) point out, that knowledge is ever fully integrated into a system
but it is fragmentary in nature and people are able to cope with diverse
understandings. Knowledge processes are contextual to people’s ‘lifeworlds’ (Schutz
and Luckmann 1973) which are their largely tacit worlds of lived experience with
their associated patterns in the way social relationships are maintained and socio-
ecological situations problematized.

Knowledge systems have tended to be classified as ‘scientific’, ‘local’ or
‘indigenous’. It is preferable to use the term ‘local knowledge’ because, as Mazur and
Titilola (1992: 282) conclude, it is unlikely that any farming system is wholly
indigenous and ‘uninfluenced by methods and techniques originating outside the
system’. Local knowledge has been variously represented, with views ranging from it
being an obstacle to development to it being an important component of alternatives
to modernization. Traditionally, in the ‘transportational paradigms’ (Dissanayake
1986: 280) of the 1970s it was seen as primitive and wrong, and thus people needed to
be re-educated or modernised. In later ‘farmer–first’ approaches (Chambers et al
1989) it was conceived of as a valuable and definable stock of knowledge to be
extracted and repackaged into sustainable research and intervention packages. More
recently, ‘rural people’s knowledge’ and traditional science are seen as ‘contrasting
multiple epistemologies’ that are contextual to particular social, ecological and
economic environments (Scoones and Thompson 1994: 17).
The weakness of early interest in local people’s knowledge was that it confined descriptions of indigenous knowledge to Indigenous Technical Knowledge (IDS 1979), which fails to see agriculture more holistically as ‘social praxis’ (Cornwall et al 1994: 99). Technical knowledge is but one aspect of a local ‘cultural system of common sense’ (Geertz 1983) which is concerned with mutual understanding, reproduction of cultural identity (Richards 1985, 1986) and adaptation to the environmental stresses and shocks of everyday life.

The tendency to label knowledge tends to divert attention from the fact that knowledge is a ‘fluid, everchanging outcome of complex social processes’ (Clark and Murdoch 1997: 44). Scientific knowledge has usually been assumed to be more transportable without necessarily linking it to its associated social processes or ‘lifeworlds’. The problem with past rural development approaches that assume the mobility of scientific knowledge is their failure to adequately critique how its transfer variously subsumes or coalesces with other forms of knowledge. As both Clark and Murdoch (1997) and Arce and Long (1992) note, the distinction between various knowledge forms really only emerges once social actors and their associated ‘lifeworlds’ interact and interpenetrate, or once the knowledge has travelled.

Rather than trying to distinguish between different types of knowledge, it is more important to focus on the way different individuals (researchers, extension personnel and locals) with their associated knowledge, values and power, encounter each other
face to face. Long (1989) terms this, an interface\textsuperscript{4} encounter. Participatory action research assumes that knowledge cannot be separated from its social and political context. It seeks to make available to local stakeholders the useful knowledge that emerges from the collaborative action learning process so that it can be used to inform ways in which they can act differently in the face of ongoing problem situations.

2:6 SUSTAINABLE LIVELIHOODS

The aim of a Participatory Action Research process aimed at improving food security is sustainable livelihood practice. The facilitation of sustainable livelihood practices represents a formidable challenge in a rural context where there is environmental degradation, chronic food insecurity and extensive ‘low-input’ farming. In attempting to arrive at sustainable livelihood practice the focus is on livelihood/environment linkages.

Defining what is sustainable livelihood practice is, as Pretty (1994: 39) says ‘part of the problem’. Rather than one correct understanding of what constitutes sustainable livelihood practice, there are multiple perspectives. The choice of perspective used to inform policy and practice at local, national and global levels is ultimately political as it empowers some stakeholders and disempowers others. This is because sustainability is neither a value-neutral term nor one that can describe a fixed or

\textsuperscript{4} Long and Villareal (1994: 43) define a social interface as ‘critical point of intersection between different social systems, fields or levels of social order where structural discontinuities, based upon differences of normative value and social interest, are most likely to be found’.

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generalizable ‘set of practices or technologies, nor a model to ‘describe or impose on the world’ (Pretty 1994: 39).

Sustainability, as Conway (1994) notes, is but one objective of an agro-ecosystem and incompatible with the other objectives of productivity, stability and equity. Sustainability thus requires contextual tradeoffs between these objectives, which involves negotiation, compromise and competing value judgements among local and non-local stakeholders with multiple power and knowledge networks. Sustainability is a difficult concept because, at the centre of it, as Croll and Parkin (1992b: 9) assert, ‘lies the difficult, negotiable and contested relationship between person and environment’.

Food insecurity is multi-dimensional and often seasonal in nature. It is an emergent quality of livelihood interaction with the surrounding social and ecological environment. There is a multiplicity of ways in which vulnerability to food insecurity is facilitated. Hence a holistic conceptual apparatus is needed to handle food security/environment interactions. Chamber’s (1988b, 1995) notion of ‘sustainable rural livelihoods’ is a useful holistic organising concept. It stresses the combination of ‘capability’ (Dreze & Sen 1989, Sen 1984), equity and sustainability of livelihood management of resources, relations, entitlements (Sen 1989), ‘claims’ and ‘access’ (Swift 1989) in coping with various stresses, shocks and opportunities.

‘Sustainable Rural Livelihood’ is primarily a local level concept. Whilst poverty / environment interactions are clearest at the local level the political economy of these interactions needs to be pursued upwards to include North/South relationships and
donor policy as well as downwards to include ‘the dialectic between environmental and social change’ (Blaikie 1989: 26). While recognising the food security/environment synergy the notion of ‘sustainable rural livelihood’ does not give enough credence to the flexible trade-offs people make between short-term food needs and longer term strategies to conserve the subsistence resource base (Conway and Barbier 1990). As food insecurity intensifies due to collapsing food ‘entitlements’ (Sen 1981, 1989), impetus to degrade the resource base also changes and intensifies.

Sustainable livelihood problems are complex and dynamic and often conflictual in nature because diverse local stakeholders are in constantly evolving relationships with their social and ecological environments. These relationships are mediated by diverse institutions (both formal and informal) that shape ways in which these stakeholders benefit from, and impact on, diverse environments. As people interact with their environment and each other in both normal and crisis situations their actions reproduce and/or alter such institutions over time.

Local institutions are, as Uphoff (1992) argues, important for sustainable rural development. In Burkina Faso, Village Territory Management (Toulmin 1993) and Oxfam’s Projet Agro-Forresterie (Gubbels 1993) are two promising examples of attempts to support local institution building around natural resource management and conservation techniques. However, these two attempts, while producing some important practical results, fail to focus on process when intervening in heterogeneous
rural communities where there is embedded conflict arising from the varying capability of stakeholders to realise their diverse environmental entitlements³.

Food security/environment linkages are complex, contextual and unpredictable. They often involve complex ‘webs of causality’ (Mearns 1991). They are contextual because as Ingold (1992: 51) notes, ‘enfolded within persons are the histories of their environmental relations; enfolded within the environment are the histories of the activities of persons’. A shift is needed to conceptualise problems in livelihood relations to the environment and development as ‘wicked’⁶ (Miller 1985).

In attempting to improve Fulbe food security the ultimate goal is sustainable livelihood practice. However the Fulbe live in an uncertain environment. Any attempt at sustainable livelihood practice must involve a learning approach that accepts that there are diverse sources of knowledge and multiple perspectives as to what constitutes sustainable practice. A learning process approach is one of a number of alternative participatory approaches to rural livelihood development that have emerged over the last decade.

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³ In Leach and Mearns early works (1991) there was some confusion over their use of Sen’s terms entitlements and endowments. The use of the term ‘environmental entitlements’ in this thesis corresponds to their later use of the term. ‘Environmental entitlements refer to alternative sets of utilities derived from environmental goods and services over which social actors have effective legitimate command and which are instrumental in achieving wellbeing’ (Leach et al 1997:17- bold in original). The unit of analysis is the social actor, which while often referring to an individual person can also refer to a group that share characteristics such as age, gender or caste.

⁶ Wicked problem situations are complex, multi faceted, ill structured and dynamic where there are multiple perspectives on problem definition that are value driven and often conflictual.
2:7 ALTERNATIVE APPROACHES - 'FARMER FIRST' AND BEYOND

There is emerging consensus that conventional research and extension approaches are limited in their ability to handle the very complex and dynamic phenomena associated with risk-prone rural livelihoods. Conventional approaches see rural agricultural practice as a largely technical activity rather than 'social praxis' (Cornwall et al 1994: 99). In emerging approaches the emphasis has shifted from expert control of knowledge generation to increasing the capacity of local stakeholders to learn and adapt to complex and changing situations.

In rural development literature the shift is variously characterised as a shift from optimisation and blueprint approaches to adaptive learning approaches and methodological pluralism (Green, C. 1994, Korten 1984, Mearns 1991). The direction is towards holistic, contextual and critical approaches in rural research and extension is characterised as an evolution from Farmer First (Chambers et al 1989) to Beyond Farmer First (Scoones and Thompson 1994) approaches. Rather than the 'transportational paradigm' (Dissanayake 1986: 280) characteristic of the 1970’s and early 1980’s, where research and intervention focussed on the efficient extraction of information and technology innovation, intervention is directed towards collaboration in improving livelihood management praxis.

Populist participatory or 'Farmer First' (Table 2:1) approaches (Chambers et al 1989) focus on active collaboration between researchers and local clients, empowerment and alleviation of poverty. The assumptions are that rural communities share a common vision and non-conflictual access to resources and discourse and thus are
open to consensus solutions. Local knowledge is viewed as systematised and having
discrete elements capable of appropriation for project initiation and management.

<table>
<thead>
<tr>
<th>Table 2:1</th>
<th>Beyond Farmer First: challenging the populist view</th>
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<tr>
<td></td>
<td>Populist Approaches: Farmer First</td>
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<tr>
<td><strong>Assumptions</strong></td>
<td>Populist ideal of common goals interests and power among ‘farmers’ and communities. 'Stock' of uniform and systematized local knowledge available for assimilation and incorporation.</td>
</tr>
<tr>
<td><strong>Process</strong></td>
<td>‘Farmer’ or ‘community’ consensus solutions to identified problems. Managed intervention, designed solutions and planned outcomes with farmer involvement in planning and implementation.</td>
</tr>
<tr>
<td><strong>Role of ’outsider’</strong></td>
<td>Invisible information collector, documentor of RPK, planner of interventions; manager of implementation; more recently: facilitator, initiator, catalyst.</td>
</tr>
<tr>
<td><strong>Role of ’insider’</strong></td>
<td>Reactive respondent, passive participant.</td>
</tr>
<tr>
<td><strong>Styles of investigation</strong></td>
<td>Positivist, hard systems research (FSR, AEA, RRA, some PRA, FPR and PTD)</td>
</tr>
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</table>

(From Scoones and Thompson 1994: 22)

Farmer First approaches, (Table 2: 1 above) such as Farming Systems Research (FSR), Agro-ecosystems Analysis (AEA) and Rapid Rural Appraisal (RRA), focus on farming system description and specification of boundaries, linkages and components in order to define the scope for technological development. The methodological focus
was on efficient extraction of information. A plethora of methodologies developed (cf. Cornwall et al 1994) without any real increase in understanding of how learning about rural livelihood systems occurs. The intervention process was viewed as an interaction between those having the distinctive roles of the researcher, who generates knowledge, an extension practitioner who transfers it, and a farmer who uses it.

Beyond Farmer First approaches view farmers as ‘situated agents’ (Bebbington 1994) who are active in local knowledge generation, coping with change and negotiating access to resources and decision making discourse in particular sociopolitical and agro-ecological contexts. Knowledge and power are viewed as diffuse and fragmentary resulting from interaction between local and non-local asymmetrical networks. Such approaches acknowledge the agency of both the researcher/extension practitioner and local people in shaping collaborative processes that involve more symmetrical contributions of knowledge, negotiation, conflict resolution and the accommodation of multiple stakeholder perspectives. Distinctions between the researcher, extension practitioner and farmer are somewhat blurred.

Participatory Action Research is a ‘Beyond Farmer First’ approach. In the context of improving food security Fulbe are seen as ‘situated agents’ with diverse experiences of coping with food insecurity. They are thus valuable participants in a process of incremental action and reflection aimed at improving their capacity to cope. The process is not simply one of finding consensus solutions to identified problems but one of accommodating divergent interests in a complex learning process. My role as a researcher is one of a visible actor in developing an understanding food insecurity situations and negotiating incremental action.
It is important to provide a theoretical framework for thinking about food security. This is important because action research involves praxis, which seeks a dynamic interdependency between theory, inquiry process and practical action. It was essential that I had an adequate theoretical framework in order to be reflexively aware during the learning process aimed at improving Fulbe Jelgobe food insecurity.

I initiated the action research activities described in Chapters 6 and 7 during the ‘hungry season’ of 1989. It was a time when the combined labour demands of dry-grain millet farming and the movement of cattle away from the fields coincided with ‘off-farm’ activity aimed at coping until harvest. Obviously, given the bad season, intense, transitory food insecurity was the central issue. While the season’s food insecurity could be classed as intense and transitory it could be better classed as a symptom (caused by the shock of drought) of chronic food insecurity problems. Both the capacity of local Fulbe and Maccube to cope as well as the options employed, are linked to the degree of vulnerability. Thus while dealing with intense, transitory food insecurity I also had to consider strategies to deal with chronic issues and thus connect relief activities with more sustainable options.

I chose food security for a number of reasons apart from its fundamental importance. The simplest reason was that I had funding for food-for-work programs. I wanted to involve local Fulbe in planning these programs as part of an action research process that sought to develop a holistic understanding of food insecurity. The 1989 season
was already shaping up as a poor year. All local activity was focussed coping and
food security was an issue that was capable of generating cooperation among diverse
interest groups.

In normal years in the Jelgoji, food insecurity involves an inability to access available
food supplies through the market at Djibo, household stores or subsidised grain
available through NGO projects. 1990 was the only year in recent memory when the
food supply was extremely limited (because of widespread harvest failure in 1989)
and people actually waited for trucks arriving from the capital Ouagadougou in order
to buy grain. Difficulty in accessing food is a combination of production failures,
limited cash supplies emanating from the livestock and off-farm sectors and
limitations in accessing the local mutual assistance/reciprocity system.

A definition of food security has two important components: stable access to adequate
food supplies and the removal of food insecurity fears through equitable ‘operation of
the food system’ (Maxwell 1990). Drinkwater and McEwan (1994) stress three
conditions for food security: the availability of adequate and sufficiently diverse food
supplies, their accessibility by all households and supply sustainability. The fear of
food insecurity can only be removed as Dreze and Sen (1989) stress, by increasing
food availability and diversifying activities. Access to food is determined by an
interaction of food availability, the successful achievement of potential claims or
‘entitlements’ to food through household and community relationships and local
methods of redistribution and coping.
The temporal aspect is also important to analysis of food security. Food insecurity may involve chronic, transitory or intense transitory episodes accompanied by increased mortality that are usually termed famines. Famines are periods of intensification of longer-term food insecurity processes. The intensification is usually due to drought or war. As De Waal (1989) shows, famines are both food and health crises. No famine story is the same, as Watts argues, when he stresses the variability of processes precipitating food insecurity and famine. He contends that famines are ‘particular couplings of structures of power and human agency and are rarely exactly alike’ (Watts 1991: 18).

Sen (1981) argued that Food Availability Decline (FAD) was an insufficient basis to explain famine. Instead he suggested that famine occurred because of people lacking effective, legitimate and socially sanctioned entitlements to, or command over, available food. Sen does not offer a general theory of famine or food insecurity causation but his ‘entitlements analysis’ offers an important conceptual framework. He focuses on power and enforceable rights, which govern processes whereby a household’s physical ‘endowments’ are exchanged for food.

In his entitlements analysis Sen (1981) uses a number of terms in original ways. ‘Endowment’ is taken to mean a person’s or household’s set of resources including their own labour. ‘Exchange entitlements’ encompass a set of possible commodity bundles that could be legally attained by using one’s endowments and opportunities through production, trade and employment. In a later work he uses the term ‘extended entitlements’ to include social security and general social rights and obligations under the entitlement umbrella (Dreze and Sen 1989: 10).
‘E-mapping’ (exchange entitlement mapping) refers to the relation that designates or frames the set of possible commodity bundles that are legally attainable from any given endowment, through trade, transfer and production. Various claims, relations and rules of entitlement (Sen 1981: 1-2) influence endowments. These refer to the socially and/or legally sanctioned modes of possession, acquisition and claims in any situation. Sen’s notions of rules of entitlement however, seem to be inconsistent. They range from the narrow ‘legal channels of acquirement’ (Sen 1987:8), to the incorporation of other social rules not formalised by law in ‘the set of all rights relevant’ (Sen 1982:348) to the person and particular situation. These are the ‘extended entitlements’ (Gasper 1993).

Food insecurity (and eventually famine) can then be framed as ‘entitlement failure’ (Sen: 1981: 50-51). This can be either ‘direct entitlement failure’ due to a failure in subsistence food production or ‘trade entitlement failure’ involving worsening terms of trade between commodities and necessary food purchases. Although entitlement failure does not cover every aspect of a crisis in food security it is a very useful framework to guide development activity among vulnerable populations. Sen concentrates on a household’s ability to establish control over varying bundles of commodities and goods (Dreze and Sen, 1989). A household’s exchange entitlements depend on its endowments or assets and the ability to transform this ‘endowment bundle’ into a ‘commodity bundle’ through production, exchange, inheritance and social claims.
Fig (2:2) The dynamics of sustainable livelihoods

(From Drinkwater and McEwan 1994: 115)

As Drinkwater and McEwan (1994) stress, both inter and intra-household endowments and entitlements, and their distribution, are dynamic, depending on position in the society. Intra-household food security is influenced by gender and generational status and these relationships are continually re-negotiated. Thus equity is an important consideration in food security analysis. Drinkwater and McEwan (1994) picture the transformation of endowments to entitlements holistically as part of sustainable livelihood development (Fig 2: 2 above) and thus a concern for sustainable food security.
Sen’s analysis shifts the focus from shortage of food supply to what happens between production and consumption. The household, community networks, and the market thus become important in food insecurity analysis, although Sen was initially only concerned with command over food through market channels. However, in the Sahel, where there is incomplete commoditisation, there is an interaction of markets and social forms of exchange (particularly among pastoralists). Markets are also political. Saul’s (1987) studies in Burkina point to the complex crop advance systems organised by local merchants and the extreme concentration of inter-seasonal grain storage among a few merchants. Social relations of exchange and production are vital to the pastoral sector in vulnerable ecosystems.

Seasonal stresses, as Watts (1991) contends, are exacerbated by volatile terms of trade and ‘growing household inequality’. Increased animal sales combined with price collapses see a rapid divestment of cattle, especially by the poor. Rapid accumulation on the part of merchants (absentee owners) and wealthy pastoralists often accompanies this rapid divestment in the context of high grain/low animal prices. This rapid accumulation of diverse herds signal new relations in production where absentee owners organise contract herding and wealthy herdsmen gain increased control over wells and pasture.

Sen’s conceptual framework is not without its critics. Devereux (1996) is one who sees Sen’s unit of analysis as problematic. His unit of analysis was the individual but can be applied by using a notional ‘representative individual’ (Osmani 1995) at the household, group or caste levels. Devereux (1996: 2) is concerned, however, to point out that groups and households are composed of diverse individuals who cannot be
‘representative’. Sen, in other words, does not adequately allow for diversity among social actors.

A further point of disagreement lies with the term ‘entitlement’ itself, as Sen himself recognises (1984: 30). He has, as Gasper (1993) points out, a dual motivation in taking a term with ‘strong normative connotations’ and using it for a positive construct. He seeks both to use it as a means of positive analysis and a moral critique of possessive individualism. Sen also complicates matters by using the term in various ways. He refers to various entitlements (Sen 1981: 156) to subsistence food production (a positive sense) and then entitlements to educational opportunities (a normative sense) (Dreze and Sen 1990a & b).

There is also difficulty in attaching the term ‘entitlement’ to something that is potential, and in most situations, uncertain. Exchange entitlements refer to potential entitlements or best case scenarios. One is normally entitled to what one has or obtains, not to possibilities and Nozick (1974) uses it in this sense when attaching it to what Sen calls endowments. As exchange entitlements are potential best case scenarios, people may, and do fail to take advantage of all opportunities through ignorance, culturally or religiously fixed food habits, disease and skill levels. People may also choose to ration or even starve temporarily in order to maintain assets. Opportunities may be lost or gained through illegal activities or non-compliance with social norms and recourse to charity. The fuzziness associated with the concept of entitlements seems to have caused confusion in the use of the term by others.
Swift, for example, in talking of proximate causes of famine, limits the use of the
term to 'exchange relationships' or trade (Swift: 1993). Similarly Kabeer (1991;
Kabeer and Aziz 1990), in probing intra-household distribution and rural women's
entitlements, modifies some of Sen's terminology in showing that women's
('extended') entitlements depend on intra-household negotiation. She talks of
distinctions between entitlements whereas Sen in the context would have talked of
distinctions between 'entitlement relations'. Davies and Leach (1991a) use
'environmental entitlements' in referring to rights or access to natural resources. Sen
would label these endowments while others establish a clearer distinction between
endowments and entitlements (Leach et al 1997).

De Waal (1990) effectively critiques Sen from an African perspective by raising
several issues. Firstly, people often choose to ration food in order to preserve assets,
even spending money on food concentrates for animals rather than food. Such
contingency plans are made in order that animals can be retained for draft, ceremonial
or social purposes. This factor would tend to indicate that the poor are active agents
and far from passive in the face of famine as Sen would imply.

Secondly, De Waal differentiates between famine mortality and starvation, citing
disease as a major factor in famine mortality caused indirectly by food crises. He also
queries Sen's definition of famine in that Africans did not always equate famine with
starvation but rather the decline (sometimes terminal) of 'a way of life' (De Waal
1990: 470). The Fulbe instead of just talking of famine (rafo) or hunger (yolbere),
they often speak of 'rafo pulaku' or a famine of fulaniness.
De Waal thus points to other factors in food insecurity and famine than simple access to food (De Waal 1989). He also attempts to link historical processes of vulnerability with famine. Swift (1989) also points out that Sen fails to explain the differential vulnerability to famine by groups experiencing the same conditions. Swift seeks to disaggregate poverty by seeking to understand vulnerability and looks at the creation of vulnerability through production, exchange failures and changes in asset status. Swift includes ‘claims’ in asset status and thus makes links with the ‘moral economy’ and ‘coping strategies’.

It has long been documented that attempts to minimise the risk of food insecurity in pre-capitalist societies hinge on the exploitation of a complex system of relationships and institutions (cf. Evans-Pritchard 1940, Fafchamps 1992, Platteau 1991, Posner 1980, Scott 1976). Scott (1976) used the term ‘moral economy’ to refer to solidarity systems that Southeast Asian peasants employed to reinforce their ethical concern with the right to subsistence and the principle of reciprocity. Solidarity systems are usually arranged around ‘delayed reciprocity contingent upon need and affordability’ (Fafchamps 1992:148). Solidarity takes a number of forms – exchanges of grain, animal loans, credit and labour assistance, for example. It is a complex system of strategic family, religious and friendship networks as well as patronage relationships for maintaining livelihood security in uncertain situations. Incentive to abide by such mechanisms is based on the continuing self-interest of households in search of mutual insurance. The system works by insuring, as Posner (1980) maintains, that short-term benefits obtained by deviation from the system are less than long-term sanctions or punishment. It is a system of reciprocal and non-reciprocal claims and obligations regarding non-market transfer of goods and services.
Seaman and Holt (1980: 296) argue that a shift from a communal to a market economy increases vulnerability to food insecurity. While making a simplistic division between the two types of economies, they conclude that attempts to by-pass communal solidarity systems by increased recourse to market exchanges remain problematic. In fact, the distinction between the two economies has been blurred by a long history of coexistence. As Meillasoux (1975) shows in reference to the Côte d’Ivoire context, traditional societies/economies can have extensive connections with the so-called market economy without any social disruptions.

The non-market transfer of goods and services through solidarity networks remain essential components of Sahelian economies. As Adams (1993) argues in reference to Mali, lineage membership is often an important criterion for belonging to such networks. In the Djibo area of northern Burkina one can observe separate lineage networks among the Moodibaabe and Maabube in the village of Monnde So. While the various networks maintain an information and monitoring system by virtue of their relative intimacy with each other, this does not stop strategic links being made to other networks such as merchants in Djibo and Maccube in nearby villages. Marriages can be organised to cement relationships with other networks. For example, in 1990, a marriage was arranged between a young Maabo woman from Monnde So and an affluent Baylo (blacksmith) in Djibo. She became the fourth wife and eventually settled into the relationship after fleeing several times. Once the relationship was acknowledged as being stable the Maabo family in Monnde so received a substantial amount of money and goods through the customary marriage exchanges. In this way
the Maabo household with no sons to contribute to labour reserves was sustained
during a crisis. This is not dissimilar to Lewis’s (1981) Malian study which showed
that ‘otherwise unviable lineage households disabled by illness or unfavourable
lifecycle stage are sustained’ through the extension of solidarity networks by
exogamous marriage.

The solidarity systems of traditional communities often involve reciprocal exchanges
of commodities and services. These exchanges are used to indicate solidarity in
difficult situations but not necessarily a long-term commitment to support. Sahlins
(1968) distinguished categories of reciprocity ranging from altruism to negotiated
support. His triple categorisation of reciprocity in primitive society is related to
kinship ties and geographic/social distance. He distinguishes between generalised,
balanced and negative reciprocity. Generalised reciprocity involves apparently
altruistic exchanges involving hospitality and gifts. A classic illustration of this type
of reciprocity is from Evans-Pritchard and his study of Sudanese Nuer pastoralists
from which he states ‘no one in a Nuer village starves unless all are starving. The
food supply of a community is ultimately at the disposal of all its members within
whose corporate life each family has security to pursue its particular interests and to
satisfy its most elementary needs’ (Evans-Pritchard, 1951:132). Generalised
exchanges are related to cultural and religious ceremonies and charitable gifts
(Islamic tithing etc). As Swift (1993) implies, one hesitates to use the word altruistic
about these exchanges that are usually made among close kin and friends. They are at
the same time an indication of belonging to the society or group in question and a
calculated strategy to stimulate future charitable behaviour. ‘Balanced reciprocity’ is
bartering with the expectation of a return such as contribution of labour to ‘collective work parties’, watering of animals and grain/animal loans.

The third category is that of ‘negative reciprocity’ which is somewhat confrontational. It usually revolves around requests for gifts and services made to distant kin or strangers. For example Moodibaabe in Monnde So exploit relationships with affluent merchants as far away as Abidjan in Côte d’Ivoire. The requests are made on the basis of previous answers to intercessory prayers for financial enrichment. The Fulbe in general have no qualms about making confrontational requests to Tubaakoobe (Europeans) and Mossi merchants but would rarely do so (publicly at least) among fellow Fulbe. However the Fulbe do make many day to day requests and the exchanges involved have both a social and religious significance. The phrases, sabu Alla (for God’s sake) or sabu Alla endam (because of God and kinship) often accompanies their requests. One never rejects a request outright but responds by saying Alla new (may God help), or Alla hoynu (may God ease) together with phrase such as mi waawaa hannden (I cannot help today). It is necessary to imply that one may help or reciprocate in the future, if circumstances permit.

Among the Jelgobe, the types of reciprocity evident are variable. They depend loosely on kinship geographic distance but many are opportunistic. Adams (1993), from studies among the Bambara people in Mali, distinguishes between four categories of transfer or reciprocity. These are ritual homage and alms, gifts, exchange and credit. Like Sahlin’s categories these can be viewed as a ‘continuum of exchange’
differentiated by the ‘degree of tolerance for material imbalance indicated by the time allowed to reciprocate’ (Sahlins, 1968: 146-48).

(Fig 2: 3) **Reciprocal Exchanges**

If the moral economy is framed as a redistribution system then, as Swift (1993) indicates, there are horizontal reciprocity networks among various groups of equal status as well as vertical ones involving various patron/client relationships (Fig 2: 3). Reciprocity does not imply that equal exchange is always expected. The aim is to maintain the ability to claim future help or to illustrate willingness to perpetuate the system. The vertical dimension is much more akin to Scott's moral economy idea. It involves the use of various claims on those higher in socio-economic status as well as various channels of charity. Such exchanges occur between and within pastoral and farming communities and, both locally and further afield (Fig 2: 3).
It is evident in the Jelgoje region that the networks established to ease hardship operate well in the short term. They are in effect part of a complex system of coping and adaptation responses. The longer-term strategies are expressed by changes to cropping patterns and agro-pastoral ‘configuration’.

<table>
<thead>
<tr>
<th>Trigger event (production)</th>
<th>Behavioural Category (Consumption)</th>
<th>Strategy (Generic)</th>
<th>Response (specific)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAIN PRODUCTION DEFICIT</td>
<td>PROTECT CONSUMPTION</td>
<td>PURCHASE GRAIN (market exchanges)</td>
<td>- sell non food crops - use off-farm - income sell assets (eg animals) - borrow cash - postpone debt repayment - reduce non-food spending</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RECEIVE GRAIN (non-market transfers)</td>
<td>- remittences - charity(eg zakat) - begging - food aid</td>
</tr>
<tr>
<td></td>
<td>MODIFY CONSUMPTION</td>
<td>REDUCE CONSUMPTION (ration)</td>
<td>- smaller portions - fewer meals per day - fewer snack foods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DIVERSIFY CONSUMPTION (change diet)</td>
<td>- less preferred varieties - wild foods - less nutritious diet (no meat or fish)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REDUCE CONSUMERS (change HH size)</td>
<td>- wife returns to father - children sent to relatives - male temporary migration - betroth daughter</td>
</tr>
</tbody>
</table>

(adapted from Devereux 1993)

Coping ‘strategies’ are a complex array of responses (Table 2:2) to food insecurity as the season unfolds. Coping options such as asset disposal, changes in dietary habits and activation of various networks in the ‘moral economy’ are not always sequentially employed in response to increasing severity of seasonal conditions but
are a number of options used in parallel. They are similar across very different food systems (Longhurst 1986, Downing 1988). Devereux (1993) illustrates a common array of responses in the West African context (Table 2.2).

Coping responses are enacted annually during the hungry season prior to harvest or during abnormally poor seasons. The pre-harvest ‘hungry season’ is the time of maximum energy demand. It is often during this period that chances of a harvest are compromised due to failure of the later rains, hunger-induced illness or inadequate labour resources.

Davies distinguishes between ‘insurance strategies’ to reduce the likelihood of production failure and ‘coping strategies’ that respond to potential and actual production failure (Davies 1993). The former aim at increasing insurance options by changes in production patterns or the balance of farming and pastoral activities for example. The latter are employed to cope until the next harvest. For example Frankenberger and Goldstein (1990) distinguish between asset depletion, contraction of community reciprocity and non-farm coping strategies and different types of household assets and their potential for use in coping. There is always a trade-off between short-term survival and longer-term sustainability.

How useful then, is the reinforcement of ‘coping responses’ for reducing food insecurity? The important thing about coping and insurance responses/options is that, short of disaster, people are active agents in coping. They cope, and have had substantial experience in doing so. For pastoralists divested of their cattle, all of life is bound up in coping. Davies (1993) argues that while coping responses are useful in
the short term they may inhibit longer-term development options. In moving from relief to development however it is possible to make positive and productive linkages between coping options and longer-term adaptation.

De Waal (1989) distinguishes between erosive and non-erosive coping to distinguish between those options or activities that erode the subsistence resource base and those that do not. Abusive coping activities such as wood harvesting are linked to environmental degradation. However as Behnke et al (1993) show, marginal grasslands are perhaps more resilient to degradation than once assumed. The danger, perhaps, with reinforcing coping options is the encouragement of a survival orientation that militates against active development. The fact is that in many Sahelian situations today livelihood problems linked to changing socio-ecological situations are best responded to by supporting opportunism. People caught up in the ‘deprivation trap’ (Chambers 1983: 112) cannot often afford the luxury of risking or saving resources that are prerequisites for being economically active.

However, the exploration and reinforcement of coping options creates space for the active linking of relief and development. Focussing on local people’s agency to respond to food insecurity is an important start in combating food insecurity. The use of coping options by both Fulbe and Maccube is rarely predictable, as they are often opportunistic reactions in the face of a particular set of constraints, threats and opportunities. It is the contention of this thesis that, in the short-term, food insecurity is best mitigated by paying attention to, and reinforcing indigenous insurance, coping and networking responses. Reinforcement is directed at increasing the number of coping options and discouraging options that are environmentally destructive. In this
context the collaborative planning and implementation of dry-season gardening and associated food-for-work programs is aimed at increasing the local portfolio of options available to local people.

2:9 CONCLUSION

In concluding this chapter, it is important to emphasise that the key to facilitating sustainable improvements in food security in uncertain Sahelian environments is ‘by building local capacity for self-directed and controlled learning’ (Gran 1986: 290). Participatory Action Research is an important methodological framework for guiding such learning processes. It is an agency approach that views Fulbe as capable and knowledgeable agents in coping with the complex seasonal scenarios associated with food insecurity. Their ‘interactive’ (Pretty 1994: 41) participation is an essential component of the learning process. As participants they bring diverse types of local knowledge and varying ways of relating their livelihood activity to the surrounding environment to the learning process.

The participatory process is an emergent one. Ideally it develops in intensity over time as the facilitator’s appreciation of the local power networks grows along with knowledge of what motivates local Fulbe to support, change or resist this participatory process. This process is not necessarily consensual. Conflict resolution and the continual re-negotiation of cooperation are necessary components of it. It is a matter of adequately understanding and representing diverse interests in an on-going inquiry process which is linked to action on food security.
Food security is essentially about sustainable access to adequate quantities of sufficiently diverse foods to satisfy livelihood needs. Essentially, it is a 'proxy' for poverty or livelihood security (Maxwell 1990: 4). Farmers and pastoralists in risk-prone areas have complex ways of coping that balance asset preservation, cash generation, and sustained access to food supplies. When food security is at risk such people exhibit agency in employing a complex array of coping and adapting responses that seek to meet immediate food needs while preserving a base for future livelihood activity. Such strategies involve the manipulation of household asset portfolios, access to common property resources and the activation of networks of social relationships. The knowledge, local 'common sense' (Geertz 1993: 73) and capability evident in the employment of these coping responses are worth understanding and supporting in an effort to improve food security. Participatory Action Research provides a framework to understand and support these responses.

These responses are contextual to particular livelihood/environment relationships. The Fulbe and Maccube carry out a variety of pastoral and agro-pastoralism livelihoods in risk-prone environments. They have particular ways of relating livelihood activity to the surrounding environment. It is necessary to understand pastoral and agro-pastoral livelihoods in general and those of the Fulbe Jelgobe in particular. Chapter three seeks to look at pastoral and agro-pastoral livelihoods and some emerging trends in the way these livelihoods are conceptualised. Chapter four focuses on the social life of the Fulbe Jelgobe, their livelihood activity and their rangeland.
CHAPTER: 3

PASTORAL AND AGRO-PASTORAL LIVELIHOODS

3:1 INTRODUCTION

Variability and uncertainty typify pastoral areas in West Africa. Each seasonal performance by pastoralists is different. There are different opportunities to grasp and hazards to avoid in maintaining household food security. Complete knowledge of such situations is difficult, if not impossible to obtain before action on food security or pastoral development is necessary. Rather than attempting to develop blueprint and prescriptive responses it is preferable to initiate action from ‘optimal ignorance’ (Chambers 1992) and facilitate an adaptive learning process.

The problems encountered in such risk-prone situations are livelihood security ones. They are not simply technical ones but involve a complex interaction between agro-pastoral production constraints and opportunities, common property resource access and the capacity of people to activate social networks at the household, community and regional levels. Pastoralists and agro-pastoralists are important participants in learning approaches aimed at improving these livelihood problem situations. Participatory Action Research is a valid way of collaborating with pastoralists in seeking to understand their risk-prone situations and take incremental action to improve their livelihood security.
In this chapter I briefly look at pastoral and agro-pastoral livelihoods and alternatives to conventional blueprint planning and intervention approaches. I outline and confirm pastoral adaptation and relational skills and look at trends in approaches to pastoral development. Emerging approaches value pastoral flexibility and responsiveness within uncertain environments. They seek to embrace and value the flexibility of pastoral associations, institutions and organisations as well as the complexity of relationships between pastoralists and other people within their environment and the shifts in these relationships over time.

In chapter four I look more closely at Fulbe Jelgobe agro-pastoral livelihood activity.

The Fulbe have valuable local knowledge that is ‘embedded in practical action’ (Scoones 1996b: 4) aimed at livelihood security in their local environment, the Jelgoji.

3:2 PASTORAL WORLDS

Pastoralism in West Africa implies vulnerable livelihoods in uncertain environments, where livestock production is usually dominant and is supported by some form of mobile livelihood system to cope with a seasonally variable resource base. Pastoral identity is usually confirmed by a strong attachment to a pastoral language (for example, the Fulbe and their language Fulfulde) and to livestock (especially cattle) as the focus of cultural wellbeing. Pastoral self-identity is an important component in labelling any society pastoralist. Many Jelgobe Fulani livelihoods in Burkina Faso, for example, revolve around managing small and dwindling herds in marginal and

Most sedentary and urban populations view pastoralists and their lifestyle in negative terms. Pastoralists largely view their relations with governments and urban populations in terms of ethnicity. In Burkina Faso, most government extension officers, police and administrators are non-pastoralists. The fact of being pastoralist and illiterate is usually enough to sharpen the avidity of bureaucrats and extension officers when enforcing compliance with regulations and dealing with the straying of animals into fields and forests (Bonfiglioli 1991, Guichard 1990).

National governments tend to treat ‘their pastoral nomads as a regressive social formation, bypassed by history, whose continued existence was a blot on the national honour’ (Johnson 1993: 31). Most West African governments these days express this attitude by an agrarian policy allowing the ‘chaotic’ colonisation by farmers of pastoral areas. As rural development programs aimed at commercialisation expand areas under cultivation, the rights of peripheral groups (usually pastoralists) are subordinated. Transhumance is considered at best a necessary evil, to the point, for example, that some governments are considering transhumance taxes. In order to carry out state projects, some governments have gone to the point of institutionalising the principle of ‘razzia’ or plunder. In northern Benin, for example, forestry agents were entitled to 20% of the product of fines and confiscations incurred by pastoralists whose animals entered forest project zones (Guichard, 1990).
General Government policy, intended or otherwise, is to treat nomadic pastoral areas as ‘bureaucratic Siberia’, sending administrative and extension personnel there for punishment or professional apprenticeship reasons. Such people have little enthusiasm for understanding the diversity of pastoral systems and the seasonal cycles of resource exploitation or promoting resource management through locally existing institutions. They seem much more interested in enforcing regulations.

Pastoralists can be viewed as both victims and agents of desertification. However most governments and their administrators and extension agents still prefer to simplistically see pastoralists as the prime cause of desertification (Johnson 1993). There has been little real interest in allowing pastoralists and their knowledge systems to inform genuine processes of control and responsibility for their rangelands. Some control has been attempted through ‘pastoral cooperatives’ or ‘associations’. But these seem to be little more than externally imposed and follow generalised institutional prescriptions (Boutrais 1992).

Despite these widespread negative conceptions, pastoralists’ vigorously assert the superiority of their social worlds. This is often reflected in cultural stereotypes and associated proverbs and oral tradition such as the Fulbe’s ‘Pulaaaku’ or image of ‘Fulaniness’ (for example ‘Silamaka and Poullori’ - Seydou, 1972). These stereotypes portray non-pastoralists as inferior or potential slaves. Other Fulbe oral tradition refers to the centrality of cattle in pastoral life. Ba and Dieterlen’s (1961) analysis of the Fulbe initiatory tale ‘Koumen’ portrays the strength of the Fulbe as being in their cattle husbandry. Dwindling herds are thus a source of misery and shame. In the
Fulani pastoral world the herding apprentice is enjoined to look to *Koumen* for inspiration.

What then is generally perceived as constituting pastoral 'worlds'? Answering the question as to what constitutes a pastoralist or pastoralism is complex. Galaty (1981: 5), in making reference to numerous authors, contends that:

The received literature on nomadic pastoral societies articulates a fairly coherent view, wholly applicable to east Africa, of a rural based and relatively autonomous set of shifting homesteads, dependent to a large extent on the food products of livestock, and related to each other by means of a conceptual scheme of social and political identity and a set of social networks usually mediated by the exchange of animals. The very institutions which generate internal cohesion, integration and unity - a segmentary political system, pastoral commitment, shared language and culture - act to differentiate the society from other similar societies, other dissimilar societies, and the national state and market sector (Evans Pritchard 1940, Southall 1976; Sahlins 1961) ... Whether assumed at the outset of inquiry, or observed as a matter of fact, the classical view has always rested on several analytical elements: that 'nomadism' and 'pastoralism' largely converged in these societies; that the societies were largely static in form and impervious to history; that as social systems they were relatively autonomous and closed; that they could be characterised by a collectivist and egalitarian ideology largely manifested in practice; that their attitudes towards production and exchange of livestock were marked by values born outside of the economic domain; and that they represented a degree of equilibrium which reasserted itself following disruptions of various sorts (c.f Dyson - Hudson 1980, Herskovits 1926).

Seasonal mobility, self-image, lifestyle adaptation to marginal grassland ecologies and varying strategies to obtain the grain component of daily diet (that is exchange with sedentary farmers or the embracing of agro-pastoralism) are all components of a working definition of pastoralism. Designations such as nomadic/sedentary or pastoral/agricultural rarely characterise actual states but rather 'processes of interchange and contextualised variation' between the two poles (Galaty 1984:19).

Rigby (1985:129) prefers to distinguish between pastoral societies where herds are a means of production and those where the herd is conceived of as a product, that is, the degree to which processes of commoditisation have occurred.
Relationships between man and animals in pastoral groups are different from those in either hunter/gatherer, where they are regarded as quarry, or agricultural ones, where they are regarded as investments or being useful for draught purposes. In many respects animals in pastoral societies ‘become part of the greater extended family in psychological and cultural terms’ (Smith 1992). However, there is probably no pastoral society that exists solely on animal products and thus no pastoral group can be examined in isolation. Thus, as well as relationships with their environment one must examine the various relationships pastoralists negotiate and maintain with more sedentary societies who cohabit their environment.

Use of space by pastoralists involves strategic seasonal movements between a series of loci such as permanent water points and pasture areas. The degree of movement and the duration of exploitation of any one area are influenced by seasonal conditions and the relationship between pastoral groups and between pastoral and agricultural groups. Taking the Fulbe in West Africa as an example, Stenning (1960) points to three flexible ways mobility is used to exploit rangelands. Firstly, transhumance or the seasonal north/south movement (between Sahelian and Sudanian climatic zones) is a strategy employed to take advantage of crop residues and dry season pastures. Secondly, Stenning points to ‘migratory drift’ or the gradual migration to new rangelands and thirdly the abrupt ‘migration’ to new areas for climatic, political or social reasons. It is important to note that these strategies are flexible and open to adjustment as the seasons unfold. Movement strategy is based on transfer of information regarding pasture, water points and possible diseases which occurs via family networks, regional market days and major watering points. Pastoralists spend a considerable amount of time maintaining information networks.
Subsistence pastoral livelihoods involve complex solidarity and mutual insurance networks. These ‘solidarity systems are usually organised around delayed reciprocity contingent upon need and affordability’ (Fafchamps 1992: 148). Pastoral solidarity systems are contextualised to the extreme vulnerability of pastoral life. There is no formal authority to enforce these systems, and they are rarely altruistic in nature. It is more like a repeated game whereby cooperation can be rewarded and opportunism punished by diminished prospects of future help.

Pastoral mutual insurance systems depend on realised income and wealth, but these are not always easily observable. Wealth and income are tied to a complex asset mix. Pastoralists consciously try to decrease the observability of their assets in order to secure assistance or escape supporting others. However in rural communities there are monitoring signals and systems such as transfer of gifts at weddings and child naming ceremonies, which balance self-revelation or lack thereof.

Paradoxically, it is often in the interest of the solidarity group to allow or even encourage wealth accumulation by certain influential men, as a source of protection and assurance of subsistence. The prestige of many ‘influential men’ is linked to their usefulness in the solidarity system. Self-enrichment is, however, rarely overt in the short-term as it occurs through intermediaries and processes that are mostly hidden to the outsider. These men often receive all sorts of gifts and become privileged sources of information. They are often middle-men in project negotiations, being seen by the
community as having greater capacity to seize opportunities (Fafchamps, 1992).

However, the wealth redistribution system works, as Scott (1976: 4), commenting on an Asian situation says, through ‘the abrasive force of gossip and envy and the knowledge that the abandoned poor are likely to be a real and present danger to better-off villagers’

3:3 PASTORAL RELATIONSHIPS:

Mobility and flexible relationships with surrounding societies mean that pastoral societies are well adapted to their marginal physical environments. They have rational coping and adaptation strategies to maintain subsistence needs in response to seasonal and longer term variations in their resource base. They have effective social security systems for supporting the less fortunate, and provide a set of coherent beliefs and moral values, participatory social organisations and a social identity for the individual. As Sanford (1983) asserts, any sensible development policy will conserve what is valuable in this system.

Pastoralists need farmers or non-pastoralists as sources of grain and services, in order to conserve their specialisation in livestock husbandry. The relationship is often caricatured as bush versus village or, historically, master versus slave. They are two worlds or two different attitudes to life. The bush signifies liberty, independence, strength in adversity and mobility. The village symbolises the cultivated field and its

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1 This is why the poor often tolerate self-enrichment on the part of influential people through project funds and rural credit schemes, provided it does not facilitate complete independence or escape from the system.
products, sedentary lifestyles, the market and commercial exchanges and dependency (Bonfiglioli 1990).

In order to secure grain pastoralists must maintain relationships with agricultural societies, involve themselves in local exchange systems or produce it themselves. Historically grains have been obtained by the gleaning of wild grains, from agricultural societies through payment of tribute, market exchange, and payment for manuring of fields and contract herding. In addition to agricultural society sources, grain is also obtained via recourse to various opportunistic and longer-term farming strategies. As Bonfiglioli (1990) points out, both pastoral and agricultural societies practice a fluid movement between various forms of agro-pastoralism (as will be explained later in this chapter).

As McCowan et al (1979) show, animal husbandry and cropping are linked in a variety of ways. They highlight:

- food links (animal products exchanged for grain),
- forage links where crop stubble is grazed,
- manure links where animals manure fields while grazing stubble, or where pastoral groups establish camps on fields near permanent water sources that are close to dry-season pastures,
- animal traction links,
- investment links, where cropping income is used to buy animals or animals are sold to finance cropping operations,
- employment links - contract herding or cropping.

Hopen (1958: 37, 154-5) illustrates a typical West African symbiosis between pastoral and agricultural groups in the exploitation of marginal grasslands. The relationship between pastoral Fulbe and agricultural Haabe\(^2\) revolved around animals manuring

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\(^2\) Haabe (Kaado sg) is a term the Fulbe use for non-pastoral black people.
fields while pasturing on stubble. While social interaction is limited Hopen argues that the stubble/manure arrangements reduce tensions between the two groups, especially over crop damage. Sundstrom (1972) describes how the various niches in the Central Niger Delta are exploited by various exchange relationships between the Fulbe, Bozo fisherman and Songhai farmers.

3:4 AGRO - PASTORALISM

In any region different types of agro-pastoralism operate as complex forms of social and economic interdependency within varying ecological environments. In this section I will use Bonfiglioli’s (1990) model to analyse different types of agro-pastoral livelihoods. I will also look at mixed farming as a development approach. Mixed farming is a form of agro-pastoralism and some argue (McCowan et al 1979, Winrock 1992) argue that it is a desirable and almost inevitable prescription for the intensification of production systems due to population pressure.

The occupation pastoralist or sedentary farmer ‘is not necessarily a fixed one’ (Smith 1992). Over time people of both societies and economies can adopt either livelihood focus depending on their reaction to shocks and stresses. Haaland (1972) suggests that the choice of pastoralism or agriculture is motivated by prospects of profit from cattle ownership, when fortunes improve, or agriculture as a survival strategy. The Sahel provides the backdrop for a remarkably diverse range of locally adapted combinations of agriculture and pastoralism, well suited to particular sites and the prevailing socio-economic and seasonal conditions. Those who wish to maintain purity of lifestyle do
so by cultivating flexible relationships with either society in order to exchange products and secure access to resources such as water and fodder.

Vincze (1980), in reference to Eastern Europe, argues that agro-pastoralism will develop in areas where cultivable land that produces both crops and fodder is in short supply and is in close proximity to marginal areas best exploited by pastoralism. He points to ecological and technical complementarity. Agro-pastoralism is a strategy to enlarge ‘the sphere of economic exploitation’ in ecologically diverse environments. Agriculture and herd mobility support each other. Technologically, annual cultivation cycles and seasonal herd movement allow stubble grazing and field manuring which increase productivity.

The conjunction of cultivation and stock raising present problems in allocation of land, agricultural products, capital, labour, and specialised expertise. Management of mobile herds involves considerable expertise and various forms of association, which allow access to local and non-local information networks necessary to exploit variable landscapes and avoid disease. This expertise is not readily transferable and is usually possessed by distinct social groups.

Today, in the Sahel region of West Africa, agro-pastoralism is widespread as a strategy employed by pastoralist and farmer alike to survive and adapt in precarious socio-economic environments. Even though at times pastoralist and farmer may be seen to be employing the same strategy and living similar livelihoods, they remain culturally and socially different. Bonfiglioli (1990: 265) conceives of a number of different agro-pastoral configurations (Fig 3:1), featuring a fluid integration of, and
interdependency between, pastoral and agricultural practices. From a pastoralist point of view he conceives of opportunistic, temporary and security agro-pastoralism.

**Fig 3:1 Types of Fulbe Agro-pastoralism**

(Adapted from Bonfiglioli 1990: 25)

In using the notion of configuration, Bonfiglioli puts the accent on fluctuating forms of individual and group interdependency within specific social, ecological and economic environments. The **opportunistic** configuration implies long transhumance routes with a definite seasonal movement between pastoral and agricultural zones. Using the *Wodaabe* of Niger as an example, there is a definite movement from pastoral zones in the north during the rains to southern agricultural zones with northern limits being the 300mm annual rainfall isohyet. This type of agro-pastoralism does not necessarily mean that the pastoralists practice agriculture, but that they at least complement their pastoralism by taking advantage of what the
agricultural world can offer. It implies the possession of large herds, abundant natural resources and sufficient family labour potential to practice a form of complementary specialisation through opportunistic cropping either with family labour or hired labour.

Entry into agro-pastoralism is a constant seasonal choice depending on labour availability, rainfall and rangeland condition. Temporary agro-pastoralism is where pastoral communities interrupt their seasonal rhythm and temporarily sedentarise close to cropping areas. It usually follows tragic loss of animals due to drought or disease and where other options such as bush foods, are exhausted. Farming becomes a survival strategy, or necessary evil. It usually means changes in eating habits and habitation. The aim is always to reconstitute the herd and move back towards pastoralism on the pastoralism / agriculture continuum. This form of agro-pastoralism has become common since the droughts of the early 1970s in the Sahel. The current tendency is for this transitory form to be perpetuated due to the precarious state of the natural environment and the lowering of the market link between grain and animal prices. Pastoralists tend therefore to be irreversibly involved in agriculture leading to what Bonfiglioli termed, security agro-pastoralism.

Security agro-pastoralism means that pastoral practice is changed and focused on small ruminants and a ‘simplification’ of transhumance patterns (Bonfiglioli and Diallo 1988). Despite becoming virtually sedentary ‘dry-grain’ (Hill 1982) farmers, pastoralists still try to emphasize their pastoralist heritage. A good example is the
Fulbe Jelgobe and Maccube/Rimmaaybe\(^3\) of northern Burkina Faso. The rapport farmer/pastoralist is greatly modified together with social divisions of labour within each production system. Women tend to be more involved in gardening and raising ‘moutons de case’\(^4\). While larger social formations are dispersed in accordance with the availability of arable land, the size of the autonomous family unit is increased in order to cope with farm labour demands being added to the annual calendar of activities. In security agro-pastoral situations there often seems to be a ‘coalescing’ of ethnicity and a change in social distinctions and status not dissimilar to what Baier and Lovejoy (1977) describe among the Tuareg of central Sudan\(^5\). The Fulbe adopt lifestyles that are virtually the same as the Maccube who in past times were their slaves.

From the point of view of farmers, the accent is on increasing investment in animals. By investing in animals, the farmer moves into a new socio-economic configuration. Livestock capital procures food security and to a certain extent prestige. Investment in animals usually follows times of drought where animal prices are low and grain prices high. Spare grain is invested in animals. Bonfiglioli (1990) distinguishes varying degrees of farmer investment in livestock as agro-pastoralism based on interest, investment or conversion to pastoralism.

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\(^3\) Maccudo (sg) maccube (pl) literally means captive or a person of servile condition while Dimmaajo (sg) and Rimmaaybe (pl) refers to descendants of enslaved people. In much day to day conversation with the Fulbe Jelgobe the two terms are used interchangeably.

\(^4\) ‘Moutons de case’ is a French term literally meaning house sheep. It refers more generally to small ruminants (goats and sheep) kept within the house enclosure or compound and fed on crop residues, millet bran left over from cooking and various leaves. Children usually herd these animals in close proximity to the house. More often than not it is the women of the household who husband these animals.
Agro-pastoralism based on interest alone describes a situation where the farming household makes opportunistic investments in a small number of animals. Farming remains the livelihood focus and livestock husbandry is practiced with little enthusiasm or skill. Pastoral activity is limited to keeping the animals away from fields and is often confined to a few animals fed on crop residues within the houseyard. There are enough animals to ensure the accomplishment of social obligations, such as children’s naming ceremonies. Livestock rearing is often confined to several ‘moutons de case’ fed by women on household grain and crop residues and tree leaves.

An investment configuration of agro-pastoralism involves larger numbers of livestock, including cattle. It usually relies on farmers cultivating their relationships with pastoralists in order to manage the animals in a way that does not interfere with farming, which is still perceived as the primary livelihood activity. The pastoralist is contracted for husbandry purposes because the farmer usually does not have sufficient available labour to combine both activities nor social networks allowing efficient access to water and pasture resources. It is a relationship of confidence and simple exchanges. If the herd becomes large enough then a more formal contract is negotiated. An appropriate exchange is negotiated involving pastoralist rights to milk or exchange of grain. The shepherd usually has free access to the milk while the farmer receives all progeny and pays the incidental costs of wells, ropes, vaccination and salt etc.

5 This refers to the geographic zone immediately south of the Sahara desert, not the country by the same name.
As the herd increases, pastoral considerations modify the farmer's lifestyle and he moves into a form of agro-pastoralism that Bonfiglioli perceives as facilitating a conversion / re-conversion to a pastoralist lifestyle. It involves a fundamental reorientation of the production system. This process can be witnessed among some of the Rimmaaybe of northern Burkina Faso who have invested in herds large enough to support livelihood needs. They have usually spent long periods of time with Fulbe Jelgobe in order to learn herding skills and access herding information networks before taking over control of the herds. Many are absentee owners who have migrated to urban areas. They thus employ pastoralist herdsmen while at the same time managing sedentary agricultural production or commerce. Many large herds managed by Fulbe Jelgobe in northern Burkina Faso belong to absentee Mossi or Rimmaaybe owners. As Bonfiglioli (1990) illustrates, similar situations of 're-conversion' are evident between some groups of 6 Hausa Aderawa farmers and Fulbe nomads in Central Niger. In effect, the agriculturalists start to question their whole agricultural lifestyle as they modify their relations of production and residential models.

In any region these six types of agro-pastoralism operate like a kaleidoscope. They merge and re-emerge as complex forms of social and economic interdependency within varying ecological environments. The movement from one type to the next is rarely one of deliberate choice but one of opportunism or concerns for survival. For some, agro-pastoralism is a promotion, for others a survival strategy. For example the Woddaabe communities in Niger, after a period of relatively sedentary pastoral

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6 The Hausa Aderawa people are a clan of the Hausa people who form the main ethnic group of Niger. They are predominantly dry grain millet and peanut farmers or merchants. They generally rely on Fulbe cattle to manure their fields.
lifestyles, increased their mobility after the 1930's when cultivation encroached on their rangeland. Today they are more nomadic than in the past (Bonfiglioli 1990).

In northern Burkina it is not uncommon to see Rimmaye owning large herds and hiring their former masters, the Fulbe Jelgobe, to manage them. Fluidity of movement between the varying configurations is the crux of adaptation and survival strategies used in response to the uncertainty of Sahelian life.

However, a recent review of sub-Saharan agriculture (Winrock 1992) concluded that mixed crop-livestock farming was the most efficient response to growing demographic pressure. The report subscribes to the Boserupian notion of the inevitability of an ‘evolutionary’ process of intensification from extensive pastoralism to intensive mixed farming (Boserup 1965, 1981; Tiffen and Mortimore 1992). The proposal of mixed farming is by no means recent. As early as 1947 Curasson proposed that mixed farming should be the base of agricultural development.

Both anglophone and francophone development publications at the time proposed mixed farming, involving forage production, animal traction and animal manure.

These proposals had their critics. Doutresoullé (1948) saw difficulties in the implementation of such proposals, revolving around farmer/pastoralist conflict, ethnic specialisation and the difficulty of transforming farmers into pastoralists. Between 1948 and 1992 not much has changed. Mixed farming as a proposal is largely an externally imposed model with proponents still largely disinterested in local strategies for associating agriculture and pastoralism.
Although some efficiencies may be gained at the ‘farm’ level there are some problems on the broader rangeland scale. Generalisations about the increased efficiency of intensive settings are hard to make. Wilson and Clarke (1976) report higher productivity of migratory livestock in Sudan, as do Bremen and De Wit (1983) for transhumant livestock in Mali. However Wilson (1982) found transhumant and sedentary agopastoral livestock productivity to be similar in Mali. In Nigeria Van Raay and De Leeuw (1974) found settled livestock productivity to be greater due to preferential access to prime pastures.

It is also claimed that mixed farming increases feed diversity. This is predicated to a certain extent on fodder production. Fodder production in the sahelian zones is an extremely doubtful strategy as there are few species that can be grown effectively below 350mm rainfall. There are similar limitations to fodder tree planting. In any case, cultivation of fodder demands that these areas need to be guarded, further complicating allocation of labour. Flexible and seasonally variable movement over extensive rangelands and access to their grass/tree associations allows for feed diversity. It is also claimed that mixed farming can exploit environmental differences by stratification of production systems into breeding and fattening areas. This argument falsely assumes that rangeland diversity is static. In poor rainfall seasons pastoralists will hold on to animals longer to avoid low prices while in high rainfall seasons breeding zones are also effective fattening zones. Some local forms of stratification do exist with farmers buying small ruminants to be reared in house compounds (moutons de case) for sale at important Muslim festival times.
Proponents of mixed farming argue that it will reduce conflict between herders and farmers and the transaction costs of manure/stubble exchanges. It is argued that since the farmer's own animals will graze on the stubble, the previous pastoralist/farmer arrangements will be rendered unnecessary. Although animal density may increase under mixed farming it is unlikely there would be an equitable distribution of animals. Tapscott's (1990) study in a densely populated area of Namibia shows that half of the households do not own any cattle. In densely farmed areas it would be extremely difficult for farmers to keep cattle near their fields for animal traction purposes and manuring. There would thus be a need to take cattle away from crops during the cultivation season, necessitating allocation of labour away from farming, something that poor farmers could ill afford.

It is doubtful that mixed farming is an option for the poor, who have limited access to animals and often go into debt to obtain animals to fulfil social or religious obligations. Most mixed farming strategies seem to favour farming skills and thus there is potential that the skill of herding, which involves considerable local knowledge and expertise, will be lost. Another problem with mixed farming is that historically the exploitation of marginal grasslands has always depended on a diversity of flexible pastoralist/farmer relationships and forms of opportunistic agropastoralism. The emphasis has always been on flexibility, mobility and opportunism in adapting to extreme variations in rainfall across rangelands. A generalised strategy of settled mixed farming would seem to be inappropriate for large tracts of dry rangeland soils and their grass/tree associations that exhibit a 'complex patchiness' (Scoones 1996b) and uncertain resource base.
3:5 DEVELOPMENT RESPONSES: FROM ‘BLUEPRINT TO LEARNING’

3:5:1 The Changing Scene

In terms of contemporary investigation of and intervention in the ‘pastoral world’ there are signs of a change in direction (cf. Scoones 1996b). There is less interest in conducting an inquiry to designate those guilty of a supposed crime of desertification. If a ‘crime’ has occurred there is increasing willingness to recognise that everyone in the situation has either profited from or participated in it and that there are in fact systemic connections between the pastoral and other worlds (Pouillon 1990). Researchers and practitioners alike are increasingly more willing to concede that pastoralists have a rich heritage and store of knowledge about the maintenance and use of uncertain semi-arid rangeland environments. Such environments exhibit complex ‘non-equilibrium dynamics’ (Behnke et al 1993). Efforts to embrace and value complexity and uncertainty have methodological and planning implications. In the context of uncertainty, pastoralist grazing management and tenure systems (and associated institutions) are a valuable base for planning. Rather than looking at pastoralists and their rangelands as separate entities, recent methodological innovations have focussed on holistic and contextual analysis of pastoral livelihood/rangeland relationships and their co-evolution over time (Russell and Ison 1991).

The previous conceptual models of pastoral development that have informed practice have been very ‘western’: that is, with a strong emphasis on commercial beef production and ‘the specialised stratification of the production process in breeding,
growing and finishing enterprises, on auction markets, on processing facilities, characteristic of North America and Australia’ (Sanford, 1983: 6). Western models originated in particular historical settings where the interests of the previous inhabitants of pastoral areas were ignored, and the domestic livestock species used in pastoral development were imported. A flourishing non-pastoral sector could also be called on to save the pastoral sector periodically from collapse.

Western influenced pastoral development planning in Africa was based on several assumptions. Firstly, that the pastoral sector was not making sufficient contribution to the national economy (Vedeld, 1992). Secondly that pastoral system aims and management practices are economically irrational and need to be modernised (Livingstone, 1977). Thirdly, that pastoral systems are environmentally destructive (White, 1992). These assumptions spawned policies aimed at increasing pastoral livestock volume entering formal markets (De Haan 1990), a focus on sheep and cattle and the adoption of modern/western systems of production.

Traditional development planning has often focussed on replacing, rather than understanding and incorporating elements of African pastoral systems. As Perrier (1990) points out, replacing existing pastoral systems with western ones is problematic, due to different tenure systems, production goals and decision-making structures. Western systems have a commercial meat/fibre focus, restricted mobility, simplified management structures, private land tenure and a sheep and cattle focus with a low human density (Perrier 1990). African systems adapt to uncertainty and exploit diversity. They are opportunistic, focus on mobility to manage grazing, have multiple goals (for example, milk production, traction, capital accumulation and
manuring), use communal lands and negotiate flexible tenure systems and have
complex decision making structures.

The logic of ‘replacing’ traditional pastoral systems is flawed. Studies by Breman
and de Wit (1983) and Wilson et al (1983) in Mali show that transhumant pastoral
systems substantially out-produce sedentary agro-pastoralists and US and Australian
ranchers in terms of protein per hectare per year. Similarly Cossins (1985) and Upton
(1989) and Cossins and Upton (1988) show that Ethiopian Borana pastoral systems
show higher returns of both energy and protein per hectare than Australian Northern
Territory pastoral systems. Rather than prescribing or imposing imported models the
focus of analysis and intervention should focus on appreciating the knowledge
embedded in traditional management strategies and the constraints affecting
traditional pastoral systems. Traditional systems are not necessarily under-productive
given the ‘complex patchiness’ (Scoones 1994) of their ecosystems.

African rangeland ecosystems are increasingly seen as exhibiting complex non-
equilibrium dynamics (Behnke et al 1993) where populations and other components
are not in long-term balance with other elements of the system. As Dyson-Hudson and
McCabe (1985:159) warn, perturbations in African rangeland ecosystems ‘are more
frequent and cyclically complex than planners ... allowed for’. The complex dynamics
are due to positive feedback within systems or external forcing (De Angelis and
Waterhouse 1987, Nicolas and Prigogine 1989). In the case of West African dryland
ecosystems the external forcing is climatically in the form of droughts and spatially in
the form of rangeland colonisation by farmers and the withdrawal of land from
pastoral production through acquisition by individuals for commercial production and
by the state for national parks. The frequency of droughts prevents plants and animals from developing closely coupled associations and where 'ecosystem development and succession are abbreviated or non-existent and ecosystems seldom reach a climatically determined equilibrium point' (Ellis 1996: 38). Treating rangeland systems as non-equilibrium systems places the emphasis on uncertainty.

Opportunism, as Sandford (1996) says, is an essential management response to irregular and unpredictable crises. Although such crises can be planned for through spreading of the resource base and crop/livestock integration, the results of opportunistic responses are often inequitable. Those who respond rapidly may win and others may lose. Some households are forced out of the pastoral system. West African Fulbe pastoral communities have concepts of 'takaabe lobbube' (hapless or unfortunate poor) and 'takaabe bonbe' (inert or undeserving poor). The former are judged as good herdsmen who are deserving of help to reconstitute herds. Opportunism does pose a problem in conceptualising equity and application of safety nets.

A number of studies (Ellis and Swift 1988, Westoby et al 1989) have pointed out that former rangeland management and development thinking was predicated on equilibrium system dynamics. Addressing African pastoral system development, Ellis and Swift (1988) concluded, as did Sanford (1983) in an earlier study, that traditional pastoral strategies of flexibility and opportunism are a more suitable base for handling unpredictable ecosystems.
Degradation of rangeland environments is more a result of the weakening of
traditional mechanisms by pastoral development policy and, in some cases, survival
responses such as tree harvesting (Manger 1994). As Bartels et al (1990) show, claims
of overstocking are frequently due to a difference in production priorities between
pastoralists and planners.

Previous planning strategies are based on the assumption that ‘carrying capacity’ can
be determined. However, carrying capacity is a function of production goals and, as
has already been shown, production goals vary greatly between western and African
systems and within African pastoral systems. Rangelands exhibit a ‘complex
patchiness’ (Scoones 1994) which varies seasonally and annually and which is
exploited by households with varying resources, and production goals and strategies.
‘Carrying capacity’ is a dubious concept if one assumes that African arid and semi-
arid pastoral rangeland systems exhibit non-equilibrium dynamics (cf Behnke et al
1993). As De Leeuw and Tothill (1990) note, carrying capacity can rarely be
measured accurately. Varying rights and claims to ownership complicate any attempt
to assign ownership. It is rare that a herdsman or head of family has sole rights to
every animal under his care. Large family herds are divided and pastured in different
localities. Even if animal numbers could be measured accurately the resulting
stocking rate recommendations could rarely be enforced. Many Sahelian pastoral
systems make substantial use of crop residues and fallow farmlands by negotiation.
This contribution to the annual feed budget is often ignored in carrying capacity
estimates.
3:5:2 Land Tenure Systems

Other accusations of pastoralist mismanagement relate to communal land tenure systems. ‘Mainstream’ (Sanford 1983) views have assumed the inherent destructiveness of such systems and their inability to facilitate both increased production and rangeland protection from degradation. As Lane and Moorehead (1994) claim, these assertions have been challenged and seen as a flawed basis for design of future rangeland strategies. Communal land tenure is a social institution consisting of reciprocal rights and duties. Such systems touch all aspects of life through their role in survival, wealth distribution and political power. As Behnke (1991,1994) shows, these tenure systems can be conceived of as a matrix in which rights to different resource types are situated within a hierarchy of different ownership groups, ranging from individual producer to ethnic group. These tenure systems are flexible and also allow for mobility. Any externally designed change to these systems affects the whole social system.

Three main theoretical models (Table 3:1) have informed previous policies on African rangeland use and tenure. The commons argument rests on the notion that rangelands have a fixed carrying capacity and that the self interest of pastoralists will lead to its over-exploitation if they are left to their own devices. As Lane and Moorehead (1994) note, the argument also assumes homogeneity of community livelihoods and interest in resources, and that producers can act autonomously, which does not apply to most pastoral societies. It is further assumed that users must bear the costs of their use. Private property is assumed to be the best way to achieve such
an end. Herders are deemed incapable of achieving this transition and therefore it is
best done by an external agency such as the state.

<table>
<thead>
<tr>
<th>Table 3:1 Major Approaches to Land Tenure and Property Rights</th>
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<tr>
<td><strong>The tragedy of the commons (Hardin 1968, 1988)</strong></td>
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<tr>
<td>• most influential theory held by policy makers in Africa today;</td>
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<tr>
<td>• animals are held individually, while the range is owned by ‘everyone’ or ‘no one’;</td>
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<td>• herders will always invest in more animals because benefit accrues to individuals;</td>
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<tr>
<td>• privatisation of the resource is necessary.</td>
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<tr>
<td><strong>The property rights school (Demsetz 1967; Behnke 1991,1994)</strong></td>
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<tr>
<td>• As resources become increasingly scarce they will become progressively more controlled;</td>
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<tr>
<td>• Increased population pressure will convert opportunistic grazing strategies to continuous use;</td>
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<tr>
<td>• Costs of policing resources become less than benefits;</td>
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<tr>
<td>• Herders can develop management institutions of their own.</td>
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<tr>
<td><strong>The assurance problem approach (Runge 1981, 1984; Bromley and Cernea 1989)</strong></td>
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<tr>
<td>• Where communities have low and uncertain incomes and are critically dependent on natural resources, communal forms of property are more efficient;</td>
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<tr>
<td>• Institutions act to coordinate actions to promote voluntary support;</td>
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<tr>
<td>• Mobility is enhanced through reciprocity.</td>
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(adapted from Lane and Moorehead, 1996: 118)

Hardin (1988), in response to criticism of his 1968 paper, concedes that the tragedy only applies to ‘open access’ or unmanaged commons. He introduces a new typology of commons, that is ‘privatism’, ‘socialism’, ‘commonism’. In this system the best fit with pastoral land tenure is that of socialism. Hardin still emphasises individual maximisation as an economic model to explain behaviour, thus failing to acknowledge the multiple ownership claims and mutual support and security systems important in pastoral rangeland management.
Property rights theory assumes some sort of historical continuum between opportunistic grazing and rangeland privatisation. Under increased population pressure, intensification of landuse will occur, starting from more productive resources and following on to lesser ones. According to Demsetz (1967), common property regimes only exist where resources have low value and the cost of policing their use is high. As the value or scarcity increases, individual maximising behaviour induces over-exploitation. This then stimulates institutional innovation aimed at conservation of the resource through more exclusive forms of access. Such control incurs costs. Privatization occurs where the costs of policing are exceeded by the benefits of exclusive access. The right to exclusive use is then seen to induce investment in the form of capital, time or effort. Protection of exclusive use is found in either customary tenure processes or state legislation.

Runge (1986) suggests that where relatively poor communities are dependent on, and face uncertainty in exploiting a natural resource base, then communal forms of land tenure are cost effective. They in effect allow access to a wider range of areas as a means of mitigating environmental risk. In an earlier work, Runge (1984) points to an ‘assurance problem’ as the key to common resource management. He argues that production strategies by individuals are based on the expected decisions of others. Therefore there is a vested interest in developing strategic cooperation norms and institutions, in order to offer some assurance about resource use. Furthermore ‘free-riders’ strategies can be minimised if expectations, assurance and action can be coordinated to enable resource use behaviour to be predictable. It is, however, necessary for a critical mass within the community to support these norms to enable communal tenure to exist and be enforced. Overgrazing, for Runge (1986), does not
necessarily arise from ‘free-rider’ strategy dominance, but a failure of interdependent producers to coordinate and enforce action compatible to locally developed norms of resource access. Pastoral societies are not homogeneous, frequently having uneven social stratification of nobles, castes and ‘slaves’ which does not favour cooperative processes. There is also an increasing trend of influential absentee herd owners to manipulate local ways of organising rangeland access (Shanmugaratnam et al 1992).

3:5:3 Pastoral Institutions and Organisations

Arguments regarding resource management and tenure throw the spotlight on pastoral institutions\(^7\) and organisations. Concerted post-independence efforts at establishing rural development organisations and co-operatives began with export crops such as peanuts and cotton and later with other sections of the farming community and then, among pastoralists. It wasn’t until the 1980’s that alternative pastoral cooperative structures were implanted. This coincided with the ‘crise économique’ (Marty 1990) of many States and the failure of a number of investments in pastoral areas. The initiative for their establishment still rests externally to the pastoral milieu, except in recent initiatives in Senegal, Burkina Faso and Mali (Boudet et al 1987) where local organisations have been established by civil servants who have been forced into early retirement by structural adjustment policies. However such civil servants still retain contacts with their bureaucracies and are often paternalistic and slow to recognise

\(^7\) Although the terms institution and organisation are used interchangeably on many occasions it is useful to distinguish between them. North (1990: 3-5) defines institutions ‘as any form of constraint that human beings devise to shape interaction’. Organisations, on the other hand, ‘are groups of individuals bound by some common purpose to achieve objectives’. Uphoff (1986: 8-9) sees an institution as being a complex of norms and behaviours that persist over time by forming some socially desired purpose, while an organisation is a structure of recognised and accepted roles.
local creativity and potential to take responsibility. Often the organisations created by them tend to develop into private business ventures.

Co-operative organisations have proved problematic amongst pastoralists as their traditional solidarity is an ‘économie de l’affection’ (Hyden 1985) - an intimate mixture of society and culture not limited to the economic domain, as most co-operative projects are. The equitable distribution of assets is difficult to negotiate. The structure of co-operative organisations is usually based on imported models that lack flexibility and which have organisational responsibilities that require advanced levels of literacy of non-indigenous languages. The goal of much collaboration with local pastoralists is simply to put an imported organisational structure in place rather than negotiating a contextually relevant and flexible one that is capable of facilitating improvement and coping with uncertainty. In most cases, the process necessary for developing useful local organisations is a complex and variable one that takes a considerable amount of time. Marty (1990) for instance, claims that a period of at least ten years is not out of the question.

The African experience of developing pastoral institutions suggests that starting small and forging collective action around common interests or priorities is a more likely route to organisational development (Scoones 1996). There are many arguments in favour of supporting informal pastoral organisations in order to counter the ‘indifferent participation’ of pastoralists in previous development organisations (Marty 1990). Swift and Bonfiglioli (1984) see the advent of pastoral organisations as a response to a need for improved communication between pastoralists and the state. Sylla (1989, 1996) rightly notes that pastoral institutions/organisations have always
existed and their ‘rediscovery’ is due to a confluence of factors: a more positive perception of pastoral societies; a need to stabilise degrading rangelands and the search for more sustainable programs.

Pastoral institutions are informal, and flexible and habitual ways of managing everyday affairs, being based on both kinship and geographical proximity. In arguing for the support of informal institutions one is not arguing for the decentralisation of formal institutions but the empowerment of local customary organisations. Swift (1993) suggests that three principles should inform pastoral administration. Firstly, flexibility and diversity in organisational design that enables adaptation to variable seasonal conditions. Secondly, the principle of subsidiarity: that is, administration and planning should be carried out as near to the level of resource users as possible. Thirdly, the reduction of ‘transaction costs’ of organisation by devolution of tasks to customary institutions. Sylla (1989) calls for linkages to be made between strengthened grass-roots organisations and macro-level organisations, which cover a wider area and have more influence at broader policy levels. ‘Umbrella’ and local organisation collaboration would allow for both better enforcement and monitoring and also the exploitation of a broader rangeland on the part of local organisations. For example, larger organisations such as the Peulh Association of northwest Niger and the Fulani Association of Nigeria (Niamir 1990) have enabled the expression of herdies’ issues at State level.

Attempts at implanting pastoral organisations have been mixed. There have been a variety of organisational models that have varied in both structure and the geographic or administrative areas they cover (that is, state, province, region, community or
village). For example, the Federation Nationale des eleveurs Centrafricain, Groupements d’Interet Pastorale in the Central African Republic, Groupement Villageois in Burkina Faso and Groupements Mutualistes Pastoraux in Niger all covered different areas. The areas covered ranged from village to national level but they rarely corresponded to areas controlled by traditional institutions and organisations.

In Mali the first attempts at organisational development tried to bring together heads of pastoral families without any real effort to ascertain their real interests, or ability or will to co-operate. Other attempts tried to bring together transhumance groups (Groupements mutualistes pastoraux in Niger, Groupements d’Interet Pastoraux in the Central African Republic, for example), or those who depend on the same pasture areas and water points (Secteurs co-operatif of Gao in Mali). However these groups were often no more than instruments used by influential men to gain access to credit.

In Burkina Faso, for example, the Union de Groupements villageois de l’Oudalan covers the Oudalan province of northeastern Burkina Faso which is centred on the town of Dori. This association manages commercial operations for village groups by facilitating credit, food aid, veterinary supplies, animal food concentrates and functional literacy programs. It is, however, rare that a single organisation can represent and mobilise entire communities, let alone larger structural entities such as provinces. This has tended towards a multiplication of organisations.

In Burkina Faso (and other parts of West Africa) there is growing support for the concept of Gestion de Terroir Villageois or management of ‘village territories’ (Toulmin 1993). This involves participatory analysis of the problems encountered by
communities in managing their village territories or landscapes. It then aims to clarify
the rights and responsibilities of the various community groups and establish local
management committees. However, the notion of territory used is a sedentary farming
one, which does not allow for transhumance.

Sedentary ethnic groups in Burkina have always shown a greater affinity than
pastoralists for organising for development. The danger is that they will organise
village territory management in a way that excludes transhumant and nomadic
pastoralists from using various dry season ‘niches’ within the territory, such as
stubble fields and low-lying areas. The current trend towards ‘agro-pastoralism’ and
the promotion of various forms of ‘mixed farming’ will complicate matters. Farmers
will increasingly tend to reserve stubble fields and low-lying grasslands within their
‘territory’ for their own use.

3:5:4 From Blueprint to Learning Approaches

Approaches that respect local farmer and pastoral management ability in uncertain
environments are increasing. Changes from ‘blueprint’ to ‘learning’ (Uphoff 1992)
approaches are needed in such variable environments in order to embrace historical,
political and cultural factors in development and to facilitate the emergence of
flexible and responsive local organisations that can both learn and respond in such
environments (Table 3:2). As Scoones (1996) notes, learning in uncertain
environments is ‘episodic’ with shocks such as droughts being important learning
occasions. A learning approach accepts that there are diverse perceptions and sources
of knowledge and that development and change involves both conflict and consensus (Long and Long 1992).

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<tr>
<th>Table: 3:2</th>
<th>The blueprint and learning-process approaches in rural development contrasted</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blueprint</strong></td>
<td><strong>Learning Process</strong></td>
</tr>
<tr>
<td>Idea originates in</td>
<td>Capital city</td>
</tr>
<tr>
<td>First steps</td>
<td>Data collection and plan</td>
</tr>
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<td>Design</td>
<td>Static, by experts</td>
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<td>Supporting organisation</td>
<td>Existing, or built top down</td>
</tr>
<tr>
<td>Main resources</td>
<td>Central funds and technicians</td>
</tr>
<tr>
<td>Staff training and development</td>
<td>Classroom, didactic</td>
</tr>
<tr>
<td>Implementation</td>
<td>Rapid, widespread</td>
</tr>
<tr>
<td>Management focus</td>
<td>Spending budgets, completing projects on time</td>
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<td>Standardised</td>
</tr>
<tr>
<td>Communication</td>
<td>Vertical, orders down, reports up</td>
</tr>
<tr>
<td>Leadership</td>
<td>Positional, changing</td>
</tr>
<tr>
<td>Evaluation</td>
<td>External, intermittent</td>
</tr>
<tr>
<td>Error</td>
<td>Buried</td>
</tr>
<tr>
<td>Effects</td>
<td>Dependency – creating</td>
</tr>
<tr>
<td>Associated with</td>
<td>Normal professionalism</td>
</tr>
</tbody>
</table>

(From Chambers 1993: 12)

Global or blueprint plans are often overtly or covertly resisted (for example see Ferguson (1990), in Lesotho) because they are seen to reflect ethnic, elite/urban political objectives. Effective pastoral development is not so much about engineering global solutions as it is about ‘bricolage’, imaginative improvisation with resources that are close at hand. As Sanford (1996) shows, there is much to be gained by identifying and supporting opportunistic management responses.

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8 See Appendix three for Chambers comparison of normal and new professionalism
However, as Moris (1991) claims it is unlikely that the ‘official’ system can reach clients such as pastoralists and the poor simply by making them a priority, as a change in the way interventions are organised is the priority. Moris also argues that enrolling farmers and pastoralists in research processes is a promising way to get them to take inquiry more seriously, especially if they can prioritise issues and negotiate prompt action. Nevertheless, one would be very naive to assume the ready or enthusiastic adoption of these participatory learning approaches by administrators or extension agents in Sahelian countries. As Toulmin (1991) contends, motivation for making local people responsible for the managing of their resources in Sahelian countries is mixed. There is donor country and NGO pressure for greater local participation and democracy in resource management. However, ‘governments are skilled in mastering the development discourse and in highlighting their engagement with the rhetoric in vogue amongst donors’ (Toulmin 1991). Project donors are not usually around long enough to see if the rhetoric is ever translated into action. Governments are interested in maintaining central control and see any devolution of power over water and grazing in pastoralist areas as a strengthening of pastoralist autonomy and thus a threat.

The facilitation of participatory approaches in pastoral and agro-pastoral societies that seek multiple perspectives on issues and promote democratic decision-making is problematic. Such approaches assume each individual is responsible to advance their own case. This assumption is culture bound and not readily translatable into pastoralist cultures. Similarly, the notion of the ‘obligation to develop one’s self’ (Aronson 1985), that is a theme in many participatory approaches is difficult to translate into pastoral societies. It is rare that pastoral people ‘develop’ without reference to the various networks to which they belong.
It is difficult to conceive of extension agents and administrators being willing partners in participatory approaches. They will have to overcome long-standing cultural animosity to pastoralists. Local administrators prefer to retain, at least covertly, the power to make arbitrary decisions regarding access to resources, so as to ensure that contesting parties will try to get a decision made in their favour by renumerating them (Toulmin 1991). The administrative motive in sending extension agents to pastoral zones is often one of discipline for poor work, corruption, or the apprenticeship of those fresh out of training. Such personnel often lack the commitment, ethical standards and/or the practical experience necessary to work collaboratively with pastoralists.

3:6 CONCLUSION

In chapter two I argued that it was necessary to take a participatory learning approach to improving Fulbe food security. Participatory Action Research was viewed as a valid methodological framework to guide the participation of local Fulbe in this reflexive learning process. The Fulbe and Maccube possess local knowledge that is embedded in their agro-pastoral livelihood activity in an uncertain environment. This knowledgeability and capability are important attributes that the Fulbe bring to this learning process. They also have individual and collective memories of past development interventions that will influence their motivation to participate.
Thus in this chapter I have examined pastoral and agro-pastoral livelihoods and emerging development responses to the complexity and uncertainty of these pastoral worlds. I have looked at pastoral livelihoods, pastoral relationships with more sedentary groups and agro-pastoralism. Bonfiglioli’s (1990) model is helpful in analysing agro-pastoral livelihoods. Rather than a model of homogenous livelihood activity there are ideally six types of agro-pastoralism that operate like a kaleidoscope in any region. They merge and re-emerge as complex forms of social and economic interdependency within varying ecological environments. The movement from one type to the next is rarely one of deliberate choice but one of opportunism or concerns for survival. For some, agro-pastoralism is a promotion, for others a survival strategy. This model of Bonfiglioli’s is a helpful conceptual framework for use in examining Fulbe Jelgobe livelihood activity.

Pastoral development responses have shifted from ‘blueprint’ to learning approaches that accept complexity and uncertainty as essential components of pastoral livelihood situations. Knowledge of such situations is never complete but action is always necessary to improve pastoral livelihood security. Rather than attempting to get complete information about such complex socio-ecological livelihood situations prior to intervention, it is preferable to initiate action research/learning processes that ‘monitor experience and feed back lessons’ (Scoones 1996: 6).

Chapter four looks at the Fulbe livelihood situation in detail. I will describe their social life, livelihood activities and their surrounding ecological environment. This next chapter is largely descriptive. However, aspects of the picture created emerged
through my participation with the Fulbe in the participatory action research process.

In chapter five I focus on Participatory Action Research and the principles and relationships it brings to any ‘interface’ (Long 1989) situation.
CHAPTER 4

THE SOCIAL LIFE, ENVIRONMENT AND SEASONAL LIVELIHOOD ACTIVITIES OF THE FULBE JELGOBE

4:1 INTRODUCTION

In the previous chapter I looked at pastoral and agro-pastoral livelihoods in general. I am now going to describe the livelihood activity of the Fulbe Jelgobe as well as their environment called the Jelgoji. The Fulbe Jelgobe comprise approximately 45% of the population of the Jelgoji. The Maccube or former slaves of the Fulbe constitute a further 25%. Hence people of Fulbe language and culture form approximately 70% of the Jelgoji’s population. Since they constitute a large proportion of the population, they cannot depend on ‘the agriculture and crafts of the neighbouring societies’ (Riesman 1974: 17) to satisfy livelihood needs like some nomadic Fulbe. The Fulbe Jelgobe are thus both herders and millet farmers.

Rainfall is a major constraint in agricultural and pastoral production systems. There is great variability in the spatial and temporal distribution of rainfall during the short wet season from June to September. The Fulbe have adjusted their livelihood activity accordingly and are still adjusting to these conditions. There is an annual ‘hungry season’ during the two or three months prior to the October/November harvest. This is a period where food stores from the previous years harvest are severely depleted and people alter consumption patterns in order to cope until harvest time. Both seasonal and chronic inter-annual food insecurity is a major consideration in Fulbe
livelihood management strategies. Hence the focus of the Participatory Action Research programs.

An understanding of the social life and livelihood activities of the Fulbe Jelgobe is important to engaging them in an action research process. I now analyse and describe their social life, their pastoral and agricultural activities as well as the climate and vegetation of their rangeland.

4:2 THE SOCIAL LIFE OF THE FULBE JELGOBE

Fulbe origins are obscure and their belief systems rendered complex by conversion to Islam (Smith 1992). As they spread and migrated from Senegal to Ethiopia and then throughout the Sahelian region of West Africa they established unstable yet spectacular kingdoms (Macina in Mali, Sokoto in Nigeria and in North Cameroun and the Fouta Djalon in Guinea) in the name of Islam. The Fulbe’s innate pride stems from being warriors at heart and also from their adoption of Islam.

Today they number anything from 12-15 million in Africa, spreading from Senegal and Guinea to Sudan and the Central African Republic. Called everything from Africa's Jews to 'red monkeys' they are often detested by sedentary peoples because of crop damage by cattle and dubious herding contracts. Fulbe can be relied upon to be cunning and often disdainful. Their livelihoods vary widely. They can be anything from nomadic pastoralists, rich merchants, and erudite Islamic scholars to poor farmers or squatters in the 'bidonvilles' that surround most West African cities.
Fulbe have been indifferent or sometimes hostile to colonisation and the subsequent
development of the nation state. They rejected colonial education systems, sending
their slaves to school instead. Even today they remain indifferent to most government
services such as health, education and agro-pastoral extension services. Their
attachment to transhumance and pastoralism has meant they are often scorned or
ignored by governments. Farmer-based governments and to some extent expatriate
development strategies have focused on ‘controlling’ their livestock management
strategies.

The Fulbe Jelgobe of Northern Burkina Faso are one expression of the rich variety in
livelihoods among the Fulbe. In the late seventeenth and early eighteenth centuries
they migrated from the Boni region in Mali into what is now northern Burkina Faso
with substantial herds belonging to their former masters, the Jallube. They quickly
made alliances with local chiefs in order to protect themselves and their herds from
Jallube retribution.

In just two generations the separate chiefdoms of Djibo and Barabouille were
established and through a series of isolated campaigns and battles, the Jelgobe
established themselves as masters of the region. Later on, a third chiefdom was
established at Tongomayel. A Kaananke or king ruled each chiefdom or region. At a
village level, accession to the position of Jooro is determined by genealogical
seniority. In simple terms, the jooro is in power but does not have power. He is an
adviser or arbitrator with no real coercive power except perhaps through his charisma.

\[1\] A shortened version of Jom wuro which means master of the village or camp.
Those who most influence village decision-making are usually charismatic men (mostly wealthy) or Islamic clergy or Moodibaabe. The status of such men is often determined by their skill in relating to 'useful' outsiders. These men often formed the nucleus of the post 1983 revolution ‘Committees for the Defence of the Revolution’ (CDR), or the ‘committees of elders’ which were a revolutionary concession to tradition.

The arbitration of competing claims is usually facilitated locally by the *Jooro*. This process is influenced by all sorts of subtle alliances and any dissatisfaction with a *Jooro*-inspired arbitration was made by appeal to the *Kaananke* of the region. Dissatisfaction with the appointment of a *Jooro* or any decision made by him was also expressed with the feet; people who were dissatisfied move off to form a camp somewhere else.

In Fulbe circles, having power is often seen as a burden. This is particularly true from the *Jooro*’s point of view. One often hears the phrase *Laamu na heewi joote* which conveys the idea that power brings many worries. Paradoxically one also often hears the phrase, power is sweet (*laamu na welii*). This is perhaps a reference to the fiercely contested position of *Kaananke*. The Fulbe value liberty and consider that anything is better than being subject to another authority, be it traditional or revolutionary.

The dichotomy between the two manifestations of power is best seen by reference to colonial times. The *Kaananke* allied himself to the administration as a means of reinforcing his power. The relationship was of mutual benefit. Various administrations used this alliance to exert influence in situations as diverse as tax
collection, policy enforcement and electioneering. The position of jooro however was an ineffective tool for the administration. The jooro could not command or demand anything but only try to mediate conflicting interests. The position of Jooro was unenviable. Too close an alliance with the administration, in tax collection for example, risked alienation. At the same, time ignoring the administration often meant someone else becoming jooro (Riesman, 1977). In 1980/1981 while learning Fulfulde at Monnde So, for example, the Jooro was an elderly man and rarely intervened publicly in disputes. He was consulted out of courtesy and he usually used a wealthy shepherd, not from his immediate family, as his intermediary in negotiations. He nearly always deferred to views expressed by wealthier members of his family residing in the town of Djibo some 12 kilometres away.

A significant post-independence perturbation in this Fulbe power structure came with the 1983 Marxist revolution and its subsequent abolition of all things 'feudal'. Revolutionary committees replaced the traditional power structure. However, the real community gatekeeper's influence rarely changed through all these events. Village level political activity involved the interaction of various local networks that made strategic alliances with both locals and non-locals. Although some gatekeepers or powerbrokers and their associated networks exerted their influence overtly, some remained hidden. For example, the real gatekeeper of one network of Moodibaabe families in Monnde So eventually turned out to be an itinerant marabout or Islamic priest. He circulated with his coranic scholars between the village of Monnde So, the town of Djibo and the capital Ouagadougou. It was only when he brought his coranic pupils or garibuube to the environs of Monnde So during the wet season that his
influence became discernible in the course of negotiations. Decisions made during his absence were rarely maintained.

When the Jelgobe arrived in Northern Burkina they had numerous slaves. They acquired more in subduing local populations and in subsequent slave dealing. The slaves largely acted as cultivators who supplied grain to complement the most important ingredient in Fulbe diet - milk. The arrival of the French at the turn of the century abolished this luxury. Today these former slaves make up nearly half the population. Their only language is Fulfulde and, taken together with pastoral Fulbe, this means that nearly 75% of the region's population is Fulanophone.

One cannot understand the forces operating in Fulbe life without understanding the notion of Pulaaku or Fulaniness. It is this cultural stereotype, together with their cattle, language and religion, that is the basis of their extreme pride or dimmaaku. As Riesman (1977:128) says, pulaaku is 'an exact structural equivalent of the English word 'chivalry' and, like it, designates at once certain moral qualities and a group of men possessing these qualities'. It is both the appropriate code of Fulbe behaviour and simultaneously refers to the group of men who embody it.

The dominant traits of Laawol pulaaku or 'the Fulbe path' are munyal, hakkiilo, semteende and an intimate understanding of both the Fulbe language and people. Munyal is a cross between strength and courage in adversity and a stoic acceptance or endurance of the supposedly pre-ordained vicissitudes of life. It is often translated as 'patience'. The word hakkiilo (intelligence or good sense) conveys a blending of prudence and ruse or cunning in livelihood management and face to face encounters.
Semteende (shame) is best described both as a lacking of restraint (yaage) and self-control in daily social interaction, and evidencing a weakness when facing adversity (Riesman 1974). It is most often translated as shame. The French term ‘pudeur’ or informed sense of decency is closer to the mark (that is, if one excludes any reference to sexuality). In essence it represents any revelation of weakness or non-conformity to the code of pulaku. When someone acts shamefully Fulbe say ‘o sempiti’ meaning they shamed themselves, or alternatively, ‘o walaa semteende’ meaning they have no shame. In other words a pullo must know of the social constraints on behaviour and be able to avoid contravening them in all situations, especially in front of his in-laws. By not having semteende a pullo would escape from social constraints. A true pullo is in total control of his emotions needs and impulses (Kirk-Green, 1986: 42).

Fulbe look to the captives or slaves to indicate everything that is not pulaku.

Riesman (1977: 117) outlines this stereotype when he says, ‘captives are black, fat, coarse, naive, irresponsible, uncultivated, shameless, dominated by their needs and their emotions’. These qualities are innate and manifest the servile condition. A corollary of this attitude is that all the other blacks (haabe, sg kaado, non-Fulbe black; that is, other Africans except for the Tuareg, the Moors, and the Arabs) already possess the principle attributes of slaves, and consequently would be ripe for enslavement if one had the means.

The pullo then does not have these servile traits - when he is acting like a true Fulbe person. One says 'acting' because Fulbe pulaku is a public role-play. There are times when one does not conform to the stereotype. Such occasions are when one is amongst one's own immediate family or in a Maccube village termed a debere. Fulbe
men often go to a debere to relax and remove their pulaku mask. It is in such
‘informal’ situations that one often has the most fruitful dialogues.

To sum up then, pulaku is characterised by the taste or ndaku for cows and an
intimate knowledge of cattle husbandry, self-control over physical needs and
impulses, and the choice of stimulation over comfort. One must not express any
discomfort in public, whether it be a pain, physical or moral (such as grief), or a need
(like hunger, thirst). Of course one does not enact pulaku all day, but for limited
periods of public interaction. Thus as Riesman (1975: 45-47) maintains, there are
‘formal’ and ‘informal’ aspects of life and behaviour and these are not always easy to
differentiate.

Semteende, which is a lack of pulaku (or even a fear of lacking it) is the motivating
force for the Fulbe to behave as Fulbe. Without cattle it is difficult to exhibit pulaku
and if one has no longer any cattle then one has probably not acted as a pullo. In pre-
colonial times, loss of cattle was shameful. It implied that one was not man enough to
defend his herd and by implication, not brave enough to steal some back.

These days the shame is attached to inadequate shepherding ability in the face of a
degrad ing environment. Most Jelgobe these days are agro-pastoralists. Seasonal
decision-making must be balanced between cropping millet and transhumance
herding. Some Jelgobe are still nomadic in the sense that they rely entirely on their
animals for livelihood security and manage them using diverse patterns of mobility.
These Jelgobe are mainly large herd owners who have migrated to the wetter
rangelands in the south-west and south east of Burkina Faso or some in the north-east
of Burkina Faso who travel into Mali and/or Niger. Most Fulbe in the Soum province of Burkina Faso are either sedentary pastoralists or transhumant ones who move their herds over short distances in a north-south pattern. They move north at the debut of the rains, as soon as surface water allows shepherds to take advantage of bush pastures towards the Malian border, and also escape conflicts with farmers over crop damage. They move back south in the dry season to their villages and/or permanent water points.

At first observation, Fulbe Jelgobe society seems very secular. Unlike surrounding tribes such as the Mossi, Kurumba and Dogon ‘they have no systematic cosmology, nor do they have any plastic or graphic arts’, the exception being geometric patterns on leather work and household utensils (Riesman 1977:39). Similarly, it is hard to find any traditional Fulbe rituals regarding ‘curing sickness, warding off death, increasing fertility, and so on’ (Riesman, 1975: 40). The Jelgobe seem to rely on neighbouring tribes (particularly the Mossi and Kurumba), itinerant Fulbe Woddaba and Hausa merchants from Niger for safaare or ‘medicine’ and occult rituals. Islamic Fulbe generally feign ignorance in these matters. Some Islamic clergy considered less erudite do however dabble in ‘folk medicine’ and sell charms as a supplementary source of income. The Fulbe Jelgobe state quite categorically that their religion (kulol Alla, literally, fear of Alla) is Islam, yet most maintain a rather casual adherence to its tenets, that is, except for the Islamic clergy caste or guild, the Moodibaabe. The Fulbe see their attachment to Islam as an indication of their elevated status in comparison to neighbouring ethnic groups, whom they class as herferbe which approximates to the English term heathens. One Moodibbo gave expression to this notion when referring to the Kurumba people at Arabinda (one hundred kilometres east of Djibo) by saying,
‘we Fulbe fear Alla, we were born in the light, they (the Kurumba) were born in darkness and remain there to this day’.

In the above paragraph the Moodibaabe were described as belonging to a caste or guild. Their membership is indicated usually by their praise name of Siise as distinguished from the normal Jelgobe name of Dikko. As mentioned previously there are two Fulfulde speaking groups in the region around Djibo, the Fulbe and the Maccube. Scattered among these two societies are caste groups such as, blacksmiths (Waylube), minstrels or bards (Maabuube), Islamic clergy (Moodibaabe), leather workers (Gargasaabe) and woodworkers (Lawbe). These castes are as Riesman (1977) says, more akin to professional guilds or associations. It does not mean however, that the professional expertise concerned is confined to those within the guilds. For example, many Maabuube women work with leather and produce coloured cushions with fine geometric patterns. On the other hand, it is rare to find anyone outside the Maabuube, Moodibaabe and Waylube caste lineages exerting these professions. It is also common for the women of individual guilds to have their own particular artisanal work. For instance, it is generally the Waylube women who make the clay pots or loonde that are used for carrying water.

French administrators classified these guild members together with the Maccube/Rimmaaybe, as they tended to live in the same areas. However in Fulbe thought they are different and the notion of servitude is not attached to them. As Riesman (1977) asserts, historically the Maccube/Rimmaaybe belonged to some one, whereas guild members were free men or rimbe and could, given favourable circumstances, have their own Maccube. Politically, guild members did not seek
positions of power as the livelihood focus was on their professions. It was generally only Fulbe who attained positions of power.

Although marriage is within a guild is generally the rule, marriages as Riesman (1977: 23) states, may occur ‘between men and women of different guilds and also between guild members living in different societies or ethnic groups’. For example, one marriage that the author attended in Djibo was between a wealthy blacksmith who was residing among Maccube, and a young Maabo woman from Monnde So whose family had lived with Fulbe for over fifty years. While it is rare for Fulbe to marry non-Fulbe it is not unusual for a Maabo living among Fulbe to marry a Maabo guild woman living among the Maccube or even among the Mossi.

As Riesman (1977: 22-23) describes, there is a certain mobility in these professions. He cites the case of the Maabo moving from a Fulbe chief’s house to that of a Songhay chief. Similarly, the Kurumba chief of Belehede, a Muslim, had a Moodibbo from a Fulbe camp within the vicinity, living in his compound and leading worship at the mosque for some period of time. The Gargasaabe in the Jelgoji area around Djibo were originally, as Riesman (1977) states, leather, wood and ironworkers within the social structure of the Tuareg. They have retained their Tamashek language and the Fulbe often deride them for the manner in which they speak Fulfulde.

The gender division of labour is distinctive. Men's work is mainly in the ladde or bush shepherding cattle, sheep and goats and/or field cultivating millet. Women's work is confined to the village or camp and involves food preparation, hut construction, craftwork, milking and selling of milk products. There is no typical male workday. A
man either works alone or with his peers and rarely, if ever, with his father or in-laws (esiraabe). Most work involves the younger men (15-40 years).

Unlike women, who work throughout their lives, Fulbe men (particularly amongst the more sedentary groups) enjoy a virtual retirement around 40 years of age. In former times slaves did the work and even today Maccube are paid to do the more arduous tasks. Men seem to have endless time to talk and Jelgobe society seems very much orientated to leisure. As Riesman (1977: 73) observed, ‘human energy not engaged in the production of goods for subsistence is used to maintain relations between people’. There is a seemingly constant involvement in activities associated with various rites of passage, child naming ceremonies (indeeri), marriage and death. Although a lot of time is spent in communication and maintenance of relations, ‘cooperation for the common good hardly exists, as the common good itself does not exist, but reciprocal exchange of help is frequent’ (Riesman 1977:73).

Age, kinship and gender mediate power or authority relations within the wuro.

Seniority is expressed in the right to insult with impunity. Reciprocity in insulting implies equality and occurs between cross cousins and those of a similar age. Women submit to male domination because of cultural considerations rather than conforming to the wishes of any individual male (Riesman 1975). The woman however is ‘master’ of the dwelling she lives in. As jom suudu he can, and often does, manipulate her husband in many subtle ways depending on her charisma, ability and family network. Authority is ultimately expressed in access / rights to livestock for personal ends.
In former years Fulbe pastoral livelihoods complemented those of the agricultural Maccube. In fact the Fulbe could not aspire to being true pastoralists without cultivating relations with the Maccube. Drought, politics and population pressure have tended to diminish the differences between these two livelihood types and hence the fruitfulness of exchanges between them. Both groups today practice various forms of agro-pastoralism.

4.3 THE JELGOJI (THE JELGOBE RANGELAND ENVIRONMENT)

4.3.1 CLIMATE

With reference to rainfall measurements and stories of the past, it is clear that the climatic trend of the Sahelian area round Djibo is one of increasing dryness. The years 1985 and 1990 experienced rainfalls of 200mm or less. Rainfall is extremely variable in volume and spatial and temporal distribution (Table 4:1).

<table>
<thead>
<tr>
<th>DJIBO RAINFALL</th>
<th>1930-60</th>
<th>1961-70</th>
<th>1971-80</th>
<th>1981-87</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rainfall(mm)</td>
<td>600(1)</td>
<td>574</td>
<td>410.1</td>
<td>298</td>
</tr>
</tbody>
</table>

Table 4:1 Djibo Rainfall Trends

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Rainfall(mm):</td>
<td>457.7</td>
<td>308.8</td>
<td>322</td>
<td>226.5</td>
<td>174.7</td>
<td>298.5</td>
<td>297.6</td>
</tr>
</tbody>
</table>

(1) Estimation from averages at Ouahigouya and Dori.

(From Graf et al 1987: 153)
The Djibo rainfall figures conform to the trend of deficit rainfall years since 1969 noted by Grouzis and Albergel (1989) in their detailed analysis of Burkina Faso's rainfall. The trend towards persistent rainfall deficit years is indicated also by their analysis of the movement of the 500mm and 900mm isohyets (Fig. 4: 1)

Fig. 4:1 - Fluctuation of the 500 and 900mm isohyets during the last six decades

From Grouzis and Albergel (1989: 244)
Extreme variability in amount and distribution of rainfall masks to a large extent any evaluation of competency in agro-pastoral management. The uncertainty of each rainy season causes agro-pastoralists to adapt their traditional ‘script’ (Vierich; 1984) in responding to an unfolding seasonal ‘scenarios’ (Moris 1991:27) of unpredictable opportunities and constraints. The traditional ‘script’ is a package or repertoire of locally acceptable options, improvisations, techniques and exploitable relationships employed in responding to the local situation. There are alternating processes of action, judgement and contextual adjustments. In Richard’s (1989) terms, it is a matter of running a total ‘performance’ in a satisfactory way. During the performance there is a blurring of the distinction between that which is ‘normal’ or planned and that which is experimental or between ‘bricolage’ and innovation.

There are many different rainy season scenarios: -

- early (May) versus late (July) onset
- early (early September) versus late (October) finish
- early onset with a dry month (July 86 for example) before further rains
- early or mid-May with well spaced rains until the end of September (the 1991 season for example)

An ideal scenario is a mid-June onset with storms every ten days until late September or early October. Millet varieties vary in length of growing season from 75-115 days. Ideally the initial sowing (aawre) or planting rain is around 40-50 millimetres. The problem with early light rains (less than 30 millimetres) is that they stimulate pasture growth while not providing a suitable environment for sowing. When sowing
eventuates one has to sow into established grass and thus commence cultivation, with its associated heavy labour demand, at the same time.

Early onset followed by a dry period of more than two weeks necessitates partial or complete re-sowings. A long dry period after initial rains also creates problems for pastures - especially annual species. Pasture species respond rapidly to the rain but then die out creating pasture problems even when the total yearly rainfall is above average. In only one year since 1979 has there been an early onset (early May) with continued well-spaced rains until the end of September 1991. The critical rainfall parameters are onset and finish, number of rainy days and their temporal distribution.

Prospects of a harvest are extremely uncertain and quite often depend on just one storm towards the end of September. In the late 1980’s, when locusts were a problem, only those who sowed with the first rain stood any chance of harvesting a crop. The millet sown with the first rain was large enough to withstand attack when the locusts hatched. Subsequent sowings were wiped out as soon as the shoots broke the surface.

The rainy season is part of a three-season Fulbe year or hitaande. The three seasons include: the rainy season or ndunngu (June - September/October), cold-dry season or dabbunde (November - January/February) and the hot-dry season or ceeedu (February - June). The rainy season is usually preceded by several severe dust storms. Thr rain usually arrives in three different ways: heavy electrical rainstorms (20-80mm) with violent winds usually at the beginning and end of the season; less violent storms (often on consecutive days); and light rain falling over an extended period. Rainfall rarely exceeds 4-5 hours in duration. Rain fronts in the Djibo region usually arrive
from the northeast or east, occasionally from the west, rarely from the South and hardly ever from the north. With most precipitation in the form of heavy and violent storms, the major problems are those of erosion and moisture penetration.

4:3:2 THE BUSH (*ladde*)

The Fulbe Jelgobe describe their environment by using several terms designating soil-vegetation combinations,

- *palol* or low-lying floodable areas which can be either large and extensively inundated over a long period of time (*a goruwol*) or small temporarily flooded areas (*a goyfal*).  
- *bolaaje (Pl)* or *bolawol (Sg)*, are heavier clay soil areas in the proximity of low-lying areas that are often encrusted.  
- *seeno* or sandy dune areas where the majority of millet fields are situated.  
- Denuded areas (often encrusted or gravel covered slopes) called *ferro* (lateritic) and *kolaade* (encrusted heavy clay soils).

The *palol/goyfal* associations are naturally the most important in terms of pasture, forestry and agriculture. They contain valuable pasture associations of *Panicum laetum (paguri)*, *Oryza barthii (maaro ladde)*, *Eragrostis ciliaris, Setaria anceps (butaloy)*, *Echinochloa colonum* and a most important perennial, *Andropogan*  

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2 Note: In this section the Fulbe terms for grasses and trees are in italics.
gavanus (soobo). The grass Panicum laetum (paguri) is an important bush food whose grains are an alternative for millet during the ‘hungry season’.

These pasture species are associated with a variety of trees namely; Acacia species - Siberiana, Albida, Seye, Nilotica, Senegal, Melilfera and Pennata; Grewia species, Ziziphus mauritania (jaabe) and Spina christi, Anogeissus leiocarpus, Adamsonia digitata (bokki), Balanites aegyptiaca (tanne), Tamarandus digitata and Pterocarpus sp. Adamsonia digitata, Ziziphus mauritania and Balanites aegyptiaca (tanne) are also important bush food sources.

The seeno or dune areas are favoured for farming in the vicinity of villages but provide valuable pasture in designated grazing zones if rainfall is adequate. These areas have occasional and fast disappearing patches of the perennial Andropogan gayanus and associations of Eragrostis tremula (pitirdi), Pennisetum pedicallatum (bogodollo), Schoenfeldia gracilis (hudo bolao), Eragrostis pilosa and Cenchrus biflorus (kebbe) which is edible in its early growth stages but is an annoyance when mature because of its spiny seed. The sandy soils usually have associations of trees such as, Piliostigma reticulatum, Ziziphus mauritania, Boscia senegalensis, Adenium obesum, Balanites aegyptiaca, Bauhenia rufescens, Comiphora africana, Muertua crassifola, Euphorbia balsamifera, Caloptropis procera and Guiera senegalensis. The latter two present in any number usually indicate soil degradation.

The largely denuded clay or laterite slopes exhibit grass associations of Tripogan minimus (lamlamuko), Cymbopogon schoenanthus (wulude), Sporobolus microprotus (pitirdi jawle), Brachyaria distichophylla (paguri) and Schoenfeldia gracilis. Trees
typically associated with such areas are *Acacia seyal*, *Acacia senegal*, *Laeta raddiana*,
*Boscia senegalensis*, *Boscia augustifolia*, *Caloptropis*, *Balanites aegyptiaca*,
*Combretum micranthum*. On soils unsuited to cultivation *Petrocarpus lucens* and
*Ziziphus mauritania* can be found.

The Fulbe complain of the increasing absence of perennial grasses, such as the
*Andropgon* species on the ‘dune’ areas and old fields. Likewise they point to a decline
in the *Echinochloa* species, *Oryza* species associations (*burgu*) in areas inundated for
long periods during the rainy season. There is also a noticeable trend of crop residues
becoming less available to pastoralists as farmers appropriate them for their own
needs (building and handicraft use and feeding animals used for animal traction
purposes). The phenomenon of increasing ‘urbanisation’ of cattle has also placed
increasing pressure on pastures within a twenty-kilometre radius of larger towns
(Djibo). Many of those migrating to Djibo from the surrounding area bring with them
small numbers of cattle as well as smaller ruminants. These animals are housed in the
residential compounds and the herding is contracted out. The town herds led out each
day have caused noticeable degradation along grazing paths and overgrazing and
increased farming pressure have tended to eliminate the more favourable pasture
species.
4:3 FULBE JELGOBE SEASONAL LIVELIHOOD ACTIVITIES

4:4:1 PASTORALISM

Almost all Fulbe and Maccube families own some animals. In fact a reasonable definition of extreme poverty in the region would be a family not able to supply an animal for their children's naming ceremony eight days after the birth. Just as Fulbe Jelgobe pastoralists are turning to farming, increasing numbers of cultivating groups are raising livestock. Farming ethnic groups (local Maccube and Mossi who have migrated into the region) usually own small ruminants but also often own donkeys, bovines or even camels for animal traction purposes.

Before embarking on any further description of agro-pastoralism among the Jelgobe it should be noted that any researcher would be naive to assume that he/she could gather accurate quantitative data regarding livestock ownership. Persistent attempts to ascertain numbers and assign ownership often lead to suspicion and a breakdown in trust that inhibits collaborative inquiry. Pastoralists avoid at all costs communicating with any precision just how many animals they own. It is as if they fear, as Pouillion (1988) says, being sanctioned by some divinity for declaring their animal numbers, the possession of which is at best precarious. Although Government and NGO bodies alike publish figures statistically analysed to a number of decimal places one must always assume that quantitative assessments are inherently inaccurate. What is more, the figures could be significantly out of date by the time such data are published or made accessible to planners.
Pastoralists rarely bring all their cattle to vaccination campaigns for fear of their animals being counted. In the late 1980’s there was an outbreak of cattle pleuropneumonia north of Pilaadi. The area concerned is a grazing area devoid of any permanent villages or camps. The shepherds (*duroobe*) needed to bring their animals to Pilaadi where there were suitable vaccination yards. The owners and/or shepherds only brought small proportions of their herds for vaccination as they mistrusted the government personnel. The rest of the cattle were moved to So Bulle or the Malian border region. The result was that many unvaccinated cattle were lost. Local Fulbe women (with experience of the effectiveness of recent measles vaccination campaigns) treated the men as fools. However the shepherd’s decision was based on bitter experience and a genuine mistrust of government officials. For similar reasons larger herds are usually split and watered at different times in case counts are attempted at permanent water points during the height of the dry season.

The question of overstocking is complex. Fulbe cattle management is based on milk production, capital accumulation and social exchange. The purposeful fattening of stock for the commercial market or keeping stock in optimal condition is not their priority. There are, however, exceptions: women fattening sheep in the house compound; animals prepared for muslim festivals; and some Maccube and Mossi merchants investing in NGO sponsored export schemes by virtue of their accumulated wealth or access to credit schemes. The survival of present cattle numbers is the main priority. A good proportion of cattle in the Jelgoji region is either owned by absentee owners or is in transit from Mali to markets at Djibo or Ouagadougou.
Determination of carrying capacity must take into account local objectives of livestock management. Any notion of carrying capacity around Djibo is complicated by urbanisation trends. Both people and animals have been congregating in and around Djibo. The ‘town’ herd of some 200 cattle leaves Djibo every morning and returns at dusk. They travel up to twenty kilometres from Djibo. The shepherds take advantage of available seasonal pasture and the fact that most other animals within the immediate environs of Djibo have been moved away to avoid disputes regarding field damage during the rains. The routes taken are generally east towards Tongomayel and north through Meena or Monnde So. Wherever this large herd is shepherded it reduces the pasture available to village herds and influences the direction in which their shepherds travel with their animals. The collection of dry grass for town animals is also an influence on forage availability around Djibo. The donkey carts tend to travel along accessible routes. The collection is thus close to these arteries. The main routes are the roads to Tongomayel, Monnde So/ Petaga, Meena/Yaate, Se/Gannua and Baraboulle.

Seasonally unpredictable rainfall, difficulty in determining animal numbers and the varying rates of colonisation of rangeland by farmers inherent to the varying ‘socio-ecological’ situations makes any determination of carrying capacity difficult and largely irrelevant as an influence on decision making. By the time all data could be collated and used to inform policy a different ‘socio-ecological scenario’ would be emerging. In any case, determination of carrying capacity would have to take into account differing management objectives such as milk production, capital
accumulation for social exchange and limited management of cattle for market exchange.

Carrying capacity formulation in the Djibo area is also complicated by herds from the Boni region of Mali moving through the area in response to poor seasons. Also groups of Bella (servile populations of the Tuareg) move through the area to access grass seed (Panicum laetum) reserves or paguri during the wet season. Both these migrations periodically add pressure to the pasture resources.

Restricted access to grazing land through colonisation of grazing lands by Maccube and migrating Mossi farmers as well as extreme spatial and temporal variations in rainfall would militate against any natural rangeland homeostasis. For example, in 1986 some rangeland south of Pilaadi that was traditionally viewed as grazing land was 're-classified' as farming land by the local Committee for the Defense of the Revolution in order to accommodate the increased farming needs of people at Pilaadi, So and Monnde So.

Rainfall during most seasons is extremely unpredictable with pasture production being extremely variable. There are also areas north of Djibo that remain inaccessible to herds for periods during the rainy season because of lack of run-off to fill the depressions that enable the watering of stock. Of the thirteen rainy seasons between 1979 and 1992 there have been 13 different season scenarios. The 1986 and 1990 seasons were disastrous with less than 200 millimetres of rainfall. The 1986 season was a bad pasture season with light rains in May enough to germinate pasture but not enough to provide surface water for transhumant cattle north of Djibo. It did not rain
again until late June, by which time all the pasture had died off but re-sowing of
millet fields was still possible. Several late storms meant that there was still sufficient
moisture to allow some meagre millet harvests. The Moodibaabe and Maabube from
Monnde So decided to send the younger shepherds of both castes to an area around
Kaya some 150 kilometres to the southeast. They sold several younger male animals
to fund the trip and leave sufficient grain supplies at home. They had done so because
of information obtained from Fulbe merchants at the Djibo cattle market and an
itinerant Moodibbo who had been through Kaya in the previous month. Although the
Kaya area had had good rains they were reticent to move into a heavily populated
Mossi area. Their reticence proved justified.

When they arrived near Kaya with some four hundred cattle they found the pasture
areas already heavily populated by migrating Fulbe. They found Fulbe from the Dori
area to the northeast, local ‘Mossi Fulani’ (Silamoraabe) as well as Fulbe from the
Sebb a area to the east. Such was the concentration of already weakened animals in
the area that over half of their animals died (including five owned by the author).
They managed to sell the weakest beasts to butchers at Kaya and Kongousi and return
to Djibo where there was some millet stubble. They supplemented this with
subsidised wheat chaff from the flourmill at Banfora in southern Burkina.

The 1990 season was different. Although only half the average rainfall fell during the
entire season the first fall was heavy enough to provide surface water north of Djibo
and allow millet fields to be sown. However sporadic storms continued only until late
August and then stopped. There was enough pasture to forestall migration but the
millet crops failed completely. Many families had to migrate to other regions or move
into Djibo. Such was the pressure on grain supplies. The majority of the younger men (jokkolbe) moved to the goldfields at Arabinda (100km to the east) or Seguenega to the southwest.

As far as the Jelgodji (Fulbe Jelgobe’s local landscape) is concerned it is preferable to distinguish between varying socio-ecological ‘situations’ (Fisher 1986) rather than systems. As seen above, each year since 1979 has presented a different situation that Jelgobe responded to with a tacit repertoire of socially sanctioned options. Responses are not uniform across the population. In 1986 for example, while the Mooddibaabe and Maabuube took their cattle to Kaya, most non-caste Fulbe shepherds travelled to the area north of Ouahigouya. Although the pasture situation there was precarious, the animal population was much lower thus enabling the majority of animals to survive. Different groups responded according to their information networks and their ‘sense’ as to how the seasonal scenario was unfolding. Some of those who chose to go to ‘Kaya’ had their herds reduced below a ‘subsistence’ level which forced a permanent recourse to millet farming in the short term. Those who chose other options were left in a much better position to reconstitute herds despite loosing some animals. Both groups used their social networks and their sense as to the nature of the unfolding seasonal scenario to respond to the socio-ecological situation confronting them.

Fulbe pastoralists normally use small ruminants as a medium of exchange when cash or grain is needed. It is a more complicated process to commercialise cattle as decisions regarding sale are often complicated by multiple claims on the proceeds. Fulbe are always reticent to sell cattle except in cases of absolute necessity. The focus of commercialisation of animals in the Jelgoji is the weekly livestock markets at
Djibo. Buyers come from the capital Ouagadougou and many other urban centres. Purchased livestock go as far afield as Ivory Coast and Nigeria. There is a lively exchange between smaller bush markets (Petega and Buro for example) which operate on a three-day cycle and the main Djibo market. Animals traded at the Djibo market come from up to a one hundred-kilometre radius. Animals bought in the smaller markets are traded for a profit in the Wednesday Djibo market where buyers are more numerous. The sale is usually witnessed and facilitated by a designated mediator who receives a commission. Communication of bush market prices is remarkably efficient. Animals are taken to Ouagadougou two hundred kilometres to the South by vehicles or, in the case of cattle, by foot after necessary customs and veterinary certificates have been issued.

Transhumance (*lusu*) and herding patterns in the Jelgoji involve only short distances (usually less than fifty kilometres). Longer distance patterns are reserved for catastrophes, longer-term re-location to the southeast or southwest of Burkina Faso and for the salt cure (*hurfaare*) to the area around Boni in Mali. A number of families with herds numbering more than fifty bovines have relocated in areas to the south and continue to carry on a ‘pure’ pastoral lifestyle or as one interviewee responded - *mi meemataa jalo hannden* (‘these days I never touch a hoe’).

Among those Jelgobe Fulbe interviewed in the Fada N’ Gourma and Mahadaga areas, most moved south in response to the droughts of the early seventies and mid-eighties and decided to settle permanently. It is only families with large numbers of cattle that can afford long distance migration and resettlement. Families either moved south with their own cattle or sold their herds at northern markets and re-stocked after having
moved south. The move south is a big decision as it involves adapting to new animal
disease situations as well as animist farming groups and local Fulbe populations often
hostile to northern muslim pastoralists.

Fulbe populations resident in the south complain that northern Jelgobe pastoralists
disturb the farmer/herder relationships established over a long period of time. One
example given was that resident Gourma Fulbe received grain in exchange for herds
fertilising the fields whereas the Jelgobe were quite happy to pay for the grain in the
same situation. The Gourma Fulbe complained that the Jelgobe had thus forced them
to pay for grain as well. The Jelgobe resist lengthy migrations as much as possible. It
is usually only the younger men who go on such journeys.

Jelgobe transhumance usually involves movements in a north/south pattern.
Movement is generally north, away from the fields after the first rains and back south
again to permanent water points as the northern bush surface water sources dry up.
Water availability is the primary stimulus to move. Many families with small herds
manage to stay in cultivation areas and practice daily herding movements depending
on the season. During the rains herds move from the village (during the day and
sometimes at night as well) on well-defined paths that avoid fields within a two to
five kilometre radius. The women at the home compound usually milk (*birude*) twice
each day.

If the first rains are of sufficient strength, then cattle from Monde So head to an area
stretching north between So Bulle and the Malian border and east to Nassumbu. The
area is devoid of villages and millet fields as there are no permanent sources of water.
The first rains are usually very localised storms hence areas open up to herding progressively according to the amount of surface water. Access is on a first-come, first served basis. Only some young men and their families move to temporary camps in the area, leaving enough labour in Monnde So to cultivate. The area is only accessible after rains sufficient to leave water in depressions. The previous seasons dry pasture and some tree species are grazed until new annual pasture species emerge in the depressions (predominantly *Panicum laetum*) and later on the dune areas. If rains do not continue then cattle are forced back to wells near So Bulle or even back to Petaga. Mobility of cattle south is complicated by the need to avoid newly sown fields. Enough cattle are left in Monnde So to provide milk for consumption and sale. Each Djibo cattle market day women bring excess milk from the northern herds the thirty kilometres to Djibo for sale. Cattle that are left in Monnde So are usually pastured along the watercourse near So or at the strips of pasture land that run between So and Nassumbu and So and Petaga.

During both wet and dry seasons children herd sheep (*baali* pl.) and goats (*be'i* pl.) within a two to five kilometre radius of the camp or village. Small ruminants and one or two milking cows are often kept near the village and fed supplementary rations of crop residues, wheat and millet bran and cotton seed.

Families in any one camp or village usually combine cattle into one herd under the control of young men. For example at Monnde So there are several combined herds that go out from the village each day. The Moodibaabe, Maabuube and pastoral Fulbe (*fulbe duroobe*) families each combine their cattle into one herd and head out from the village. At Djibo those who own cattle within the town usually confide their cattle
to a contract shepherd who guides a herd of 150-200 cattle out from Djibo along narrow pasture corridors and away from fields in the wet season, and to available dry season pastures within a 20km radius. The cattle are either watered at Djibo or at Monnde So if they are heading north.

Family or combined village herds exhibit a number of different patterns in the dry season with at best one milking per day in the two or three months following the end of the rains. They are very similar to those described by Claude et al (1991) in the northeast Oudoulan province of Burkina Faso. Some observable patterns are:

- The camp, or more usually the permanent village, is located beside a permanent water source and the cattle are herded within a 10-15km radius and return at night.
- The camp is at a permanent water source and young men shepherd the herds out during the day, stay overnight in the bush and return the next day for water. The distance covered is 15-30 km.
- The camp is situated on fields and is equi-distant from water source and pasture. The herd is moved to water during the day and moved out to pasture during the night or the next day. The cattle are then watered again before return to the camp or village. The distances involved are 5-10km either direction from the watering point.
- The camp is near water and the best milking cows are left at the camp. The rest of the herd moves out over a number of days and nights. This is usually at the height
of the dry season. This pattern is a rarity among the Jelgobe and used only in extreme circumstances.

The main dry season task for pastoralists is watering the animals. Some wet season lakes retain water 3-4 months after the rains depending on the rainfall. As the lakes dry up wells are dug and water retrieved by half a calabash (lokkuure) attached to locally made fibre ropes. The water table is around 4-8 metres deep at most watering points around Djibo while some further north are up to 80 metres deep. Watering a herd of ten cattle takes one to two hours depending on the depth of the well and the number of those helping. Watering rights are usually determined by negotiation with the local chief (Jooro). At permanent watering points such as Monnde So, different areas of the lake bed suitable for wells are allotted to different social groups or castes. Priority is given to those who dig and maintain the wells. Non-residents are allowed to use wells in exchange for a gift.

4:4:2 FARMING

Both Maccube and Fulbe are involved in low-input ‘dry-grain’ farming. The Fulbe prefer to farm the lighter sandy soils (ceeni pl.) as these require least effort to cultivate. The Maccube and other farming groups (for example the Mossi who have migrated into the area) attempt where possible to also farm sorghum (mbayeeri) on the heavier soils of the temporarily inundated low-lying areas.

While both Fulbe and Maccube have similar strategies or approaches to farming, the latter are much less enthusiastic about farming and regard it as a vocation that is
beneath them. Fulbe indifference as regards dry-grain farming is often evidenced by their lack of preparation at the start of the rainy season. They usually find themselves ill-prepared for both sowing and cultivation and rush around seeking seed and implements after the sowing rains have fallen. The time spent searching for seed and implements often means that their efforts to take advantage of the first rains are compromised. They often have no seed stored from the previous season and hence must endebt themselves immediately to buy local seed. It is not uncommon for poorer Fulbe to sell their cultivation implements during the dry season in order to buy millet. Thus they must further endebt themselves to buy implements. Maccube are somewhat better prepared having stored seed reserves for use and for sale as well as implements at hand to take advantage of the first sowing rains. Even a delay in sowing of twenty-four hours often means that there is inadequate soil moisture.

Farming in the Jelgoji is full of uncertainty and sowing methods have been refined to the point where the average *seeno* field of between 1.5 and two hectares can be sown in three to four hours. Millet (*Pennisetum typhoides* and *Pennisetum violaceum*) is usually sown on the sandy (*seeno*) areas while sorghum is used in the floodable heavier soil areas. Maize (*kaminaari*) is also sown with the first rains in small heavily manured pockets close to, or even inside, house compounds. Ripening early, the maize is roasted over hot coals to supplement food rations during the final hungry-season weeks before harvest.

A number of millet varieties are sown in the Jelgoji area. They vary in growing season from 95 - 125 days. The species sown are area specific and are named according to their geographic area of origin or the subgroup of the Fulbe that normally grows them.
For example *gawri hayre* is the name given to a short season variety predominantly
grown in the Boni region of Mali. Mossi farmers have introduced other longer-season
millet seed from the south. Vulnerable families are often forced to buy market grain
(usually southern Burkina or Ghana varieties) to supplement local seed grain supplies
in later sowings. Thus, it is not uncommon to find several varieties of millet in the
same *seeno* field. With millet being an allogamous plant there is a propensity for
cross-fertilization among these diverse cultivated forms (*Pennisetum typhoides*) and
even naturally occurring forms (*Pennisetum violaceum*) (cf. Claude et al. 1991; Grouzis, 1980).

The best performing local varieties are hoarded by farmers and are relatively
expensive after the first rains and beyond the reach of poorer families. The sowing of
such longer season varieties obtained from the markets often exacerbates the family’s
problems as the rains rarely last long enough to assure harvest. Although the shorter
season varieties are available in the area, people are extremely reluctant to use them
because early maturing crops are virtually wiped out by birds. They also have a
slightly different taste when converted into the staple millet porridge. Taste is a
significant consideration when one eats *nyiiri* every day of the year (if possible). For
example when one older man from Monnde So was asked why he left a lucrative
shepherding job in northern Cote d’Ivoire his sole response was *mi hungi nyiiri
mabbe* (I couldn’t stand the taste of their *nyiiri*).

There has been a tendency over the last ten years to sow millet in the heavily grassed
low-lying areas in order to adapt to the lower rainfall or to replace nutrient exhausted
*seeno* fields. This tendency has reduced herder’s access to these grass and forage tree
areas. The practice of fallowing fields has almost ceased due to population pressure and the fact that the owner of any field not sown after the first rains is almost obliged to make it available for cultivation to extended family members or visitors. Hence in any one area nearly all fields are sown but not all are cultivated. These sown fields not intended for use are at times bartered or hired out for cash in cases of necessity. There is increasing pressure to farm designated grazing areas.

Field preparation is minimal and usually involves clearing of shrub regrowth and the spreading of manure from house compound animal pens and cattle camps. Fulbe try to camp their animals on their own fields if the proximity of permanent water permits. However they often camp them on those of the Maccube which are usually closer to permanent water points. There is usually some form of payment or exchange for the fertilising of the field. The manure is not generally incorporated into the soil and commercial fertilisers are rarely used. Usually only a relatively small portion of the field is fertilised as such areas are vulnerable to low or erratic rainfall seasons.

The priority is to sow the seeño while moisture is available because diurnal temperatures at the onset of the rainy season remain around 40 deg C. Early rains during May are often followed by an extended dry period during which part or the entire original sowing dies off. Hence most seasons involve a number of complete or partial re-sowings. An optimum scenario for sowing is an initial rainfall of 30-40 millimetres followed by another storm within the next 10-14 days. However, people will sow fields following rains of much less than 30 millimetres. When sowing after light rains they generally sow the better areas of the field first and then the more marginal areas as follow-up rains occur. The problem with several light rains of 10-20
millimetres occurring prior to a viable sowing rain is that the grass and weeds are already in an advanced state of growth before sowing can occur. Thus the fields need cultivating before sowing or simultaneously with sowing. The problem with this scenario is that there is a heavy labour demand at the start of the season. Sowing after a viable rain usually only involves relatively small amounts of labour and allows a space of 10-14 days to organise the labour required to actually cultivate the field. This 'space' is important as it allows families to contact those family members who had migrated during the dry season in search of 'off-farm' income and secure their return. Men who had migrated did not usually return to the Djibo area unless they had received news of viable sowing rains.

While Fulbe often sow their millet in marginal conditions, they usually test the soil moisture by digging several test pockets. If the soil is moist at the bottom of the pocket, then sowing proceeds. Sowing usually involves two operations. The first involves the digging of small pockets in the soil with the aid of a long handled hoe-axe. Secondly some 30-40 seeds are placed in the hole or pocket which is then closed over with the foot. The person with the hoe-axe walks at a normal pace and digs a hole approximately every two paces. On reaching the edge of the field he returns and digs pockets parallel to the first line and about 50 centimetres away from it. Ideally the pockets of the second row are placed in between those of the first. A second family member follows behind placing the seeds in the hole and closing the pocket by tamping down the earth with the foot. If one takes the *seeno* fields around Monnde So as an example, there are usually 4,500-6,000 pockets per hectare. The manured sites are generally sown at a greater density than the rest of the field. The first sowing rate
averages around 3-4 kilograms per hectare, which is ideally increased to around ten kilograms per hectare after repeated sowings.

The sown field is an important investment. Some fields are sown without any real intention to cultivate them. As such they become valuable coping options through various share-cropping arrangements with those unfortunate enough to have been prevented from sowing their fields due to illness or inability to return home in time, migrating families or residents of nearby towns who have no local cultivation rights. Some families with limited resources will sow a number of small fields in different locations and only choose to cultivate the most promising one as the season unfolds thus maximising the effectiveness of available labour resources.

For example Haamidi, a Maabo from Monnde So lost some two hundred head of cattle over a decade through mismanagement caused by drug abuse. In former years he negotiated access to a number fields and hired Maccube to farm them. With virtually no cattle left he coped by hiring out his fields each year. Each year he sows them without intending to cultivate them and then manages to sell the cultivation rights. He also manages to use offers of potential future access as some sort of collateral for cash loans during the dry season. This then gives him the liberty to carry out his role as a Maabo or praise singer and reciter of genealogies and eulogies for chiefs and others.

As a purposeful strategy to mitigate risk, family groups often attempt to cultivate two or three dispersed fields, depending on available manpower. The fields can be five to ten kilometres apart and reached by bicycle, or managed by different members of the
extended family who camp temporarily near each field. A relevant example here is an extended family of Moodibaabe living in Monnde So. The head of family and the leader of worship at the local mosque, together with his youngest son, cultivate a field by the lake at Monnde So. This is a prime field and heavily manured by cattle waiting for access to the wells at the lake. Two older brothers cultivate two fields near So Bulle some twenty kilometres away to the north. These fields are accessed by bicycle during cultivation and camped in when harvest time is close. As such they are able to increase the chances for a successful harvest by having fields spread over a large area. Mostly over the last thirteen years either one area or both have yielded a satisfactory harvest, except in 1990 when the whole area suffered a major drought.

A similar example would be the Maccube family of Baa Dembo at Dadungal near the lake at Monnde So. He is patriarch of a large family with eight sons capable of cultivating fields. Baa manages the joint operation of the eight fields scattered over a fifteen-kilometre radius with some having substantial low-lying areas suitable for sorghum plus a large garden at Monnde So. In good years he is able to store enough grain to have one year’s supply in reserve. He kept tight control over his sons and had considerable animal investments that were herded by local Fulbe to the north. His livelihood activities could be described as, what is referred to later in this chapter, as ‘investment agro-pastoralism’. However, Baa died in 1989 and the loss of his organisational capability meant a rapid decline in family livelihood security. Some sons, free at last from his control, migrated to the goldfields near Arabinda one hundred kilometres to the east and one son migrated to Abidjan in Cote d’Ivoire. By 1991 most of the food reserves were sold or used up and the sons who had migrated regularly failed to arrive home for the start of the rainy season to sow and cultivate
the fields. The family then had to survive on cultivating three fields and renting out
the rest.

Cultivation is usually a two-stage process with the timing of each stage being
dependent on the sequence of the rains. The first stage (remude) usually starts 10-14
days after sowing depending on soil humidity. A long-handled hoe (jalo) is used to
cultivate the soil by dragging the soil away from the germinated seed. At the same
time the germinated pocket of seed is thinned, leaving the best three or four shoots.
Cultivation involves anything from 30-150 hours per hectare depending on weed
infestation and the capacity and health of the cultivator.

Communal work parties are important elements of cultivation and involve a strategic
exchange of labour between families. Usually the most capable cultivators from each
family are invited. The family whose field is being cultivated are expected to
reciprocate in manpower when invited to another working party. Cultivation among
the Jelgobe is a male occupation except in the occasional female-headed family too
poor to hire labour. Pastoralists will usually hire young maccube men where possible
to escape the drudgery of cultivation.

The second phase of cultivation (dodaade) is either a continuation of the first stage or
a separate phase some ten to twenty days later depending on the rainfall pattern and
the pressure of other labour demands such as herding. While there are two traditional
phases of cultivation, fields may be cultivated more often depending on the local
rainfall scenario and the resultant weed growth.
Harvest (tayre) occurs over a period of two to four weeks during October/November. Hybrid millet heads (semuri) are usually harvested two to three weeks before the main harvest. Such heads are low in grain and dark in colour. As harvest nears semi-ripe millet heads are cut and roasted over coals to supplement food rations. Harvesting is a family affair involving both genders. The millet heads are cut and tied into bundles (wulaare sg., bulaaje pl.). Early post-harvest transactions use the wulaare as a unit of exchange and it usually takes the grain of seven to ten bulaaje to fill a one hundred-kilogram sac. The other measure of quantity is a large tomato paste tin (konkooru) usually holding 1.8-1.9 kilogram of millet (depending on how well it is heaped up). The tin is more associated with the market situation and involves the women pounding (unude) the millet heads in a large wooden mortar (wowru), sifting out the chaff and collecting the grain.

Immediately before and after harvest there is great deal of commercial activity. Merchants and influential men attempt to settle debts by demanding millet bundles at a time when they are cheapest. Immediately post-harvest the bundles sell for 350-400 CFA and just a month later they can sell for double that price. Merchants can thus obtain large quantities of millet at low prices and increase the vulnerability of such indebted families. Decisions or sales that are made during this period can compromise a family's food availability for the rest of the year. Even in a good year (averaging one in five over the last 13 years), most Jelgobe count on having a ‘hungry period’ of 2-3 months each year. Unfortunately this period usually falls in the period of heaviest labour demand. The picture then is one of chronic seasonal food insecurity.
The post-harvest dry-season months involve both Fulbe and Maccube in searching for
‘off-farm’ opportunities to add to their food supply. Options are numerous. They
include contract herding of sale cattle to Ouagadougou, migration to larger cities to
find work or beg, claims on extended family members, commerce in livestock,
handicrafts and fossicking at several gold mining sites within a one hundred kilometre
radius of Djibo. It is the men who move. In recent poor seasons especially, the spectre
of numerous women and children camping close to, or actually moving into
permanent villages or towns has become a common sight. Men fortunate enough to
find work (even as far south as Ivory Coast) occasionally do not return for a number
of years leaving the women concerned extremely vulnerable. Many women attempt to
negotiate a divorce (which is normally the man’s perogative) in order to quickly
remarry or return to their parents.

These strategies are used opportunistically in conjunction with a portfolio of various
coping options that include selling valuables such as gold jewellery, mats and cooking
utensils, and firewood harvesting. In desperate circumstances women enter into
hastily arranged re-marriages or prostitution. One discussion recorded by the author
among Fulbe women in Djibo evoked an increasingly common scenario. One
Maccudo woman, one of three co-wives, was describing the situation of one of her
former co-wives who had been summarily divorced in the 1986 season. The sequence
of options started with the woman working for other families, pounding millet and
preparing meals in order to survive. Following this she sold her gold (kange)
jewellery then cooking utensils and finally in desperation tried prostitution. The group
consensus was that it was a natural enough strategy.
As mentioned before, the Jelgobe have a proud history of pastoralism and the control of servile populations who have been used to farm millet. Today the majority of Jelgobe around Djibo practice ‘dry grain farming’ on nutrient depleted and eroded sandy soils (ceene). The characteristics of dry grain farming are as follows:

- population density dictates that all available farmland is used annually and continued production is dependent on manuring;
- the bulk of the farmland is used for the non-irrigated cultivation of basic food grains;
- cultivation is carried out by household labour;
- grain yields are relatively low;
- most farm implements are of traditional design made by local blacksmiths;
- inequality is expressed most markedly by access to farmland.

Fulbe, according to many testimonies, currently live a miserable life. A conversation on the steps of the Prefecture in Djibo in September 1991 typifies this. A Pullo had come to the local authorities to attempt to get a judgement on compensation for crop damage caused by cattle belonging to a Maccudo. Initially most of the officials at the Prefecture, being Maccube or Mossi, just laughed. As negotiations ensued the Maccudo in question summed up the situation by saying - \textit{Inan semteende koy, pullo wuli to prefet saber na’i maccudo bonni ngesa makko} (in essence the reply was –

‘Here is real shame. A Pullo reduced to crying to the Prefet because a slave’s cattle
have damaged his field"). Environmental degradation and drought is often
classified by ‘rafo pulaaku’ (a drought in the true Fulbe lifestyle). This is
characterised by the necessity of farming and the lack of milk. A conversation
recorded at So Bulle has overtones of rafo pulaaku,

Today herding has lost its importance. We do it for the form only and we do
it badly. A man cannot whiten his stomach with milk. The best he can hope
for is to wet his mouth. Slaves have taken over our pastures and denied us
access to some lakes. We are condemned to running away during the wet
season for fear the animals will destroy fields, only to return after the
harvest. ... Even former slaves have become our masters because we
shepherd their cattle. Even that is becoming harder because they don’t trust
us. We live by selling our cattle in order to eat or because of stupid stories to
do with damage to fields. In the old days we had good relations with the
farmers. We would give them animals for their traditional ceremonies and
they would help us cultivate our fields. ... Today the Fulbe are never right or
innocent in front of the local authorities. The Fulbe didn’t follow the path of
the European and now we are reduced to doing nothing useful. ...

Fulbe in this northern region of Burkina Faso are involved in combining management
of remnant herds and dry-grain farming. Despite Maccube and Fulbe having
increasingly similar livelihoods there are still however significant exchanges in the
form of labour. For example, in the case of Fulbe who have settled down and
increasingly inhabit mud-brick houses, Maccube still largely supply the labour
involved in mud house construction. Grass huts (Buguaji) are constructed
traditionally by Fulbe women with men supplying the flexible poles and the loosely
woven mats (dengeleesi). However today, with many Fulbe families only occasionally
going on transhumance, there is reduced need for grass huts. If someone needs a grass
hut built or restored it is usually Maccube men who are called.
Fig 4: 2 JELGOBE AGRO-PASTORALISM

(Aadapted from Bonfiglioli 1990)

Jelgobe agro-pastoralism can be illustrated (Fig 4: 2) by using some of Bonfiglioli's (1990) types of agro-pastoral configurations presented in Chapter Three. In the Jelgoji there are few Fulbe who survive on pastoralism alone and there is a trend towards 'survival agro-pastoralism'. Both Maccube and Fulbe can be increasingly classified as survival agro-pastoralists. However from the point of view of the outsider they seem to be a homogenous group with no obvious distinction between the Fulbe and Maccube in terms of habitat and lifestyle. This is not dissimilar to Baier and Lovejoy's (1977) observations of a coalescing of ethnicity among the Tuareg of the Central Sudan in their response to recurring drought. They do however differ markedly in the social networks they use for coping.
People who characterise this configuration of agro-pastoralism usually have small numbers of small ruminants and opportunistic access to cattle. They have problems in maintaining access to millet fields and spend a large portion of their time seeking off-farm income with many having migrated to urban centres. Maccube seek revenue by hiring themselves as labourers to richer relatives or Fulbe, making mud bricks, constructing houses, re-plastering the outside of mud brick houses or more recently (since 1985), migration to the goldfields at Arabinda or south of Ouahigouya. These people are caught up in what Chambers (1983: 112) calls the ‘deprivation trap’. This is where interacting ‘clusters’ of disadvantage such as powerlessness, vulnerability, poverty and physical weakness entraps people in a process that is leading towards deprivation. Increasing numbers of such people mean that there is an overall contraction of local mutual assurance systems as these people are increasingly unable to reciprocate in terms of material and services.

There are very few families who, once forced into survival agro-pastoralism re-ascend the ladder of wealth and return to ‘temporary’ or ‘investment’ agro-pastoralism. Rehabilitation options are very limited. As a matter of fact in the Monnde So area the author can only think of one herdsman that has returned to a major livelihood emphasis on herding after relying on farming for a number of years. His opportunity came from striking it rich at the Arabinda goldfields. He invested his one million two hundred thousand CFA (about $5,000 US in 1990) in animals and moved most of them out of the area before relatives and friends could make too many requests. Animals were cheap as a result of a poor season and the money also enabled him to trade in millet. However this trade in millet lasted only twelve months because of his inability to network with established grain dealers in Djibo.
On the other hand, Maccube families with large labour requirements have been able to profit from reasonable grain yields and low animal prices to invest in animals. One example from Monnde So would suffice here. A Maabo from Monnde So, was a skilled leather worker and had many networks for selling his products and he was self sufficient in grain as he had access to several fields. Over the years since 1983 he had invested in a herd of over 15 cattle and numerous sheep. He supplemented his income by buying sheep at small bush markets at Petega and Buro and selling them at the main Djibo markets for a profit. He was not reticent to commercialise his cattle and eventually he gained access to a line of credit from an NGO dealing in cattle for the Ghana market. Although the Fulbe were not too impressed by the overt commercialisation of cattle they encouraged him because he was a skilled negotiator with outsiders, especially NGOs.

Any attempt at development in the Jelgoji area must take into account substantial numbers of people with extremely vulnerable livelihoods that must be frequently supported by relief efforts. Chapters 7 and 8 report on two action research processes that sought both to understand and improve the vulnerable agro-pastoral livelihoods of the Fulbe and Maccube. The focus was on ameliorating food security prospects through reinforcing coping options amidst the Fulbe’s and Maccube’s annual adaptive performances (Richards 1989) as they responded to the social and ecological exigencies of each season. Critical reflection in the midst of the cooperative action is aimed at both enriching my understanding of food insecurity and improving my capacity to facilitate improvement.
The Fulbe Jelgobe are thus both herders and millet farmers. In the Jelgoji there are few Fulbe who survive on pastoralism alone and there is a trend towards ‘survival agro-pastoralism’. People who characterise this configuration of agro-pastoralism usually have small numbers of small ruminants and opportunistic access to cattle. They have problems in maintaining access to millet fields and spend a large portion of their time seeking off-farm income with many having migrated to urban centres. However from the point of view of the outsider they seem to be a homogenous group with no obvious distinction between the Fulbe and Maccube in terms of habitat and lifestyle.

Jelgobe transhumance usually involves movements over 20-30 kilometre distances in a north/south pattern. Movement is generally north, away from the fields after the first rains and back south again to permanent water points as the northern bush surface water sources dry up. Water availability is the primary stimulus to move. Many families with small herds manage to stay in cultivation areas and practice daily herding movements depending on the season. Fulbe pastoralists normally use small ruminants as a medium of exchange when cash or grain is needed. It is a more complicated process to commercialise cattle and the usually only sell in cases of absolute necessity. The focus of commercialisation of animals in the Jelgoji is the weekly livestock markets at Djibo.
The majority of Jelgobe around Djibo practice 'dry grain farming' on nutrient depleted and eroded sandy soils (ceene). The characteristics of dry grain farming are as follows:

- population density dictates that all available farmland is used annually and continued production is dependent on manuring;
- the bulk of the farmland is used for the non-irrigated cultivation of basic food grains;
- cultivation is carried out by household labour;
- grain yields are relatively low;
- most farm implements are of traditional design made by local blacksmiths;
- inequality is expressed most markedly by access to farmland.

The Fulbe notion of *pulaaku* or Fulaniness is an important aspect of their social relationships. It is characterised by the taste or *ndaku* for cows and an intimate knowledge of cattle husbandry, self-control over physical needs and impulses, and the choice of stimulation over comfort. Fulbe enact pulaaku during social interactions in their own milieu. When outside this milieu they are more relaxed and open to revealing their concerns. Thus there are formal and informal ways of interacting with the Fulbe that are important in a participatory inquiry process. Fulbe have a keen sense of helping others but do not readily understand our concept of cooperation for the common good. All effort or work is done for oneself or someone else, not for the community in general. This is an aspect of social life that must be considered in a collaborative approach to improving food security.
As far as the Jelgodji (Fulbe Jelgobe’s local landscape) is concerned it is preferable to
distinguish between varying socio-ecological ‘situations’ (Fisher 1986) rather than
systems. Each year since my arrival in 1979 has involved a different seasonal
scenario. Uncertainty and variability are fundamental aspects of the Fulbe Jelgobe’s
livelihood situations. As agents they have the knowledge and capacity to cope with
this uncertainty. This ability to cope is worth supporting and improving through an
action research process aimed at better food security.
CHAPTER: 5

METHODOLOGY

5:1 INTRODUCTION

'Researching is learning with the special intention of adding to public knowledge' (Bawden 1990: 31).

I have argued in chapter two that a flexible learning approach which takes clues from diverse local stakeholder’s struggles, knowledge and strategies is the best way to improve Fulbe capacity to cope with food insecurity. Food insecurity is a complex livelihood problem situation. It is not just a production problem that can be addressed by co-opting Fulbe into the design or implementation of packages of technology and techniques. Livelihood problem situations involve a complex web of interactions between production systems, capacity to access common property resources and the ability to activate social networks at household community and regional levels. Hence a ‘learning approach’ (Korten 1980) is called for that requires the researcher to be a ‘reflective practitioner’ (Schon 1983) who promotes Fulbe capacity to link critical reflection to action.

Food insecurity problem situations demand action before a complete understanding is possible. Participatory Action Research provides the framework for participation with local Fulbe in an active research/learning process that begins with ‘optimal ignorance’¹ (Chambers 1992) of the socio-ecological situation. As a learning process

¹ The ‘principles of optimal ignorance are knowing what it is not worth knowing, and of appropriate imprecision – not measuring more than needed’ (Chambers 1992: 14). This involves relating the cost of learning to the usefulness of information by optimising trade-offs between the quantity, relevance, accuracy and timeliness of information.
it aims to create useful knowledge, that is to be shared by stakeholder and researcher alike to inform action and, through reflection, to improved knowledge and action. In using this participatory approach I am not intending to facilitate an 'aggressive partisanship' (Mehta 1997) which sides with a particular vulnerable social group. Rather, as a 'reflective practitioner' my aim is to facilitate a more open and inclusive negotiation with diverse stakeholders while at the same time supporting subordinate groups' access to decision-making dialogue.

Chapters three and Four provided insights into pastoral and agro-pastoral livelihoods with a focus in chapter four on the livelihood practices of the Fulbe Jelgobe. These livelihood practices are susceptible to improvement through a participatory learning process that aims at better food security. Participatory Action Research provides a methodological framework that brings a number of basic themes to this process. These are collaboration through participation, acquisition of useful knowledge, transformation of current practices and collaborative control of the emergent process. In this chapter I explore Participatory Action Research as a methodology, its organisation in the research context and the array of methods and techniques used in its implementation.
5:2 PARTICIPATORY ACTION RESEARCH

The emergent process of Participatory action research is contextual and therefore a precise definition\(^2\) is, in essence, self-defeating. As Grundy and Kemmis (1981) state, Participatory Action Research processes are characterised by aims of involvement and improvement. The focus is on the livelihood and social practice of local ‘agents’.

These practices involve both practical and strategic action that is amenable to improvement. Improvement of these local practices involves collaboration with local agents in a reflexive learning process. This process incorporates cycles of planning, acting, observing and reflecting that are ‘systematically and self-critically implemented and interrelated (Grundy and Kemmis 1981: 322).

Action Research was first conceptualised by Lewin (1946) who proposed an iterative process of ‘analysis, fact finding, conceptualisation, planning, implementation and evaluation to simultaneously solve problems and generate new knowledge’ (Brown and Tandon 1983). Lewin worked on a range of community projects focussing on integration and social justice as well as American dietary habits. He orchestrated a process of initiating action and evaluating the outcome with the researcher being highly visible and influential (Levin 1994). Since then action research has been

\(^2\) It is useful to cite several definitions. Rapoport (1970: 499) sees action research as aiming to contribute to ‘both the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework’. Greenwood et al (1993) seek to distinguish between the participatory intent of the action research process and the degree of participation actually achieved. They thus see Participatory Action Research as both a process and a goal for a research process. They Participatory Action Research as an emergent organisational learning process that incorporates local knowledge and ‘emphasises co-learning, participation and organisational transformation’ (1993:177). Smith (1997: 177) Sees Participatory Action Research occurring where ‘a group of people collectively enters into a living process examining their reality by asking penetrating questions, mulling over assumptions related to their everyday struggles, deliberating alternatives, and taking meaningful actions’.
established ‘as an appropriate research paradigm for educational, professional, managerial and organisational development’ (Zuber-Skerrit 1996).

Throughout its history, action research has been influenced and changed by as much as it influences and changes situations in which it is used. In undergoing various processes of ‘localisation’ from western educational and corporate situations to Third World settings, action research still remains a change-oriented process of collaborative learning (Holly 1990). Holly describes action research in Britain as emerging from positivist origins, through more phenomenological approaches, to currently arrive in the emancipatory sphere influenced by critical theory. Action research in the United States remained firmly tied to positivistic social science and organisational development with little interest in exploring the researcher/researched relationship (Levin 1994). In England and Norway in the 1950's, 1960's and 1970's action research was primarily interested in the industrial sector, linking technology and social change (Levin 1994).

During a similar period and extending into the 1980's Participatory Research was developed. Participatory research and its variants have been practised in third world contexts that are oriented to radical social change (Fals-Borda 1987, Fals-Borda and Rahman 1991 Hall 1978, 1981), adult education and emancipation and have an obvious focus on participation. Freire (1972,1978) with his Latin American ‘conscientisation’ processes was also an important influence. Consciousness raising or ‘conscientisation’ was used by Freire to denote a process whereby people are empowered to use their own knowledge and ‘see through’ ways in which vested interests manipulate the generation and use of knowledge for their own purposes.
Brown and Tandon (1983), in critiquing and comparing American action research and participatory research approaches, portrayed them as two reasonably autonomous paradigms. They imply that both approaches have been relatively static in theory and practice, but this is hardly the case. If one acknowledges the agency of the researcher then his/her political values influence how understanding in each situation is linked to change.

Whyte (1984, 1991) described the notion of 'Participatory Action Research' and related it to diverse situations in industry and agriculture. He stressed participation and dialogue in the research process and portrayed participatory action research as an emergent process accommodating emancipatory, technical and practical interests on a transformation/reformation social change continuum (Whyte 1991). As a contributor to a later paper by Greenwood et al (1993), Whyte describes Participatory Action Research as both a process and a goal where themes of co-learning, participation, emergent process and organisational transformation are applied to a research context.

While Whyte sees emancipatory, practical and technical interests as different potential emphases during a research process, Carr and Kemmis (1986), using Habermasian\(^3\) notions of knowledge interests, seek to elaborate different forms of

\(^3\) Rejecting the positivist belief in the logical and methodological unity of the natural and social sciences Habermas (1984) contended that knowledge emerges from human activity that is motivated by needs and interests. His meta-theory of research contends that knowledge is constituted by virtue of three knowledge constitutive interests: a technical interest in causal explication and control of nature, a practical interest in the interpretive understanding of social practice that can guide practical judgement and an emancipatory interest in critical reflection on the social and political framework within which communication and social action occur. The latter is concerned with facilitating conditions whereby all stakeholders have the autonomy to give an adequate account of their interests in a climate of symmetrical communication. Habermas also envisages that four validity claims can emerge from unconstrained or undistorted argumentation in discourse. These are truth, comprehensibility, sincerity and normative rightness.
action research. Referring to the contexts of managerial and educational research, they envisage technical action research as being oriented to improve practice, and practical action research as aiming to improve both practitioner effectiveness and understanding of practice within existing system/organisation constraints. Action research is considered emancipatory or critical when the quest for improved understanding and effectiveness seeks to identify and transcend system/organisation constraints to improvement in a climate of ‘symmetrical communication’ (Grundy and Kemmis 1988: 87). Zuber-Skerrit (1992) outlines these three types in Table 5:1.

**Table 5:1 - Types of action research and their main characteristics.**

<table>
<thead>
<tr>
<th>Type of action research</th>
<th>Aims</th>
<th>Facilitator’s Role</th>
<th>Relationship between facilitator and participants.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Technical</td>
<td>Effectiveness/ efficiency of educational practice. Professional development</td>
<td>Outside ‘expert’</td>
<td>Co-option (of practitioners who depend on facilitator)</td>
</tr>
<tr>
<td>2. Practical</td>
<td>As (1) above. Practitioner’s understanding. Transformation of their consciousness</td>
<td>Socratic role, encouraging participation and self-reflection</td>
<td>Cooperation (process consultancy)</td>
</tr>
<tr>
<td>3. Emancipatory</td>
<td>As (2) above. Participants emancipation from the dictates of tradition, self-deception, coercion. Their critique of bureaucratic systematisation. Transformation of the organisation and of the educational system</td>
<td>Process moderator (responsibility shared equally by participants)</td>
<td>Collaboration</td>
</tr>
</tbody>
</table>

(From Zuber-Skerrit 1992:12)

Reason (1988, 1994) sees Participatory Action Research as a form of ‘cooperative experiential inquiry’, a term which is used to cover various approaches to research ‘with’ and ‘for’ people but not ‘on’ people. Central to cooperative experiential inquiry are the notions of the person as agent and an extended epistemology. In
contrast to orthodox research, the ‘primary source of knowing, and thus the primary “instrument” of research is ‘the self-directing person within a community of inquiry (Reason 1994a: 42).

The epistemological base includes up to four kinds of knowledge or ways of knowing. Three of these are, experiential knowledge through face to face encounters with people in problematic situations, everyday practical competence or practical knowledge, and propositional knowledge expressed in statements and theories. Heron (1992) adds the additional notion of presentational knowledge, or the way in which tacit experiential knowledge is given sense and meaning and linked to propositional knowledge through stories, proverbs and symbols. In cooperative inquiry, the mutually exclusive roles of the researcher and subject of orthodox research are replaced by relationships between co-researchers and co-subjects who are active within a community of inquiry.

Fig 5:1  The phases of cooperative inquiry (after Reason 1994:44)
Fig 5:2 *Cycles of Cooperative Experiential Inquiry* (after Heron 1992)

The inquiry engagement ideally cycles through four phases of action and reflection. Reason’s adaptation (Fig 5:1) of Heron’s (1981a) original diagram gives a picture of the various phases. Rather than distinctive entities the boundaries between these phases is often unclear and some cycles will emphasise one phase more than others.

Phase one (1) is where a group of co-researchers (*R*) agree to explore an issue of concern within a problematic situation⁴ and leading to the planning and undertaking

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⁴ This is, without doubt, the most difficult stage. It involves developing an understanding of the situation and an appreciation of the divergent interests of stakeholders. It then involves negotiating the focus of concern.
of some action which will contribute to this exploration. The co-researchers then become co-subjects (S) in phase two (2) by observing each other’s experience action-taking. This phase is about gaining competency in taking appropriate action. Phase three (3) is where the community of inquiry is fully immersed in the action experience. It is where superficial understandings are developed, surprises encountered and the awareness of collaboration deepened. After a period of time in phases two and three the co-researchers gather together in phase four (4) to critically reflect on the experience, look at the emergent issues and negotiate the focus for the next cycle. The cycling is between action and reflection and the different ways of knowing. Heron 1992 expresses this cycling in a different way in Fig (5: 2 above).

The shift away from orthodox inquiry is characterised by a shift to ‘participatory and holistic knowing; to critical subjectivity; and to knowledge in action’ Reason (1994: 11). Critical subjectivity is described by Reason (1994) as a process whereby subjective experience is not suppressed nor allowed to control the encounter but is made conscious and used in the inquiry process. It is a critical awareness of the way in which the researcher’s biases and prejudices and the situation’s social/political pressures shape the inquiry process. Knowledge in the inquiry process is formed in and for action, and non-formal adult education and social action are integrated into the research encounter.

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5 This critical awareness develops over time. It is thus important that the process is reflexive, emergent and iterative. Although initial assumptions and biases must be challenged in the initial stages of the inquiry process a full appreciation can only emerge. One cannot gain a complete appreciation before action is necessary. Cooperation must be continually re-negotiated.
The emergent nature of the process is important to this form of inquiry. Co-operative processes have to be negotiated and learned by all stakeholders. Competency in sustaining authentic collaboration and coherence in action is developed through the iterative learning process. The theme of collaborative learning is important to action research. Action research is a responsive approach because it is focussed on learning. Mezirow (1981) links the critical theory of Habermas (1984) to learning by contending that the knowledge constitutive interests referred to above have corollaries in learning. Each ‘interest’ has its own learning goal namely, ‘learning for task related competence, learning for interpersonal understanding and learning for perspective transformation’ (Mezirow 1981: 18). The last one, corresponding to emancipatory interests, is important to Mezirow. It conveys the idea of ‘meta-learning’ where learners are aware of their learning and there is an increased agency in learning.

Learning that is perspective transforming takes place when one is critically aware or conscious of ‘the cultural assumptions governing the rules, roles, conventions and social expectations which dictate the way we see, think, feel and act’ (Mezirow 1981:13). Learning emerges from reflection in action and reflection on action\(^6\).

Reflection is an important way of adding to stakeholders’ ‘foundation of experience’ or ‘way of being present in the world’ (Boud and Walker 1991: 13). The learning

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\(^6\) Donald Schon (1983) was concerned with a way of knowing in action or tacit knowing that informed ‘intelligent practice’. He contrasted this with formal learning. Schon saw that there was knowledge inherent in the things we do well as well as in the things we are taught and that if this practical knowledge is reflected on we can learn in action. Thinking about what we are doing while we are doing it is what Schon (1983: 49-69) terms reflection-in-action. Schon uses the example of a jazz band improvising and fine tuning their performance to the situation and the audience. A similar analogy is Richards’ (1985) notion of farmers’ annual performance as they improvise and adapt to the vagraries of the particular season. In both situations they are evolving knowledge in action and adding to their foundations of experience. It is worth attempting to reflect on this more tacit way of knowing. However any description informed by reflection is difficult. This ‘intuitive knowing is always richer in information than any description of it’ (Schon 1983:276). Reflection on action is reflection after the experience and is a collaborative focus on the outcomes of action.
process starts with reflection on action taken to deal with pressing needs and then towards a deeper awareness of the more substantive factors influencing livelihood vulnerability.

The task of action research is to facilitate improved, more insightful ways of reflecting on action that will not only lead to improved action but motivation to tackle more deeply entrenched problems. In Linthicum’s words, a learning ‘spiral’ is created, with action pushing toward reflection which results in a more decisive action’ (Fig 5: 3).

3 Reflecting and Acting for Change (after Linthicum 1991: 62)
Validity in participatory action research as a form of ‘cooperative inquiry’ is seen as a function of sustained authentic collaboration, the iterative learning process, coherence in action that issues from that process, and what Heron (1990) terms ‘variegated replication’. By variegated replication Heron intends that the cooperative inquiry needs to be repeatable, not in a literal sense but in a ‘more imaginative sense of creative metamorphosis’ (Heron 1990: 58) where the basic themes are made available to stakeholders in a new context.

Habermas points to three types of validity claims corresponding to the three knowledge interests. Claims to ‘truth’ in the technical area are on the basis of empirical evidence. In the practical arena ‘normative rightness’ and ‘appropriateness’ are the basis for the judgement of values. Sincerity and authenticity judge validity in the subjective world of emancipatory interest.

Idealistically, these first two claims are seen by Habermas (1984) to be satisfied through argumentation in an ‘ideal speech situation’ where the use of force or power to distort communication is conspicuously absent. Communicative competence is based on the assumption that people have the discursive capacity to work through problems and conflict in order to arrive at effective and appropriate resolutions. A situation is envisaged where people have the autonomy and freedom to give a true account of their own interests in arriving at an unforced consensus. It is an idealistic claim because as Giddens (1984) maintains, power is used in various ways to create and maintain difference and various stakeholders start from different positions.
Carr and Kemmis (1986), Moser (1978) and Elliott (1978:3), draw on Habermas’ (1984) notion of communicative competence or ‘ideal speech situation’ to underpin validity claims in action research encounters. All of these writers see Habermas’s notion as an intelligible practical goal, whereas, as Winter (1987) points out, it is better understood as a theoretical guiding principle. Those who link Habermas’s notion of communicative competence to action research also seem to ignore stakeholders’ efforts to deceive because of what they fear or what they hope to gain. This points to the necessity, as Drinkwater (1992) states, for research approaches to create an ‘atmosphere of trust’ while still maintaining an investigative attitude. Validation conceived of as argumentation points to an on-going or iterative process because, as Bernstein (1983: 154) notes, argumentation to support claims is fallible and often anticipatory. Argumentation often anticipates future challenges and critiques.

Sincerity, as Drinkwater (1992) contends, is judged by evaluating words against deeds. It has to do with how honest the researcher is in acknowledging the way his/her perspectives, prejudices and values are used to inform the validation and argumentation processes. In other words there can be no hidden agendas.

Praxis or informed committed action is also important in thinking about validity in action research encounters. Praxis is a response to a real socio-ecological situation in which the co-researchers as social agents are constrained to exercise practical judgement and act on the basis of understanding and commitment. The co-researchers and the wider critical community can judge competency in practical judgement, which is at the core of praxis. As Carr and Kemmis (1986) note, praxis as the mode of engaging in action in action research, is thus both a means of verifying the actor’s
understandings and commitments and the way by which these understandings and commitments can be critically developed. Ultimately, as Bawden (1990) shows, the emergent process of action research ideally produces four related outcomes relevant to the research context (Fig. 5:4) which are subsequently subjected to critique.

Fig (5:4) The Outcomes of Action Research (from Bawden 1990: 41)
5.2 ACTION-RESEARCH ORGANISATION

It now becomes necessary to describe the way in which Participatory Action Research, as a methodology, was made available to local Fulbe stakeholders in an attempt to realise the above outcomes. The organisation and planning of the process labelled Participatory Action Research within the community in focus was complex and often conflictual. It involved negotiating the conditions under which a small group of diverse stakeholders could learn from their own experience and make this learning available to others. The initial networking and negotiation within the community aimed at establishing an ‘action researching group’ that was sanctioned by the local community, representative of its various social networks and committed to the research process. The role of the group was to negotiate and mediate an ongoing process of engagement with the wider community that sought to promote a deepening awareness of their situation and a willingness to tackle more substantive issues as stakeholders became increasingly aware of the various factors underlying their vulnerability.

I organised or facilitated action research in two different communities Fig (5.5). In each community I formed an action-researching group and I facilitated them through cycles of information gathering, action on food security issues and critical reflection on the cooperative action. I expected them also to critique the information gathered from my own inquiries and judgements made based on my experiences in the area. These groups also organised the development action. A general action research group was also formed by representatives from each location in order that participants in both action research processes could interact and share information and critique.
Participatory Action Research is essentially about making an emergent process available to local stakeholders. There are two important aspects to this. Firstly, the integrity of the researcher needs to be established. This is especially important in the Fulbe context. While very hospitable, they are very suspicious about outsiders, have negative recollections about previous experiences and distrust many extension agents. The author spent some nine years living in the area before attempting this particular action research process. It was still necessary in this particular research context to demonstrate integrity and build trust by entering into the local flow of social events.
Secondly, not every one can be involved in the action research for practical reasons. For this reason, action research groups need to be formed. These groups need to be representative of the various stakeholder networks within the situation under investigation. Formation of these groups is by nature an emergent process aimed at authentic collaboration. The initial criteria were that the person was:

- representative of a particular stakeholder group
- recognised as having integrity
- able to give and receive feedback
- have time to meet.

Obviously the above four criteria were mine. There was a period given to those chosen in the groups to decide whether or not to commit to the process. It was obvious that motivation to join the process was influenced by individual and collective memories of past experiences. This is where the concept of the emergent process is important. As well as negotiating group membership there was a parallel process aimed at understanding the various motivations people had to collaborate as well as best way to sustain authentic collaboration. The membership of the groups changed over time as the local flux of events changed.

The first task of these groups was to establish ways of working together. It must be noted here that there was no pressure to conform to a certain viewpoint or facilitate engagement in pre-planned action. In fact I stressed that it was important for the ongoing process to arrive at some initial appreciation of the assumptions and biases that
each one of us had. It was stressed that divergent viewpoints were valued and would be used to inform the ongoing process of action and reflection. The task of the group was to provide information, research, critique action and dialogue within their own networks as well as network with other groups who had temporarily or permanently formed in response to problem situations. The initial stage was extremely difficult

5.3 INFORMATION GATHERING IN THE RESEARCH SITUATION

The mode of intervention among the Fulbe Jelgobe could best be described as a dynamic synthesis between unhurried and transparent participant observation\(^7\) and action research. Participant observation's menu of techniques (sustained observation, semi-structured interviews and focus group discussions) is linked to a partnership with the Fulbe and Maccube in thinking critically about their situation with a view of changing it. The action research framework situates the researcher/participant observer as a visible social agent in an emergent learning process. As a participant observer the aim was to get close to the Fulbe and Maccube in order to acquire performative competence in livelihood activities and develop empathy with their ongoing struggles. Thus action research provided the framework for a critical partnership and participant observation the rationale for getting close to lived experience.

\(^7\) In other words the researcher is not a 'complete participant' (Gold 1969) where intentions are not made explicit, but a 'participant as observer' where both the nature and intent of the engagement are made explicit.
The effectiveness of participant observation depends very much on the method of entry into the situation. Being a participant observer involves being critically aware of operating somewhere on the insider- outsider continuum as the social situation and length of stay dictates (Spradley 1980). The method of entry was contextual to the research location. At Monnde So, a host/guest \textit{(beeranaado / beero)} relationship was carefully negotiated over several months. This relationship is important in Fulbe society. The host was the channel through which information, letters and requests for interviews were channelled. Thus the host had to be someone the wider community respected.

The method of entry in Djibo, being a larger urban centre, was different. The relationship was more of a friendship with key people within the association. However, towards the end of the engagement most association members viewed the author as having a ‘guest’ relationship with Allay Cisse, the secretary of the Dewral association. The relationship with the host or with key individuals in the Djibo case was observed closely by others as a test of integrity. It was thus important to establish a ‘social base’ (Whyte 1984:35) from which to continue exploration. The fact of being some one’s guest meant that the author had a designated social position. As relations of trust, language and social proficiency developed, one became a ‘categorical member of the community’ (Denzin 1989: 175).

As Rigby (1985) argues, general informality is especially important in the establishment of rapport with pastoralists. The Jelgobe are no exception. A very real constraint to any inquiry is the general reluctance of pastoralists such as the Fulbe to respond in quantitative terms that would render their socio-economic position public.
(Pouillon 1988). Repeated efforts to ascertain individual herd numbers or ascribe ownership to various animals hinder attempts at building rapport. The principles of operation in a more ‘critical’ participatory observation of agro-pastoral livelihood activities were:

- **A reversal of learning** in an iterative learning process approach, ie, learning from them - with flexibility in use of techniques, diversity of information, opportunism, adaptability, improvisation (ie, not a blue-print program) and embracing error as a source of learning (Korten 1984; Chambers 1992)

- **Relaxed informal rapport.** (Chambers 1992, Rigby 1985)

- **Optimal ignorance**, that is, ‘knowing what is not worth knowing, and of appropriate imprecision - not measuring more than needed’ (Chambers 1992: 14).

- **Critical awareness** or a commitment to explore experience as a ‘reflective practitioner’ (Schon 1983). This involves ‘reflection-in-action’ which leads to informed improvisation and ‘reflection-on-action’ which locates learners in the learning context and highlights the social and political nature of learning.
5:4 MENU OF TECHNIQUES

1) Secondary sources

Maps and previous ethnographic studies (Benoit 1982, Claude 1991 et al, Riesman 1975) of the local area and similar areas in the Sahel area of Burkina Faso were studied. Maps at one stage were hard to obtain because Djibo was in the Burkina Faso/Mali border region and most maps had been confiscated during a tense political situation in December 1985.

2) Semi-structured interviews

Semi structured interviews in most contexts in this document refer to ‘situational conversations’ (Schatzman and Strauss 1973) with key informants near wells, cattle camps, villages and fields. Predominantly one-to-one, they are focussed on livelihood processes and relationships, that is, what people do. Attitudes and perspectives and also some quantitative data also emerge as the ‘conversation’ evolves. I avoided overt recording of such interviews as it inhibits informal dialogue and the building of trust and confidence with the Fulbe and Maccube. Most recording occurred after the interviews. In most cases8 I subjected the material (and my interpretations of it) to critique by the general action research group or individual members of it. I attempted

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8 I made my own judgements as to the sensitivity of the information and its fitness for more public scrutiny. I was thus not neutral in the search for understanding. The material that entered the more public forum of the action research groups was influenced by my previous experience and the extent of my commitment to equitable change. As Drinkwater (1992) argues, the praxis of a ‘visible’ researcher involves phronesis or ethical know-how, engagement and judgement.
to guard the anonymity of the sources by subjecting the material for critique some

time after the interviews, but in some cases this was extremely difficult.

Many interviews also focussed on the visual surroundings (landscapes and activities)
as the visual component of the process. Interaction also involved participatory
methods of diagramming (Chambers 1992) to enhance and clarify observations and
dialogue. As far as possible, open-ended questions that catalyse new questions were
employed in interviews and focus groups, thus avoiding yes/no and quantitative
questions. Questions were framed in such a way that conveyed confidence in people's
knowledge and potential usefulness in the change process. There was a conscious
attempt to move away from a pre-determined questioning or survey mentality
(Krueger 1988).

3) Focus group interviews

As a form of group interview, focus-groups make intentional use of group interaction
among population subgroups expressing affinity of interest in order to elicit data and
insights (Morgan 1988). In other words they are deliberately structured and relatively
homogeneous social or occupational groups (Krueger 1988). The focus group is
predominantly orientated towards perceptions, opinions and attitudes and more
spontaneous responses arising from group interaction (Stewart and Shamdasani
1990). The facilitator's aim is to facilitate freedom of expression among the group.
Most attempts at focus groups were at night after the evening meal. In fact, the most
promising time for relaxed informal dialogue is late at night.
4) Informal group interviews

This type of interview is contrasted with the more contrived group interview situation represented by focus groups. These interviews were with key informants and groups involved in certain routine activities. A good many of these interviews took place while the author was trying to gain some practical competence in routine activities.

5) Participatory mapping and diagramming

This involved local Fulbe and Maccube using sand and soil to map fields and important well sites to complement the ‘biographies’ of well sites, fields and settlements. It must be said however that scratching maps on the ground was not viewed by some as an innocent activity. Young Maccube and Fulbe men at Monnde often drew maps to illustrate the placement of wells and the level of the water table in the dry season. However some older Fulbe were suspicious. Not being accustomed to these mapping exercises they associated this scratching (the author’s in particular) with the divination practices of non-Fulbe people in the area. These older men much preferred dialogue to the mapping.

6) Ethno-biographies, stories and case studies

Together with action research group members I collected household/compound histories and profiles, individual life stories and field, well and garden histories.
7) Participation in a share farming arrangement

I negotiated a ‘share farming’ arrangement with an elderly Pullo called Allaay on a three hectare millet field and 0.5 hectare garden (or hoggo) adjacent to the lake at Monnde So. The share-farming agreement was based on a verbally witnessed ‘contract’ whereby the author was entitled to half of the production in return for organising labour and inputs. It was one of the main means of gaining some practical competence in routine activities. Accompanying various shepherds on their daily herding routines complemented this attempt at share-farming.

8) Proverbs and stories

Freire (1972), in the context of literacy programs in Brazil, describes a process of codification and de-codification in facilitating a movement from fatalistic tendencies to critical consciousness or awareness. The process recognises that linking local forms of expression (proverbs and stories) to literacy programs is important in creating a learning climate and acknowledging the creativeness of local people. The author’s interest in learning proverbs and using them in a literacy context was taken by local Fulbe to indicate a disposition to learn something that only they knew.

Central to the process of conscientisation is the preparation of problem posing material or codes in order to investigate people’s ‘thematic universe’ (Freire 1972). In order to be effective, these materials must be familiar or readily accessible to the local community. These materials are often pictorial but in many African cases there is much to be gained by using traditional verbal material such as local proverbs,
parables and stories, or what Heron (1996) calls, ‘presentational’ ways of knowing. In Fulbe Jelgobe society, the paucity of pictorial images and artwork is contrasted with a rich heritage of oral tradition and proverbs. In daily interaction people often used proverbs in attempts to limit understanding by outsiders or to disguise their intentions.

Proverbs and stories are effective in eliciting what Freire calls generative themes (issues important enough to stimulate action) but also the ‘hidden transcripts’ (Scott 1990) of the weak. These transcripts are often expressed openly through gossip but also in disguised form through proverbs and jokes. Proverbs were extensively used in informal group interviews or discussions and focus groups to generate discussion on particular themes. Proverbs and stories explain relationships and stereotypes and are also used to give moral instruction (Ewert 1981). It is the author’s experience that when different ideas and opinions are expressed metaphorically through proverbs in informal situations it is much less threatening to subject them to critique.

A proverb often directed at me was ‘tekkere berni de loonde maataay’ (the cloth was angry but the pot didn't notice). This refers to the cloth that cushions the impact of the heavy water pot on a woman's head. The inference was that as a supposedly knowledgeable person, the author should be able to handle conflict in discussions or negotiations. Discussion around this proverb not only helped to refine the style of participation but also to critically appraise relevant roles. In the early stages of forming action research groups some Fulbe expressed their dissatisfaction with some people chosen. They used the proverb, ‘duroowo paabi na anndi layoowo majji’ (the shepherd of the frogs knows the one who is limping). The inference being that if the
author was a good leader/organiser he should be able to tell the character of possible candidates.

Extracts from Mme C. Seydou's (1972) text 'Silamaka et Poullori, Epopee Peule du Macina' were used to stimulate discussion about the differences between Maccube and Fulbe in terms of attachment to cattle and qualities of character. A translation into the local Fulbe dialect by Riesman (1977: 118,119) was used (Appendix 4). Another useful text was a section (p15-25) of Hampate Ba's (1985) 'Njeddo Dewal - Mere de la Calamite' that is essentially a pre-Islamic Fulbe creation story. It describes the deterioration of ideal pastoral conditions and relationships through the influence of Njeddo dewal who was a female personification of evil. A brief summary on of the story in local dialect on a cassette tape was used to invite discussion about the deterioration of lifestyle and environment.

To encourage informality in dialogue, various short stories and proverbs from the Summer Institute of Linguistics (1988) literacy text, Dewtere Taali e Fulfulde were used. One example is the proverb 'Doomburu yamaa noy maasuru wa'i; doomburu wi'i andaa, sabu maasuru wo wardan e kusaw, dillidan e yonki' (the rat asked how does a cat live; The rat replies that he doesn't know because the cat comes with the dust and leaves with his life). These attempts at literacy often led to discussions about pastoral life.

As well as stories and proverbs, the Fulbe have riddles or puzzles. The author was often 'tested' by such puzzles and they were subsequently used as an informal way to facilitate problem-solving dialogue. One such riddle used in the Summer Institute of
Linguistics (1988) literacy book ‘Dewtere Fillaaji Jelgooji’ was entitled the ‘Wulaare e Araawa e Fowru’ (The millet bundle, the donkey and the hyena). The story is of a man on his way to market to sell his donkey. His elder brother gives him a millet bundle to sell and a friend asks him to take a hyena. On his way to the market the man must descend from his donkey in order to cross a lake. He also must carry the hyena, which cannot swim, and the millet bundle to the other side. Given that he can only take one item at a time how does he traverse the lake without leaving behind the hyena to attack the donkey or the donkey to eat the millet bundle?

The advantages of the use of parables as Freirian type codifications are their cultural relevance, simplicity, informality and the participatory nature of the whole process (Ewert 1981). The ‘decodification’ process is simple because one needs no projectors or posters and is also pleasurable because one is often able to move contentious issues to a level of abstraction for critique. The informality in the decodification process often incites spontaneous responses as against stereotypic or role model ones.

Proverbs also provide a natural and creative link with literacy (Kazemek and Kazemek 1992). Literacy is an important adjunct to the participatory research and wider development processes. Freire (1972) emphasised the link between literacy, critical awareness and (Box, 1989; Chambers 1992) development action. Part of the actual research process involved teaching literacy to some key individuals in order to increase communication options and allow confidentiality through letters. Most were modelled on Belloncle's functional literacy programs, which combined literacy and numeracy training (Belloncle 1984a, 1984b) in collaborating with locals in the
observation, comprehension and transformation of their communities. Most members of
the action-researching groups were eventually literate in French and/or Fulfulde.

5:5 SUMMARY

Participatory Action Research is a form of co-operative inquiry that involves diverse
local stakeholder's and takes clues from their struggles with food insecurity. The
focus is on the improvement or transformation of livelihood practices through a
reflexive learning process. Participatory Action Research provides a framework for
Fulbe to participate in a process that incorporates cycles of planning, acting,
observing and reflecting that are 'systematically and self-critically implemented and

Action research literature describes different types of research that are concerned with
emancipatory, technical or practical interests. However it is preferable to regard
Participatory Action Research as an emergent process that accommodates
emancipatory, technical and practical interests on a transformation / reformation
social change continuum. Rather than different research types they are different
potential emphases that modify facilitator roles in an on-going learning process that
gradually tackles more substantive issues. Action research is concerned with all three
areas of knowledge interest and the strategic use of appropriate methods in each area.

The methods and techniques involved in understanding Fulbe livelihood management
strategies and taking action to reinforce them, are employed in a climate of relaxed
informal rapport and critical awareness. The Participatory Action Researcher needs to

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be critically aware of the way in which his/her biases and prejudices and the
situation's social/political pressures shape the inquiry process. The methods used in
various phases of the process were: semi-structured and informal interviews; focus
groups; participatory mapping; ethno-biographies; dialogue using proverbs and stories
and a share-farming arrangement.

I organised the Participatory Action Research in the communities of Djibo and
Monnde So. All community members could not participate fully in the action research
for practical reasons. For this reason it was necessary to network and negotiate the
formation of action research groups that were sanctioned by community members,
representative of its various social networks and committed to the research process.
The role of the group was to negotiate and mediate the on-going process of
engagement with the wider community. The action-researching groups were
facilitated through cycles of information gathering, generation of action options,
action on food security issues and critical reflection on this action.

In the following two chapters I report on these action research experiences and draw
out some methodological and development issues relevant to improving Fulbe food
security. The focus of activity in Djibo was the re-activation of a gardening
association around the town lake. In Monnde So I attempted to set up the
infrastructure for dry-season gardening activity involving a mixed group of Fulbe and
Maccube.
CHAPTER: 6

DRY SEASON GARDENING AT DJIBO

6:1 INTRODUCTION

This focus of this chapter is an action research process made available to a loose association of eighty heads of families called Dewral who were cultivating some twenty-five hectares of lake-side land at Djibo in northern Burkina Faso (Fig 6:1).

Fig 6:1 Djibo and Environs (From Institut Géographique du Burkina)
The intervention was concerned with re-invigorating this association, improving members’ resilience to food insecurity while simultaneously facilitating the emergence of a more flexible organisation having local legitimacy and improved capacity to interface with various development organisations.

**Fig 6.2 The Djibo Action Research Process**

The action research process (Fig 6.2) was initiated in Djibo through networking with various groups and individuals within the association concerned and several other
prominent gardeners outside the association. In summary, this process led to the formation of a Djibo action researching group, and what could be termed a general action-researching group that eventually included several people from Monnde So. The function of the Djibo group was to dialogue extensively with association members as well as other stakeholders that they considered relevant in order to provide a situational diagnosis and identify emerging issues. The task of the ‘general’ group was to critique the intervention processes at both Djibo and Monnde So (Fig 6:2), in order to enhance the potential for both processes to address food security concerns.

6:2 Background

6:2:1 Dry Season Gardening

The association’s initial activities revolved around dry-season gardening as a way of increasing post-harvest options for supplementing cash income and food production. The rationale for focussing on the dry season was that it was the period when people were occupied in exploring off-farm income options, yet residual surface water and wells could potentially extend the growing season. Such water sources had historically allowed vegetable, fibre and fruit crops to be grown until April, when temperatures and evaporation rates became too extreme for gardening and irrigation labour demands too taxing on family labour resources. Although the accent was on dry-season gardening (November to March), once the garden infrastructure was in place, the gardens were used for most of the year (Fig 6:3).
Gardening in small stick or thorn fence enclosures (hoggo) near semi-permanent lakes has long been a strategy of both pastoralists and agriculturalists to improve food security prospects during the hungry season with early plantings of maize as well as the production of a variety of food, fibre and condiment crops. Several gardens at Djibo and Monnde So, for example, have been used continuously for over sixty years.

Lakeside areas experience intense dry-season animal activity, hence secure fencing is necessary for the viability of gardens. The lakes at Djibo and Monnde So are important dry-season livestock watering points. With the advance of the dry-season, herders use these two points to access pastures up to twenty-five kilometres away. Herders will water the cattle up until midday then hope to arrive at the pastures around dusk, allowing the animals to graze during the night (sometimes two nights), and then return the next day. It is not unusual to have hundreds if not thousands of cattle resting or being watered in close proximity to the gardens. Similarly, as water
levels recede, small ruminants herded by children graze on grasses growing on the lakebed. The pressure on garden fencing is extreme as the gardens contain the only green feed for kilometres, and family labour demands often do not often allow for continual guarding during these times.

Traditional woven millet stalk or thorn branch fences gave rise to problems in many gardens. Fulbe and Maccube traditionally used branches from the tree species Acacia albida (cayki), Acacia raddiana (jelluki), Acacia nilotica var adansoni (gawdi), Acacia senegal (patuki) and Balanites aegypti (tame). However, many fences were in a state of disrepair and could no longer protect the gardens from animals. Some fences had been rendered useless by portions of them being used or sold for firewood. The erection or repair of traditional fences had become difficult because of recently introduced penalties for the unauthorised cutting of trees and shrubs.

The cost of official cutting permits was prohibitive. Local forestry agents were also known to fined gardeners for trees and shrubs cut well before the introduction of cutting permits. Thus some gardeners, fearing substantial monetary penalties, had removed their fences and used or sold the wood. Many people at both Monnde So and Djibo had abandoned gardening altogether. Those that had continued and were currently gardening, were the more influential people who could afford permits to cut materials or those who had successfully established ‘live fences’ of Euphorbia balsamifera (badulahi) and Parkinsonia aculeata (gawdi misira).

Loosely organised associations termed ‘groupements’ or ‘pre-cooperatives’ have been the vehicle for community organisation around dry season gardening.
Government extension services, as well as various NGO's have funded and facilitated these associations by combining elements of community development, extension, food aid, credit, local leadership development and 'functional literacy' (Belloncle 1984a). The local Burkina Faso NGO 'Six S' (Se Servir de la Saison Seche en Savane et au Sahel) through its 'Groupements Naam' has been particularly effective in such development activities. As well as technical and organisational assistance, Six S also developed marketing networks centred on large urban centres such as Ouagadougou and Ouahagouya.

Bernard Ouedraogo (1990) the founder of Six-S, used a Mossi youth social institution as an organisational model but gave it a wider development focus. Some of the original aims were to coordinate mobilisation of village people and stimulate investment in both agriculture and village infrastructure in order to counter the seasonal migration in search of off-farm income. While emphasising gardening and grain banks, he also acknowledged gender issues and concerns. Women's work was considered in planning the provision of wells, grain mills, arts and craft and household small ruminant production. The association grew rapidly in the late 1970s and 1980s and spread amongst the Maccube in the Soum province. Most Fulbe found it too 'Mossi' in orientation for their liking. The rapid growth of Six-S led to a 'bureaucratisation' of the association as well as credit repayment problems, accusations of nepotism and logistical problems. Seed and other necessary inputs were not arriving in Djibo in time for the sowing of gardens.

Most recent attempts to facilitate dry-season gardening in the Djibo area have involved using wire netting fences, either as permanent fencing or temporary
protection for the growing of hedges. The cost of these fences is substantial (750-1000 CFA per metre). Quite a substantial 'cottage' industry has emerged in Burkina Faso around the fabrication of wire netting. Lengths of plain galvanised wire are crimped by hand using small machines and these crimped lengths are joined together into 25 metre rolls of netting. Several NGOs have specialised in manufacturing these machines and supplying them on credit to individuals or groups.

It is however extremely difficult to envisage that garden production, being essentially consumption oriented, could reimburse the cost of this fencing, especially in the short-term. The dilemma is that this fencing is often the only means of providing a measure of security for gardening, yet it is beyond the capacity of most people to obtain and the alternative cutting of stick and thorn fencing, while marginally less costly, is extremely damaging to the local landscape. This is particularly a dilemma for those who see a strong link between 'self-help' and sustainable practice (Conroy and Litvinoff 1989). The other problem is in developing a locally legitimate system of tenure for those who benefit from this expensive capital outlay.

6:2:2 Djibo

Djibo is a town that is experiencing substantial population growth. During the decade from 1975 to 1985 the increase was around 10% annually (Jaglin 1993). In addition there are seasonal fluctuations of population, with an increase of population during the dry season as bush wells and water sources dry up and people move to urban centres such as Djibo to find off-farm income. During bad seasons there is a substantial increase of destitute families, and female-headed families seeking work or
charitable gifts. Female-headed families, are numerous as male members of the household migrate to southern urban centres seeking paid work, or try their luck at the goldfields at Arabinda one hundred kilometres to the east. The problem for many women is that they are never sure if these men will return. It is not unusual for men to find a good job and not return for a number of years and also not send remittances home. There is thus real ambiguity about the state of their marriages, and reduced potential to remarry. Remittances that are sent are sent through the post or through couriers and friends, but many women are not literate enough to assert their rights with postal authorities and are often unaware that the money has been sent in the first place.

There is some temporary out-migration during the rainy season for the purpose of cultivating traditional family millet fields. The whole family moves up to thirty kilometres to live for the entire season in grass huts situated on their fields, or younger men travel to the fields daily during periods of cultivation. Another option is that someone travels to their field and hires work parties of local Maccube to cultivate their field over a period of one or two days. Families with cattle either assign them to be contract herded with the town herd or leave them with family members who have gone on transhumance to the north away from fields.

Accompanying the urbanisation of people is what could be termed the ‘urbanisation of animals’ (Dumont 1986). Rangeland and field degradation to the north of Djibo has meant that people, together with the remnants of their herds, have moved to the security of Djibo. Djibo being a livestock market centre has also meant that a number of merchants and townsfolk raise animals through contract herding or hand feeding in
their household compounds. Animal urbanisation is significant for two reasons. A substantial trade has developed in dry grass gathered from a twenty-kilometre radius around Djibo. Prime annual grass species are thus tending to disappear within this radius as both the dry grass and the seed filled litter bed underneath are taken. Some NGO sponsored projects have sought to add to fodder resources by encouraging the cutting of grass for hay during the wet season (Graf et al 1989). Secondly, substantial amounts of manure and urine soaked litter accumulate in town rather than on fields. While many families choose to transport this material to their millet fields, it has also become a valuable cash income option.

Another not unimportant consideration is the relatively recent in-migration of Mossi plateau farmers and livestock merchant / pastoralists from areas south of Djibo. The latter practice livestock commerce while at the same time having large enough herds to necessitate the making of herding contracts with local Fulbe or allocating family labour for transhumance. Mossi herd owners often practice transhumance movements to the south to take advantage of kinship ties. They have negotiated the farming of low-lying areas around Djibo in order to cultivate sorghum. The local Fulbe and Maccube populations have primarily used these low-lying floodable areas (palol) for pasture. The area between Se-Ganoua and Buro north of Djibo is a prime example. Mossi farmers have taken over portions of prime grass/tree pasture associations in the area and this has restricted dry season access to these pastures. The Mossi, with their greater propensity to organise themselves, both politically and economically, have attained positions of influence in the normal Burkinabe village associations such as the Committees for the Defence of the Revolution, Union Nationale des Paysans Burkinabe, Union Nationale des Femmes Burkinabe and Union Nationale des
Aïniens Burkinabé for example. This factor has reduced the motivation for Fulbe and Maccube, who tend to be in the majority, but much more dispersed spatially, to comply with 'collective' decisions (Graf et al 1989).

Djibo is a major livestock marketing centre as well as the administrative centre for the province of Soum. It has a daily market and a weekly cattle market that attracts buyers from the capital Ouagadougou and an influx of animals from an eighty-kilometre arc to the north, east and south. It also has a substantial government grain store (Office Nationale de Cereales) that sells sacs of grain as well as 'relief' grain at substantially reduced prices during bad seasons. Djibo with its markets and grain stores is also a strategic town for Malian pastoralists experiencing bad seasons in the border region directly to the north.

6:2:3 Dewral a naïve attempt at responding to food insecurity

Djibo boasts a permanent lake (Fig 6: 4 below) as well as a permanent water reticulation system fed by borehole wells. The shores of the lake have been used for a number of purposes, such as gardens, mud brick making and livestock watering. One large government sponsored garden and various other small private gardens ring the lake. However, many people had given up due to intense pressure from livestock and thieving by the local population.
In 1985 a small NGO (Federation des Eglises et Missions – FEME)\(^1\) negotiated access to commons land on the shores of the lake in order to develop gardens and re-vegetate these eroded and denuded shores.

\(^1\) FEME – the Federation of missions and churches is an umbrella organisation that coordinates and resources the development activities undertaken by the various missions and indigenous churches in Burkina Faso. As an organisation it provides the link between the Burkina government and church/mission development and relief activity. It also acts as an NGO in planning and seeking funds for projects and it was in this role that it initiated the project at Djibo.
The plan was to fence some twenty-five hectares with wire netting fences to provide gardens for those people deemed most needy by the local authorities. The plan (Fig 6:5 below) was not to fence numerous individual gardens but to fence larger areas and to subdivide these into plots separated by windbreaks of tree species such as Bauhinia rufescens (namaadi). In this manner garden security could potentially be based on cooperation between numerous gardeners. The plots were a minimum of 0.25 hectares and the perimeter fencing extended into the lake beyond the high-water mark in order to offer potential for rice growing.

Fig 6:5 Garden Layout

KEY

- Garden wire fences
- Live fences or hedges
- High water mark
- Low-water mark
- Wells
- Windbreaks separating individual gardens
A minimum fifty-metre space was left between each garden area to allow access to the lake. Hedges of *Ziziphus mauritania* (*jaabe*), a traditional bush food, were planted inside the wire perimeter and *Euphorbia balsamifera* (*badulaahi*) outside it. The latter species is traditionally used in the area to enclose gardens as it forms a dense barrier and even goats will not eat it. The intention was to remove the wire fencing once the euphorbia had grown to form a sufficiently impenetrable barrier.

There was extensive consultation with the local Committee for the Defence of the Revolution and the provincial High Commissioner in developing the plans for the gardens. Their support was crucial because the local representatives of government development services were not supportive, as the funding was not being channelled through their bureaucracy. Finally some eighty heads of families were chosen to develop gardens around the lake. Apart from existing garden owners, the group was entirely made up of those considered by authorities to be the most needy. The political climate at the time of commencement was still revolutionary and there was considerable debate surrounding the inclusion of several teachers, who owned gardens, but who had been dismissed by the Sankara government for being involved in strike action. Some CDR members were of the opinion that despite already having traditionally sanctioned access to gardens, they should be excluded because of their ‘reactionary’ behaviour. However they were eventually included in the group.

Project negotiation was mainly with local political officials and the eighty men were more or less ‘co-opted’ to implement the project plans once funding had been confirmed. Dialogue with these men regarding implementation of the project was minimal despite many of them having had previous gardening experience. It must be
said however, that not many of the potential members were inclined to want to avail themselves of the responsibility to participate in organising the project. Their main preoccupations were avoiding being embroiled in revolutionary political matters and coping until the next harvest.

Four main ethnic groups were represented: Fulbe, Maccube, Mossi and Fulse. The dominant groups were the Fulbe and Maccube. There ended up being seven separate fenced areas, which were sub-divided into 0.25 hectare gardens. Tools and seed were issued on credit over three years. The initial allocation of gardens was largely by ballot. The allocation had to be re-negotiated, with consideration being given to pre-existing garden ownership, home village location and the ethnic networks in and around the environs of Djibo. The group was formed into a loose association under the name of Dewral\textsuperscript{2} and it had an organisation structure similar to that of the ‘groupement villageois’ in the area. A team or ‘bureau’ of six men managed the association with each association member being required to contribute a fixed sum of money each month for administration expenses.

Initial project work occurred in the first month after harvest in 1985 when many of the men involved in the project were assessing various migration options (to the Arabinda goldfields, the capital Ougadougou or Cote d’Ivoire) in order to secure employment. It also unfortunately happened to coincide with a brief border war between Mali and Burkina Faso. The installation of fencing had to be interrupted to allow troop access to machine-gun nests around the lake.

\textsuperscript{2} Dewral is derived from Fulfulde, the language of the Fulbe. It literally means, ‘following or taking the same path together’.
Over the first three years some fifteen thousand trees were planted as wind breaks or hedges, together with some six hundred fruit trees. Maize, sorghum, rice, tomatoes, onions, cabbages, peppers, sweet potatoes and potatoes were grown. I was involved in the initial implementation of the project once approval had been granted and maintained an interest until late 1987.

(Fig 6: 6) The shift to action research at Djibo. (adapted from Smith 1997: 198)
The ensuing 1988/1989 period was important (Fig 6: 6). I had a profound unease about the relevance and effectiveness of both the association Dewral and the gardens themselves in improving food security. During 1989 I attended a workshop at the University of Western Sydney (Hawkesbury) entitled ‘Learning for Development’. Involvement in the workshop and subsequent enrolment in a study program there enabled me to more effectively critique past activities at Djibo. I also gained some insights into Participatory Action Research as a potential methodological framework for intervening in complex situations. What attracted me to Participatory Action Research was that it provided a framework for collaboration and learning by implementing change. Hence I could avoid being paralysed by the impossibility of developing a full picture of local food insecurity prior to taking action.

Upon returning in 1989, I responded to a request by association members and commenced an action research process to re-activate the project and facilitate improved responses to food security and tenure problems. Organisational problems had developed because few of the management team were literate in French or Fulfulde and they were not influential enough socially to maintain negotiations with local rural development agents regarding official recognition of the association. In essence there was a situation in which eighty men were exploiting some twenty-five hectares of potentially prime agricultural lakeside land without a sufficient power base to negotiate and protect long-term tenure. Short-term security of tenure had been assured through the influence of the local Committee for the Defence of the Revolution, but in the late 1980s its influence had waned and tenure issues were resurfacing.
By 1989 it was evident to local officials and group members that the gardens were not being used effectively and there was considerable conflict among those in the gardens. Local development bureaucracies had largely ignored the project, as they had not been involved in mediating the funding. The Action Research program was instituted to try and improve the productivity of the gardens, the relationships with local authorities and the cohesiveness between the different coalitions and individuals within the group.

6.3 Cooperation in improvement

Before embarking on an analysis of the intervention process it must be said that an understanding of the problem issues would not have emerged unless an initial naïve attempt at addressing food security issues had been made. The priority of the intervention was now to organise and energise a learning process (Fig 6.7 below) whereby the author’s naïve interpretation and assumptions, along with the memories, insights, anxieties and ambitions of diverse stakeholders could be used as resources in negotiating feasible individual and situational improvements.

The initial project consultations in 1985 took place in a very unsettling political climate. The endorsement of the project by the Djibo Committee for the Defence of the Revolution meant that those chosen to cultivate the gardens were being linked to a political network that they understood poorly and feared. These men were
preoccupied in coping with severe food insecurity and they thus, quite naturally, kept large portions of their ‘transcript’ hidden in order to obtain some benefits. The style of the intervention process was largely irrelevant to them.

Fig (6:7) Evolution of the Action Research process at Djibo
Association members’ past experience of joining other village associations meant that they viewed the initial period of membership as a trial, to see what immediate tangible benefits would emerge. If the association did not prove useful then they would remain only nominally attached to it. Thus in re-establishing contact in order to reinvigorate the association it was necessary to deal with immediate needs in order to establish a ‘cooperation pact’ and create space for collaboratively designing a longer-term process.

6:3:1 The Action Research groups

Before I analyse the Djibo action research process in detail it is worth looking at the formation of the action research groups. When I returned to Djibo in 1989 I met a large group of men who were impatient for change and fearful of losing access to their gardens. The intent on my part was to establish authentic collaboration or at least develop a ‘less steep influence hierarchy’ (Reason 1988) within a self-directing inquiry group. However I was faced with a substantial number of people in the gardens who wished that I take control. They were reasonably happy with the concept of an inquiry group so long as I remained overtly in control. Thus was participatory inquiry possible? If so, was it a feasible burden to place on this loose association of men?

The fear of losing access to the gardens was a motive for some form of participation. There was also a strong incentive on my part to facilitate a locally relevant form of participatory inquiry but I was unsure of the networks of influence within the group. There were several ethnic groups and a number of strong characters among the
gardeners. How then could I develop a sense of shared ownership of the process and facilitate symmetrical influence in decision making?

Total participation by all members in decision making was not practical. Thus I considered it important to develop locally sanctioned forums where reflection on a wide range of personal experiences could be connected to learning and personal and situational change. The action research groups were intended to be these forums. After several animated association meetings I chose an initial action research group. It comprised most of the men who had previously directed the association plus two others and represented all the ethnic groups in the association. It was important to develop a sense of ownership of the inquiry process and have this process sanctioned as a means of making both individual and situational improvements in food security. In order for this to occur, the gardeners had to understand the nature of the process and have confidence in the action research group’s integrity and its ability to develop relevant responses to their concerns. Thus there were several issues that emerged during the formation of the action research groups: the usefulness or relevance of the whole participatory process; the nature and maintenance of inquiry relationships and the integrity of the action research group.

I was firstly concerned with demonstrating the integrity of the action research group as an essential component of the inquiry. Local people’s perception of the participatory process was not shaped by my rhetoric but by past experiences. Rather than empowerment through equitable access to decision making, they had memories of privileged groups skilfully manipulating participation to extract resources from willing agencies. Thus it was important to establish the integrity of action research
groups. To achieve this I arranged that the first months of action research group meetings were public. The group met twice a week and the rest of the gardeners were made aware that they were welcome as observers. I made a concerted effort to demonstrate that individual concerns voiced to members of the group and diverse assumptions (including my own) about the problems of the association were discussed openly. While a picture of the situation was forming over these months several urgent issues were identified.

There was a need to repair fencing to stop animals entering the gardens and link this activity to a food-for-work program. Food-for-work programs are common throughout Burkina. They usually involve some distribution of grain free of charge, subsidised grain sales or food distribution on credit to village associations for subsequent resale in the local community. The distributions are usually made to male association members for pre-planned community work. However, little effort is made to contextualise them or explicitly connect them to longer-term development processes.

I purposely used the action research group to design and organise the food-for-work program as a further way of demonstrating their usefulness and integrity. The design and implementation of the program was crucial to the whole inquiry process. Members of the group had prior experience of such programs and a number of different models were described. The core of the program was the distribution of local varieties of millet grain. The initial distribution was free of charge but later ones involved the sale of grain at greatly subsidised prices (usually one third of local market prices). During the program a certain amount of grain was set aside to be given free of charge to those in real need. A portion of the program’s assets were also
reserved to enable cash payments for specialised work and financing repairs to members carts etc. The program was re-evaluated each month.

While demonstrating the integrity of the group to the gardeners was important it was also necessary for me to develop rapport with the action research group members. It was necessary to develop an appreciation of locally relevant or effective research relationships and how these would be maintained. The group members did not appreciate me making the first dialogue sessions public even though they could see my reasoning. In developing rapport I had to meet their ‘inclusion needs’ (Reason 1990:27). In other words I had to make sure that they understood the nature of the inquiry, their roles and establish ground rules for cooperation and interaction. In meeting these inclusion needs it was also important to get members used to the cycle of inquiry. The cycle usually involved: the gathering of divergent views of the situation or issue in focus; the formulating and debating of response options; the choosing and implementing of one or several options and finally reflecting on the action taken. In the initial stages of the inquiry I took a strong facilitatory role in group dialogue in order to establish a climate where divergent views could be expressed and debated. I also proposed that the group be flexible enough so as not to be dependent on reaching full consensus about action in order to progress the process. Flexibility was necessary as we often needed to negotiate responses to urgent issues in the midst of developing longer term action options.

I emphasised the need for action research group members to network. By this I mean I encouraged them to facilitate dialogue with and between groups and individuals connected to the gardens or who were potentially helpful to the development of the
gardens. Networking is a natural part of their own coping strategies. However, in networking to help the inquiry process they were doing something different. They were only indirectly helping themselves or members of their immediate household. They were gathering information and making contacts as part of an inquiry process that was aiming to help a large group of people. Individual group members were also expected to report on their networking. This different style of networking took some adjusting to as part of the culture of the inquiry group.

Members of the action research group were expected to visit other gardens and observe activity. Normally Fulbe and Maccube only visit the fields or gardens of close friends or relatives. In visiting the gardens or fields of people outside of these social networks, they were open to accusations of sabotaging fertility or production. The accusations were often related to the practice of witchcraft. I therefore had to help legitimise the visits by members of the action research groups. I did this by making frequent observation visits myself or joining with individual members in making visits and discussing issues with them afterwards.

I had to continually re-negotiate the inquiry process and learn what sort of participatory inquiry culture was possible in the situation. Participation did not automatically intensify over time. At times there was insufficient motivation to dialogue and decision making was left to myself and one or two members of the group. Membership of the group changed and dialogue on some problem issues was conflictual.
Memories of past experiences also influenced motivation to participate. The history of the gardening association, my intent on facilitating participatory inquiry and the stream of events at the commencement of the inquiry all contributed to the initial inquiry culture. The action research groups were vital to the organisation and management of the action research process. I will now describe and analyse the process in more detail.

6:3:2 The tyranny of the urgent

The first efforts at dialogue were directed at the immediate problems of food security, garden production, limiting animal access to the gardens and dealing with the theft of garden produce and wire from the perimeter fencing. These latter two factors had discouraged many from making any real attempt at gardening and were important and emotive enough issues to stimulate cooperation in the inquiry process. One Maccudo had lost two hundred kilograms of potatoes, the sale of which in the Djibo market could have realised enough money to buy the equivalent weight in millet. That would have been sufficient millet to feed his small family for two months.

I had hastily organised the action research core groups at this stage and I was deliberately selective about the people chosen to participate in these groups. The aim was to assemble a group of people who had been involved since the beginning of the intervention in 1985, who knew each other well enough to express their views and were forthright enough to give and receive feedback. There was a conscious trade-off between the representativeness of the group and its potential to identify areas of
overlapping interest and concern, decide the priority issues and negotiate cooperation in a food-for-work program\(^3\) that could be flexibly linked to the issues of production and garden security. The priority of the author was to address some urgent practical problems and see what lessons the action undertaken could feed back.

It is worth mentioning here that the emphasis in dialogue was on identifying overlapping interests and concerns not an attempt at reaching some new political unity around a ‘consensus’. In the years following the revolution, association members were used to meetings where a ‘consensus’ was reached by the dismissal of deviant voices. At this stage of the process there was an agreement to cooperate that was driven by overlapping interests and concerns. The solidarity and trust built between myself and the members of the Djibo action research group and between this group and the Dewral association members was, at this stage, a pragmatic and contingent unity in dealing with several urgent issues.

The Djibo action researching group comprised the remaining active members of the original Dewral organising committee and two additional individuals: a Maccudo association member who was involved with the local Six-S sponsored Groupement Naam as well as the German funded Projet Agro-Ecologie (Graf et al 1987) and a local teacher. Cisse, who was one of the teachers in the original association, had been installed as the provisional ‘secretary’ of the committee. In addition a general action-

\(^3\) Food for Work programs are generally designed around the distribution of grain in response to communal work performed. In some cases in Burkina the work performed has been to improve community assets such as schools and dispensaries. However at Djibo the accent was on work that could be carried out to improve the potential productivity of the gardens and thus family food security. The emphasis was on flexibility, planning by local stakeholders and making links between rehabilitation responses and more sustained improvements in food security prospects. Food allocations could also be traded for non-food options such as repairs on donkey carts.
researching group comprising the author, Cisse and a local policeman who managed an extensive family garden beside the lake at Djibo was formed to critique the intervention process and inform ways of improving interaction between the various parties.

Food-for-work programs were organised by the Djibo group and implemented using funds at my disposal. This was an important factor. The funding was as close to the action as possible, enabling flexible and opportunistic responses to emerging issues. For the action research group’s first planned action I encouraged them to consider relatively small but significant actions that were achievable using the member’s existing repertoire of skills. This was in order to enhance the confidence of the action research group members and build rapport with the association members.

The initial action concentrated on improving perimeter fencing and installing rock contour bunds (with associated sowing of *Andropogan gayanus*) to promote water penetration by slowing run-off into the lake. *Andropogan gayanus* (*soobo*) was a saleable perennial grass and was used inside the fences. As this grass had virtually disappeared from the close environs of Djibo, I obtained consent from the action research group and employed several men to gather seed from the bush to the north of Djibo and from the roofs of some houses where it had been stored for use in mat weaving. *Andropogon pseudapricus* (*jam poolo*) an unappetising grass to cattle and *Pennisetum pedicallatum* (*bogodollo*) were used in conjunction with any rock bunds outside the enclosures. Badly eroded sections of the gardens were renovated by digging ‘zai’ (Bagre et al 1989) holes and filling them with manure and lakebed silt. The holes (Fig 6:8) were planted with sorghum, corn and fruit trees.
Zai holes were dug to a depth of 40cm and diameter of 50 cm. The displaced earth was positioned on the downslope side of the hole in a half-moon shape.

Displaced earth arranged in half-moon shape to trap run-off

Fig 6:8 The layout of Zai holes

Work on the planning and constructing of the rock bunds was organised by several association members who had been trained by the Six S organisation or who had been involved with the ‘Projet Agro-Ecologie’. Water tube levels (Rochette 1989:474) made from clear plastic tubing (Fig 6:8) with graduated hard plastic ends were used to lay out the rock contour bunds. Such ‘relief’ activity was wholly aimed at ameliorating the garden infrastructure in order to enhance future production. A total of ten hectares were renovated in this fashion with 2.1 hectares of eroded ground.
entering into production. The benefits were long and short-term, with the owners of
the gardens coping for the season and improving their production potential for the
1991 season, which turned out to be an above average rainfall year.

Fig 6:9  Commonly used water level for laying out rock bunds or contour banks

Rock bunds (Fig 6:10) associated with tree and Andropogon grass planting were
common features of projects in the northern Yatenga and Soum provinces. OXFAM’s
Projet Agro-Forsterie (PAF) (Gubbels 1993) and the German funded ‘Projet Agro-
Ecologie’ (PAE) focussed on these soil and water conservation techniques. Both
projects used popular participatory or Farmer First approaches as models for
intervention. Rock bund techniques worked well in the Yatenga where there were
numerous laterite capped mesas and thus a plentiful supply of laterite rocks. Such
formations were not as numerous around Djibo and those that did exist had been
scoured for rocks for building purposes in Djibo itself. Rocks therefore had to be
transported over longer distances.
Rocks for the contour banks had to be transported from two kilometres away. The association members were unwilling to hire donkey carts for this purpose as many had carts themselves that only needed minor repairs such as welding, new wheel bearings or tyres to be functional. Most of the repairs cost in the order of 2-5,000 CFA. The carts, worth 80-100,000 CFA new, had been lying idle for years in some cases, for want of these minor repairs. The owners had sold various parts of the carts in order to buy food, thus the carts were neither saleable nor useable.
I negotiated with both the action research group members and the rest of the association members to use some food-for-work funds for non-food items that would benefit individual members. It was then agreed to use part of the food-for-work funds to finance cart repairs rather than hire carts of non-members. Instead of receiving grain, the members concerned opted to have their carts repaired as well as transport a negotiated amount of rocks to the gardens. I initially re-welded the steel frames of ten carts, replaced broken wheel bearings and tyres and also commenced training several people to carry out common cart repairs in the process. This process eventually became a long-term self-funding one, as many people outside the association were prepared to pay for the opportunity to have their carts repaired locally. This actually provided cash income for some of the association members who had been trained in repairs.

Admittedly those members who profited from having their carts repaired already had superior asset portfolios than most other members. However, general cooperation was negotiated on the basis that these owners contributed to the overall improvement of the gardens through the transport of rocks, lakebed silt and manure. Essentially, it was considered preferable that some in the group profited rather than outsiders.

The responses of those who had negotiated repairs rather than receiving food fed back some valuable lessons (Fig 6:11) regarding local coping options. An unexpected linkage was made with improvement in the coping options of those concerned through the restructuring of their assets. After transporting the agreed amounts of rocks, most owners preferred to use the carts themselves, relying on family labour to derive cash income from the transport of water, firewood and hay. However, some
older owners, having no younger men in the household, immediately sold the newly repaired carts in order to buy grain, invest in animals and/or pay back loans. The strategy was to profit from this unexpected opportunity and restructure their assets. They sold their carts in order to reduce the ‘lumpiness’ (Devereux 1993) or indivisibility of such an asset and thus allow for more incremental responses to food insecurity in the future.

Fig 6: 11 Food for work program linkages to improving coping options

Some loans negotiated with local merchants were strategically repaid to secure future access to credit. It was reasoned that loans from relatives and wondiibe (those who
one lived with in the community) could be more easily defaulted on in the short term.

In very poor seasons an asset such as a cart is not necessarily a liquid one. It is
difficult to realise anywhere near its full value in a local sale, as the volume of cash in
circulation is diminished and often it is only the local merchants who are in a position
to buy. However, merchants in such seasons are reluctant to buy as there is little
potential for re-sale. Thus, the preferred option of two other older men was to lease
their repaired carts to younger men, or actually employ young men to transport hay,
water or firewood.

Re-arrangement of household asset structure is often the first line of defence against
food insecurity. Rather than just a mere asset sale it is a strategy, often employed by
the Fulbe and Maccube, to re-arrange their asset structure in such a way as to
maximise their flexibility in coping with food insecurity. They divide lumpy assets so
as to increase their capacity to make multiple or incremental responses to seasonal
shocks and stresses. Once this has been done it is a matter of making trade-offs
between modifying consumption, selling these smaller asset parcels or negotiating
credit.

The proceeds from cart sales were converted into smaller asset parcels almost
immediately, and certainly not kept as cash. It was generally converted into small
ruminants (for both investment and trade purposes), millet (for both consumption and
sale), trade items such as cola nuts, tobacco, cigarettes, sugar and green tea or status
items such as radios and bicycles. A bicycle is not just a status good. It could be
classed as a productive asset if it enables the owner to cultivate fields away from the
village or visit local village livestock markets in order to trade in animals. Both Fulbe
and Maccube feared holding any amount of cash after an asset sale. This is because the sale could not be hidden from relatives, friends or neighbours who could request loans or gifts, and merchants, who would demand immediate repayment of loans. The proceeds of cattle sales for example, were converted into food, trade or status assets within hours of the sale.

Merchants in the Djibo market also profited through the repairing of carts, by the sale of timber, second-hand car tyres, tubes and wheel bearings. The Djibo action research group resolved to buy all necessary items for repairing the carts through the local merchants in order to establish a better relationship with these men who were unhappy about the number of carts being repaired as it had reduced potential sales of new ones. During 1990 and 1991 some two hundred carts were repaired. There thus was an unexpected linkage made between improving the production potential of the gardens and some association member’s capacity to cope. The repaired carts became valuable additional assets and an additional coping option for bad seasons through use, sale or rental. Such asset gains emerged unexpectedly from a food-for-work program planned by the action research group members.

6:3:3  Garden Security

The main problem with the fencing was that animals could invade the gardens once the lake’s water level receded during February to March, just as many crops were maturing (Fig 7: 12 below). This had not been a problem in the first year of the gardens as local authorities had been extremely vigilant about animals wandering unattended by shepherds. Local Fulbe clearly construed this as a measure directed at
them. Many animals had been shot or impounded and their owners fined heavily. However in early 1986 two bullocks found wandering near fields on the outskirts of Djibo were summarily shot after a severe electrical storm. These animals were owned by a local mechanic and had been trained to pull both carts and ploughs by an NGO program southwest of Djibo. They were valued at around 250, 000 CFA (approximately $1000 US at the time). It transpired that the young son of the owner had been shepherding them but had abandoned them and fled home because of the severity of the storm. No effort was made by the local authorities to negotiate a more suitable outcome. Such was the community outrage over this incident that local authorities became much less ‘vigilant’ about wandering animals.

Fig 6: 12 Interior fencing problems

With the ensuing relaxation of surveillance measures gardeners were forced to spend whole days and nights in the gardens in order to protect their crops. Various solutions were discussed and it was decided to temporarily fence the interior of the gardens with galvanised wire netting that could be removed when the lake next flooded. The second option was to hire guards by using funds that were available from the monthly contributions of the members. Two groups of men from cattle camps/villages near the
eastern edge of the lake preferred the option of continuous guarding as their area was not suitable for fencing. Upon further consultation it was found that it was actually the cattle from their own villages that were the problem and not herds of small ruminants from the town of Djibo as first suggested. However, on the western side it was decided that two gardens could profit from interior fences especially as one was adjacent to the main animal thoroughfare to the markets for villages south of Djibo.

Despite carrying out the above modifications there was still intense pressure on the gardens from animals wandering at night. An illustration from the early dry-season months of 1990 is pertinent here. The 1989/1990 season had not been good around Djibo. Many gardeners were occupied with off-farm coping activities and it was left to their wives or children to survey their gardens regularly. Despite no heavy falls at Djibo, an early rain of some sixty millimetres, five kilometres from Djibo, in the southern catchment area of the watercourse feeding into the lake, was enough to fill the lake and make gardening a viable option. Just as the gardens were in full production in early 1990 cattle were intentionally let into one section of the gardens at night and completely devastated it. Some thirty, two-year-old grafted mango trees were lost as well as substantial crops of vegetables and maize.

Local officials somewhat arbitrarily placed the value of the actual produce lost at fifty-five thousand CFA. This in no way reflected the potential value of the mango trees. Some fully developed trees in nearby localities were providing incomes of 10-20,000 CFA per year. A one hundred-kilogram sack of millet at the time was selling for around 9,500 CFA. Blame was first placed on migratory Bella (slave class of the Tuareg) groups who were camped nearby. However it soon became apparent that
cattle belonging to a major religious leader in Djibo were responsible for the damage. The owners of the gardens concerned were too afraid of this Moodibbo to attempt compensation claims.

The gardeners concerned assumed that I would use my connections with local authorities to expedite the case. However, I was unwilling to do so, because this situation was a chance for the action research group to validate their capacity to interface with local authorities. Faced with my refusal, the action research group members decided to act on behalf of the gardeners and test the local administrative system for gaining compensation. The gardeners concerned readily consented to this arrangement as they could attempt to gain compensation indirectly. The action research group persisted with the claim over six months until the compensation was obtained. The whole process achieved several things. Firstly, the local population were put on notice that the association members could mobilise effectively around an issue such as compensation for crop damage. Secondly, it provided evidence to the association members that the action research group had integrity and would deal with issues raised as well as support members of the association to realise their claims. Both these outcomes were important as they helped to build a stronger base for cooperation and help allay association members apprehensions that the formation of this action research group was the creation of a new elite.

Stealing of produce had been rife but the group failed to organise any real resistance against these thefts, as they were apprehensive about exposing their problems to local authorities. Many members had insisted on growing potatoes despite the seed being very expensive and the known difficulties in storing harvested potatoes for any length
of time during the hot season, let alone for future plantings. The price of seed was between 400 and 550 CFA per kilogram. However, potatoes could be sold in the local Djibo market to army personnel and bureaucrats for between 125-150 CFA per kilogram. If transport could be arranged to Ouagadougou then that sale price could easily have been doubled.

Several Maccube members of the association traditionally sowed fifty kilograms of seed each year in late November and generally harvested around March. Thieving was a problem both at sowing and harvesting. Freshly sown seed was dug up and re-sold to other gardeners or mature potatoes were stolen in the midst of harvesting. Harvesting was prolonged even for small crops as gardeners only harvested enough for immediate sales or consumption. In 1990 these Maccube had substantial amounts stolen at night, just prior to harvest. They were apprehensive about involving the local police and also afraid of apprehending the thieves themselves, as they feared retaliation.

Most members viewed any attempt to make an overt response to these thefts as risky as it would focus attention on the ownership of garden assets and force them to confront local families from a weak social position. If the culprits were migratory Bellaabe, the servile class of the Tuareg, there would be little opposition to taking overt action even to the extent of involving local authorities. There was, however, a risk in involving local police (who at the time were mostly Mossi) when the thieves were likely to be from the populace of Djibo. The men were not sure as to which family networks they would have to confront and thus what forms of retaliation they would have to protect themselves against.
Some members were willing to cooperate in taking overt action as they took it for
granted that the local populace would conclude that I was attempting to protect my
project investments. For them to claim that they were, in fact, protecting their own
assets was problematic. Certainly the local population would have viewed this as a
spurious claim. From my observations and interviews with other gardeners around the
lake it was evident that they saw security was an individual responsibility. Their
individual gardens were totally enclosed and guarded by family labour at night. This
was a substantial burden on family labour resources. It seemed also that those who
had gardens in a government sponsored enclosure that pre-dated the Dewral gardens
had no organised security system. These owners were from more influential families
around Djibo. Thus it was difficult to find any precedents on which to base attempts
to limit thieving.

The action on animal damage to the gardens had set a precedent for the action
research group to initiate action on behalf of the whole group without my direct
involvement. Thus it was agreed as an initial response that guards would be hired to
patrol the gardens at night. This was not necessarily the only or best strategy but was a
feasible initiative that could create space for more relevant action. Fortunately, it was
not long before several young Maccube men were caught stealing. Once apprehended,
the young men were brought around to my house. Fortunately, the general action
research group happened to be meeting there at the time. One of the members of this
group was a local policeman and also a member of a local Maccudo family. The
young men’s shame at being caught, together with the fact of being recognised by a
local policeman and fellow Maccudo were sufficient deterrents against further thefts
in the short term. The pervasive force of ensuing local gossip was sufficient both to reduce thieving and have the culprits’ families send them out of the area for some months. Again, since this action was arranged by the Djibo action research group, and the fact that hired guards were involved meant that individual members did not have to be directly involved in these proceedings.

The issue of garden security was an emotive one and overt action to remedy these problems of garden security provided several ‘moments’ of unforced solidarity among association members. It was a temporary nexus of concern interest and purpose among diverse stakeholders. This temporary nexus around the attention to urgent security issues again provided evidence as to the integrity of the action research group. It reinforced the potential of this group to dialogue, negotiate and take action as part of action learning process.

6:4 Connecting the urgent with an emergent and heuristic process

The above section gives an account of how a hastily organised group was attempting to elicit and respond to urgent issues. The overall intervention process was concerned with integrating or connecting these moments of contingency in situation, concern and purpose among diverse groups, into a longer-term process of increasing the scope and depth of cooperation and solidarity in developing locally legitimate responses to food insecurity.

Most Djibo stakeholders would have preferred that I ‘fix’ the problems and promote relationships with local officials rather than undertake the work, or pay the cost of
participation. The action research groups were the focus of cooperative action learning within the Djibo situation. Setting up an action research groups and promoting a culture of dialogue is an emergent process and requires a sustained commitment. Relationships between these groups, the wider association and myself as facilitator were alternatively enhanced and destabilised depending on the flow of events and the situation in focus.

The aim of the emergent process was to develop self-directed inquiry groups that retained an ability to action-learn. Clearly in early responses to some urgent issues these groups were very much directed groups with a 'steep influence hierarchy' (Reason 1988: 19). My support was allowing a particular process innovation to be taken up. Thus as well as an action research group that was focussing on developing and implementing practical proposals, another group was needed to focus on critiquing the process itself (Fig. 6:13 below). Myself, Cisse a local schoolteacher and Muusa the 'President' of the original association, influenced these early responses and the challenge was to facilitate more symmetrical influence on decision making. The crux of the intervention was to facilitate the emergence of a group that could work cooperatively in dealing with the concerns at hand. Clearly there had to be a reasonable basis and prospect for cooperation among group members before one could embark on the longer-term process. Critique of the responses to the urgent issues provided a reasonable assurance that cooperation was possible and that there was a nascent solidarity between the groups and the association members. The membership of these action research groups changed over time as members re-evaluated the cost of participation and the focus of concern changed.
Cooperation on dealing with urgent issues gave stakeholders a taste of cooperative action learning and an opportunity to attach themselves more firmly to a longer-term process. The urgency of the issues dictated that a small number of people heavily influenced initial decision making. It was at this point that there were important trade-offs to be made between my anticipation of the focus and associated sequence of events through which the intervention process would pass and the flexibility to allow for informed improvisation in accommodating the unexpected.
The action research group’s major functions (Fig 6:13 above) were to dialogue both with me and the association members in order to develop new thoughts about familiar experiences and move towards a creative solidarity in active inquiry by:

- Bringing information, claims, and concerns up for critical evaluation
- Negotiating practical proposals and facilitate cooperation in their implementation
- Developing and sustaining a reflexive critique on the intervention process itself.

I also walked the length of the gardens at least twice a week. This was in order to demonstrate a commitment to the intervention, develop a critical awareness of the situation as a basis for interaction within the action research groups, and be involved in situations where dialogue and chance learning could occur in more informal contexts.

6:4:1 Seeking multiple perspectives

Communicating the idea that multiple views of the Djibo situation were being sought, and that all stakeholders could potentially influence the intervention process was not effortless. The Fulbe, especially, appreciated this liberty but linked it to the necessity to negotiate individual and confidential ‘cooperation contracts’. As the degree of literacy in Fulfulde improved among these men, I continually received letters in Fulfulde requesting individual concessions. I could not remain aloof to these requests as some of them were from those I classed as friends. However, I also needed to demonstrate that I was not manipulating the action research process to favour any particular group of people. It was imperative to the effectiveness of the overall
inquiry process that the action research group be seen as a decision making vehicle having integrity. Some friendships and relationships were destabilised by the need for an open and cooperative inquiry process.

Many of these letters were given to the members of the action research group with the expectation that they would negotiate with me to obtain special concessions. If no direct response in terms of special consideration was forthcoming then the author of the letter would often generate gossip about the integrity of the group member. As the intervention proceeded, a clear link developed in the minds of association members between literacy and the ability to influence decision making. Members saw private letters as a means of discretely shaping my influence on decision making within the action research groups. Thus there was a developing association between tangible skill acquisition and empowerment.

Seeking diverse opinions, had potential to undermine group solidarity, which most admitted was necessary to interface effectively with local authorities on a variety of issues. In the first instance the effort made to seek and debate diverse views served to exacerbate existing tensions within the association and place considerable pressure on those in the action research groups.

6:4:2 The role of the researcher

I engaged in the situation at Djibo with the intent of developing a reflective participatory consciousness and participatory relationships within a community of inquiry. However, a participatory relationship was a new type of intervention
relationship for the gardeners at Djibo. While I felt a participatory relationship was important it was also necessary to make my role and relationship understandable to the gardeners. The gardeners obviously assumed that I had resources and knowledge that were useful to them. Those of Fulbe culture (who were the majority in the association) assumed that it was preferable to negotiate useful individual relationships rather than cooperate within a community of inquiry. They reasoned that I should maintain a superior status and evidence this status by using ‘my’ resources to develop strategic relationships. These assumptions while natural were not conducive to developing participatory relationships.

Some commentators on participatory approaches would argue that participatory relationships are more likely to be found amongst people like the Fulbe or Maccube than in western societies. Fals-Borda and Rahman (1991: 5) describe action research among oppressed peoples and maintain that such relationships are ‘rooted in the cultural traditions of the common people … which are resplendent with feelings and attitudes of an altruistic, co-operative and communal nature’. However, these comments appear rather idealistic and such relationships were not obvious among the Fulbe. Riesman (1977: 179), in his study of the Fulbe Jelgobe, even goes as far as saying that cooperation, ‘in the sense of working together for a common purpose is practically nonexistent among the Jelgobe’. Perhaps the only social relationships that come close to being altruistic and cooperative were within the family. Instead of cooperative endeavour, there are numerous individual arrangements that Fulbe make to help another person. These efforts to help were not always in response to a need. They were often a way of cultivating a relationship that could be helpful in the future. These constantly renegotiated helping relationships were however useful models in
setting up an inquiry community. They were in fact helping performances that were constantly re-adjusted to cope with changing circumstances. They were a model of ‘reflection-in-action’.

There were some roles that were potentially useful for me to adopt in participatory inquiry. The Fulbe and Maccube often called me Moodibbo or balloowo. I was called a Moodibbo because they believed I had accrued knowledge and wisdom. Being called a balloowo (helper) meant that I was open to helping individuals if they could successfully negotiate with me or use one of the action research group members as an intermediary. It must be said that I had a history of operating in both these modes. Most people in Djibo knew of my religious, literacy and famine relief efforts over a number of years.

The role of Moodibbo does have a wider connotation than just that of a religious teacher. It can simply imply a learned person whose views and judgements are assumed to be more credible than those of the average person. However it has some negative connotations. Many Maccube and Fulbe see Moodibaabe as being devious and manipulative. An example is pertinent here. I was attending an the indeeri (naming ceremony) of a close friend’s newborn child. Many Fulbe and Maccube were seated and waiting for the Moodibaabe to come and perform their religious function. As several of them came through the gate in the walled compound a Maccudo seated behind me said in a loud stage whisper, “inan, jigaaje ngari” (literally, “hey! the vultures have arrived”). This was a reference both to their number and their anticipation of gifts.
As a Moodibbo I should have knowledge and wisdom enough to control all aspects of engagement. However, if I was intent on facilitating an open dialogue then I needed to suspend the categorisation of various viewpoints and interpretations in terms of their usefulness and credibility. I had to attempt to treat all opinions and information gathered as a credible resource. This kind of democratic dialogue was something that a Moodibbo would not normally facilitate.

If the emphasis was on the author’s role as a balloowo then the preferred method of interfacing was by the negotiation of individual, and preferably confidential ‘contracts’ of cooperation as mentioned previously. The ground for these negotiations was usually prepared by the giving of gifts. No matter how poor people seemed they still tried to show that they had some mastery over difficult circumstances by giving a gift. Thus, in Fulbe social life a helper cannot help a group of people as there is not a common set of problems but ever varying situations of concern. In other words, one cannot have a collective relationship with a useful person except to the extent that there is potential for a number of people to be helped.

Neither of the above two roles fits that of a reflexive colleague in a community of inquiry. One is either assumed to be bringing wisdom to bear on situation or help individuals in difficult circumstances. Rather than just my wisdom and resources I was trying to support their collective wisdom and capabilities to improve a situation. I did not expect my participatory role to be understood in the early stages of an inquiry. However, I did attempt to use the emergent participatory process to contextualise this role. In Djibo my role involved a flexible interchange between providing resources and information and facilitating the conditions under which
various stakeholders could express divergent views and develop new thoughts about familiar experiences. However, my intent was to get all participants to appreciate that their wisdom, capabilities and resources were equally credible components of the inquiry process.

6:4:3 The inquiry burden

In action research all stakeholders are part of the problematic situation and ideally learn through changing or transforming that situation. This learning process ideally involves a more transparent dialogue and decision-making process where divergent views are debated and practical options negotiated. There is a need to continually re-negotiate cooperation on the implementation of practical options that emerged from these attempts at more transparent dialogue. There are thus repeated moments of re-negotiated cooperation rather than a stable consensus. This process was seen by many Fulbe as both a risk and a burden.

The idea of eliciting multiple viewpoints and using them to energise a sustained learning process appeared was a risky burden for many Fulbe. This more transparent dialogue was a threat to the Fulbe’s habitual ways of interfacing with outsiders. The Fulbe are consistently vague and indirect when communicating. This reticence to be explicit makes it difficult for them to be reflexive participants in an inquiry process.

There was a tacit assumption on my part that all action research group members would eventually be willing to divulge their views and interests and actively
participate in decision making. However, as Hardiman (1986: 65) says, 'it is a myth to assume that everybody wants to be actively involved in decision-making'. Similarly, for many Fulbe, the fact of being encouraged to critique was a risk. Not only were they being asked to be explicit, they had recent memories of their names being recorded at other project meetings when they had offered dissenting views. Thus I had to develop trust relationships in order to create a forum where dissenting views could be heard and increased potential for opinions to be expressed explicitly.

As mentioned in the beginning of the chapter, it was important also for the ‘action-researching group(s)’ to develop a rapport with the wider association members and manifest their integrity. The priority was the development of solidarity rather than harmony. But manifesting integrity was not easy for the groups for two reasons. Firstly, the bulk of those in the association assumed that the action research group members had a special relationship with me and that they had succeeded in receiving special help. This relationship was open to misunderstanding and often the subject of gossip.

Literacy in Fulfulde played an important part here in manifesting integrity. For instance when decisions about the price of subsidised grain, the actual placement of wells and the price of seed were made by the group the decisions were recorded in both French and Fulfulde. Copies were made available to group members when they communicated the decisions of the action research group and sought feedback from the wider association. Membership in the action research group was a real burden for some as they often had to refute gossip and listen to requests for special consideration from association members.
It was important to recognise this burden and not exploit the labour of these members of the action research groups. It was unrealistic to assume that altruism motivated these people to participate in these cooperative inquiry groups. Cooperating as members of these groups was not costless in terms of time lost. Therefore the question of compensation for this ‘cooperative work’ had to be discussed. I considered it important to make the question of compensation explicit in order to counter false accusations and protect the image of the action research groups. Making it explicit was not simple and the issue was never fully resolved.

6:4:4 Reflection on the past

Some of the reasons for the association’s problems began to emerge. Firstly the official ‘groupe ment’ or association structure and constitution were regarded as virtually irrelevant and too difficult to understand. Those, such as the teachers, who were able to understand the French wording of the lengthy government model documents, were not originally in positions of control. Despite the official structure, the group had developed its own authority structure, which revolved around five ‘coalitions’. Three of the coalitions were comprised of men from the three small villages on the outskirts of Djibo. One such coalition of families from nearby Firigindi had strong connections with the local Six S sponsored Groupe ment Naam. The other two were divided on ethnic lines- Fulbe/Maccube and Mossi/ Fulse. A retired teacher had become a de-facto leader of the Djibo Fulbe members. It was thus important that the action research groups reflected these emerging political and social networks.
Secondly, because the Dewral association was not effectively interfacing with other local and regional organisations, many association members had made alliances with networks outside the group. In fact some others in the gardens were already members of other ‘Groupements Villageois’ or the local Six S sponsored ‘Groupements Naam’. These village associations acted as extra networks through which people obtained seed, agronomic advice, credit and access to functional literacy classes. Some occupants of the gardens belonged to as many as five separate village associations. The members opportunistically and skilfully exploited these various groups and their associated networks according to their prevailing problems.

This trend had both positive and negative features. On the negative side this had contributed to a lack of solidarity among association members as some were receiving more inputs than others by virtue of the various arrangements made. However, of more concern were the arrangements made with wealthier people in Djibo. In some cases access to their garden sites had been used as equity in obtaining credit and this was entirely contrary to the spirit of the original access arrangements. From research into the situation it emerged that some in the association were really only involved as representatives of more influential Mossi merchants or wealthy Fulbe in and around Djibo. They were therefore open to manipulation by vested interests that were in conflict with their own.

On the more positive side, a number of potentially valuable networks had been informally linked to the association. For example, several members were involved with the Projet Agro-Ecologie (Graf et al 1989) run by German volunteers. As well as
the erosion control measures that were mentioned earlier in this chapter they were involved in developing village tree nurseries. Therefore rather than buying all trees from the Government forestry services it was possible to buy some trees from the families concerned and provide some cash income. It was also possible to profit from these men’s experiences by using them to design re-afforestation efforts within the gardens. Active cultivation of these networks by association members showed that they were already engaged actively as subjects of their own development. It also provided evidence that the informal networks within the association were becoming connected to larger regional development networks. This networking was encouraged as a valuable part of the inquiry process as mentioned previously in this chapter.

Enhancing these ‘connections’ became important in sustaining the association, but there were complications. For example, the question of seed supply became an important question in 1991. At the commencement of the association in 1985/6 seed was provided on credit and the eventual reimbursement was designed to underwrite future seed purchases. However reimbursement was minimal and individual members had taken to negotiating their own supplies. Those with connections to the Six S sponsored ‘Groupement Naam’ in Djibo were able to access seed easily and had been re-selling this seed to others. Thus the action research group acting as a management committee decided to use some association funds to buy bulk quantities of seed and make it available to members on credit or at a subsidised price.

By 1991 the Six S organisation had expanded rapidly to most parts of Burkina Faso from its northern Mossi plateau base at Ouahigouya. With the rapid development came a ‘bureaucratization’ of the organisation and a loss of responsiveness. Despite
participatory rhetoric, their approaches to village intervention became very
standardised without any real consideration of changing them for non-Mossi
populations. Organisation and supply of inputs became unreliable. Vegetable seed
supplies to Djibo became increasingly unreliable and so funds from Dewral’s
administration contributions had to be used to obtain supplies from the capital
Ouagadougou.

Purchasing bulk quantities of seed complicated the association’s activities. Members
were supplied at subsidised prices. Such was the pressure on seed supplies in Djibo
that many members immediately had the option of selling their seed at a profit to
other gardeners around Djibo. They thus kept returning to buy more. This pressure
instigated discussions about trading in seed and using the profits to benefit the
association. Profits from sales meant that the Dewral members had to decide future
options regarding seed supply and whether or not a trade in seed could be sustained.
Representatives of the group at Monnde So were also included in negotiations.
Eventually it was decided to continue seed sales with any profits being used to
subsidise seed prices for members.

Proceeds from sales and some food-for-work funds as well as grain contributions
from members were used to start a ‘grain bank’ after the 1991 harvest. While
commencing a grain bank increased the asset base of the association it also led to
friction among members. Questions were raised about the amount of money being
handled by the action research group. Hence a bank account was opened at the Djibo
Post Office and funds accounted for. However pressure to satisfy local demand for
seed and the increasing propensity for the group to allow credit to locals led to the demise of seed sales in 1992 due to non-reimbursed credit.

6:4:5 Developing solidarity

The association’s members were mostly men in real need and therefore not used to the responsibility of organising people and relating to government agencies. In other words, they did not have the expertise to organise in a cooperative fashion but were active in organising their own connections with various support networks. They were also much more vulnerable in poor seasons and thus were more apt to enter into manipulative credit arrangements and have fewer coping options. They also had a lower threshold to reach before migrating in search of cash income. In the rainy season they could not simply increase production by working both gardens and fields because of labour allocation problems and, often, because of sheer physical weakness. Really poor seasons such as 1986, where fields yielded poorly and the lake did not fill up enough to allow extensive gardening, meant that they were forced to migrate temporarily and leave the gardens unattended.

With the previous history of the gardens in mind, the first task of the action research group was to establish relationships with these various coalitions and networks in order to evaluate past experience and eventually develop an inquiry group that reflected the social networks within the association. The Dewral association did not correspond to any traditional institution, nor was it evident that any local institutional form could meet immediate needs. A group of relatively poor men who were heads of vulnerable households was expected to manage valuable commons land, negotiate
security of tenure, offset the influence of traditional elites and interface with provincial extension programs. Their efforts to accomplish these aims also had to contend with changes in government policy and several poor seasons (1989, 90 & 92) and one exceptionally good one (1991).

**Fig 6:14 Networks within the Dewral association**

As mentioned above the various connections members had made to other social and development networks had potential to undermine solidarity. It was important for the action research process to value these connections yet at the same time attempt to facilitate cooperation and solidarity. This was facilitated by the action research group representing the major networks (Fig:6:14) within the group as a whole. The first major network was that of town Fulbe and Maccube. Secondly, there were the Maccube and Fulbe from Firigindi some of whom had houses close to the southern end of the lake. The third comprised Town Mossi men who were linked to the local Protestant church and thus the initial project para-church funding agency (FEME).
The fourth comprised a mixed *haabe* group of town Fulse and Mossi with Islamic affiliations.

The organisation of the group since 1989 had evolved from a disparate amalgamation of coalitions who were often in conflict, to one where these coalitions were able to negotiate cooperation. For example in 1991 the consensus was that the group should focus on onion production, as onions were a saleable commodity in the local market and could be stored for long periods. The Mossi groups within Dewral had the most experience in onion production. These men had connections to Mossi villages on the road to Ouahigouya and in Ouahigouya itself where onions had been produced for many years. They were much more adept at establishing seed nurseries than most Fulbe or Maccube. Rather than continuing to distribute seed on credit it was decided that the Mossi growers could be contracted to establish the seed nurseries and then distribute viable shoots to members on credit. This acted as an extra source of income for those Mossi men concerned and removed the problem of poor seed germination rates. The expertise and network of contacts of one coalition was used for the benefit of all members. The buying of bundles of shoots from Ouahigouya made up any shortfalls. This arrangement persisted, as most Fulbe were not interested in spending the time on establishing the seed nurseries.

The group of literate young men were the source of many innovations. These were young Fulbe and Maccube with similar life experiences. They had travelled widely in search of work in order to pay the costs of marriage or provide for their young families. They were active in attaching themselves to NGO and government aid programs and had become literate in Fulfulde in the process. These were a group of
men who were most apt to experiment (the promotion and installation of rock bunds for example). It was through these young men that I was often able to forge links and promote interaction between the various social networks.

The association had reached a point where the different experiences and resources of groups within the association were valued. The focus in dialogue was not necessarily that of trying to synthesise diverse viewpoints into a consensus. Different groups within the association were able to take the initiative in implementing practical proposals such as onion growing and at the same time negotiate cooperation. It must be said, however, that this point had been arrived at nearly seven years after an initial naïve attempt to respond to food insecurity problems. The last three and a half years of this activity had been shaped by an intensive action research process.

6:4:6 Security of garden access/tenure

Some gardens were unused as their ‘owners’ had left the area or in one case had died. While the issue of succession was important to the overall issue of tenure it was seen as too difficult an issue to act on together with the rest of the urgent concerns. Post-revolution policy on tenure restricted the notion to a person’s capacity to evidence productive use of agricultural land. Thus it was more a question of sustained access to land rather than ownership. For instance some members of the CDR had attempted to exclude the schoolteacher Cisse from the original association, not only because he had been part of strike action but also because they argued that several old mango trees on his original garden plot did not evidence continual productive use. For the
CDR the only reason Cisse had for being included in the association was through previous ownership of a garden within the area to be fenced.

Thus, under the initial rules of the association, membership only guaranteed the right of access to the gardens. Once a garden was not being used productively the management committee of an association could cede it to someone else, but not necessarily to some one of the same family. The action research group was acting as a management committee but no precedents existed as to what constituted ‘productive use’ or what lapse of time in productive use signified that the garden had been abandoned. The owners of several gardens had migrated and left their wives to work the gardens in Djibo; thus the issue of succession became linked to a gender issue.

The post-revolution political climate and CDR policy concerning gender equity had certainly made the ceding of these gardens to the women concerned, a reasonable option. However, the action research group/ management committee was extremely wary of setting a precedent that was not aligned with the normal Fulbe or Maccube succession of productive assets. After negotiations it was decided to grant the women provisional use of these gardens until more general tenure concerns were addressed.

Irrigation of the gardens had been previously achieved by the digging of deep trenches to channel water from the lake to the gardens. With plans to introduce permanent concrete lined wells and the planting of five hundred mango trees, the issue of tenure or access rights intensified. Originally the occupants were only promised user rights to the gardens and members saw these rights as tenuous and open to manipulation by the CDR who could easily re-define the notion of ‘productive use’. This was not a satisfactory basis for the planning of wells and the future planting of fruit trees.
The issue was made more complex by the fact that some gardeners were occupying family plots that had been the subject of negotiations and exchange of gifts with the Fulbe chief in Djibo prior to the 1983 revolution, while others were newly installed on what was valuable ‘commons’ land. Even though the original rules of the association stated that access could only be guaranteed as long as the gardens were being used productively, those who were cultivating family plots clearly assumed that they had superior claims. Cisse the schoolteacher member of the action research group and his family were longstanding ‘owners’ of a garden plot beside the lake. In fact he had his traditional plot size reduced as a trade-off in securing steel fencing and he was firmly driving the focus on official registration of the association as a means of securing access to the gardens. Hence while the initial phases of the food-for-work program demonstrated active use of the gardens and improvements in infrastructure, official registration was eventually seen by most gardeners as an essential long-term security measure.

The death of one gardener from a lightning strike in his garden unexpectedly provided a chance to bring both gender and tenure issues into focus. Although gender issues regarding access to gardens had been previously brought to the action research group this opportunity was a chance to focus on the issue more publicly. Discussion within the group regarding a replacement ended in his wife being allowed to assume ‘ownership’ of the garden. She had two older sons who could work the garden, and was a member of the local women’s ‘Groupement Naam’. She had thus an extensive support network. Although some women had previously negotiated provisional access to parts of gardens, their access rights were now acknowledged to be the same as for
all other members. One suspects that the men were happy to allow this transfer as it
publicly set a precedent of transfer within the family.

From informal dialogue with some of the poorer members of the association it
appeared that they believed that the Djibo populace had sanctioned the gardens
because most of the men involved were poor and therefore could be influenced or
manipulated to yield access in the future. Thus these men feared that if ill health or
temporary migration prevented them cultivating their gardens for any period, more
influential locals could deprive them of access. Such members had initially resorted
to negotiating flexible sharing of access with other members of the group as an
attempt to evidence productive use of the gardens. Thus their first insurance option in
attempting to sustain access was to negotiate cooperation with other members. Some
of them had attempted to allow non-members access but other association members
opposed this. Extensive fruit tree planting had been planned but now emerged as a
practical proposal to avoid the poorer members becoming trapped into sharing
arrangements. It allowed them to demonstrate productive use even when periods of ill
health or labour scarcity prevented actual cultivation. However, security of tenure
became more firmly linked to official registration of the cooperative as people were
unwilling to plant numbers of trees or negotiate permanent wells without some
prospect of it.

Security of access to the gardens was clearly a factor in sustaining cooperation in the
action research program. Improvements in garden infrastructure through the food for
work program as well as plans to plant mango trees and dig permanent wells were
significantly increasing the productive potential of the gardens. While such practical
action was improving prospects of food production it was also increasing fears concerning tenure and promoting suspicion regarding some groups within the association and their links to other associations such as Six-S. Sustained access was thus a complex issue (Fig 6:15) and was linked to active use of the gardens, solidarity among diverse groups within the association, and registration of the association as a legal entity.

**Fig 6:15 Increasing security of access/tenure**

Over three and a half years the group managed to evolve to a point where there was credible dialogue among the several coalitions that was mediated by the action research group, which had become the association’s management group. In late 1991 the association as a whole was eventually registered as a ‘pre-cooperatif’ and thus able to officially access government agencies and other official NGO service networks. Registration was negotiated by the management group and supported by the fact that considerable garden production and regeneration of commons land had taken place over the three and one half years.
Perhaps the most important aspect of the whole action research process was that the newly registered group was left with a model of interactive and reflective learning. The inquiry or action research group had become the management committee of Dewral, which had become a legitimate legal entity (Appendix 3) among other development associations around Djibo.

The relief or food for work funding was designed not only to build an infrastructure that allowed for more sustained improvements in food security but also create space for stakeholders in the association to ‘risk’ participation and thus further refine the whole process. Those involved in the action research program at Djibo were however better enabled to ‘reach up’ (Hyden 1983) and ‘pull down’ (Roling 1988) locally available technical packages and services from a variety of sources. This was because immediate coping needs were being met in a responsive and flexible way that was informed by an action learning process, that encouraged diversity of opinion and continually re-negotiated cooperation.

6:5 SUMMARY

The Djibo situation involved a particular stream of events and stakeholder life experience. My concern was to use Participatory Action Research to reinvigorate a loose association of gardeners and respond to issues of severe food insecurity and security of access to lakeside gardens. A particular aim was to connect inquiry to individual and situational change. One recognised the agency of local people but also a need to increase their agency (knowledgeability and capability) in responding to an increasingly threatening stream of food insecurity events. As a researcher I brought a
set of values and experience of life at Djibo as well as a personal mission to use a participatory style of inquiry. However, one cannot mandate participation on any process. Therefore I needed to be reflexive in facilitating an inquiry process in which both the situation and the process of inquiry itself were objects of study. The so called ‘general’ action researching group was important here. The sole function of this group was to reflect on, and critique the inquiry process as it evolved. It was this group that was influential in developing a local style of participation that was ethical, effective and relevant.

There were in fact two parallel processes, one of pragmatic and contingent cooperation in dealing with urgent issues and an emergent and heuristic process aimed at developing a critical learning community. Full participation of all association members in these processes was impractical. There was a need to develop multi-layered participation. This consisted of forming and nurturing an action research group and facilitating their interaction with the wider group and outside stakeholders. This group more closely reflected the social networks within the association as the process proceeded. The inquiry activity within this group more closely approximated participatory inquiry culture.

The local or contextual participatory action research culture involved a particular set of relationships and roles. There was a need for me to exercise an understandable role and to accommodate the inclusion needs of those within the action research group. My role evolved to be a blending or adaptation of two locally understandable ones. These roles were those of a helper with necessary resources, and that of a Moodibbo who had useful knowledge. Local Fulbe culture did not have any roles or relationships
that readily conformed to those needed to sustain the interactions and dialogue within
a critical learning community. I thus had to be aware of the social implications of
critical reflection. There are risks and consequences involved in critical reflection.
The Fulbe were not used to public critique and debate. They much preferred to
express their opinions in vague or subtle ways that allowed them room to manoeuvre
in debate and decision making. Thus their inclusion needs were those of learning how
to critique and debate in the process of formulating and implementing action plans. I
had to help various individuals in the group work out ways to approach the decisions
for change that emerged from dialogue. Of vital importance to the overall process was
an increased understanding of the local social networks.

The action research group designed a flexible food-for-work program that attempted
to meet the immediate household consumption needs of association members while
also supporting work to improve the infrastructure of the gardens. This involved work
to improve fencing, plant trees and hedges, dig wells and build erosion control banks.
Some 17,000 trees (mostly local species) and 1300 fruit trees (mango and citrus) were
planted. Twelve concrete-lined wells and 2.4 kilometres of laterite stone contour
banks were erected. These measures were supported by the food-for work-program
and enhanced the productive potential of the gardens. The food-for-work program did
not just involve the distribution of food but was flexibly linked to local coping
responses. A link was made to the strategic manipulation of household assets as a
coping measure. Some members, for example, negotiated repairs on assets such as
carts or received cash payments for work such as designing erosion control banks.
The later was an example of using the training some members had received from
other development networks to improve the garden infrastructure. Members of the
action research group had prior experience of other food-for-work programs. I facilitated debate as to which was a relevant model to implement for the association members. Connecting the food-for-work program to household asset management was an option I chose to pursue in conjunction with work on erosion control.

There were also important organisational outcomes. The action research group evolved to become the management committee for the association. It was this group that interfaced with local authorities in dealing with theft of garden produce and damage caused by cattle. This association was eventually registered with local authorities under its name of Dewral. It thus became a locally legitimate organisation that was able to access Government extension services. The reception of official recognition was an important part of assuring security of tenure for those operating the gardens. They thus had increased agency. They had an improved position by virtue of being a registered organisation and an improved infrastructure and set of resources. These factors taken together made a difference in their on-going struggle to cope with food insecurity. They were also left with a model of a critical learning community that could help the management committee choose among competing options and implement responses to future streams of events that threatened food security.

Before going on to analyse the action research process at Monnde So I collated a series of pictures into a photoessay. This photoessay provides a glimpse of Fulbe livelihood activities and some of the action that the action research groups organised at Djibo and Monnde So.
PHOTOESSAY

Fulbe livelihood activities and some of the action research activity

Understanding Fulbe livelihood activities was an important to developing an appreciation of food security issues. In trying to find out about Fulbe livelihood activities I often visited wet season camps north of Monnde So (above) where Fulbe had moved their animals to avoid conflicts over crop damage. At Pilaadi (below) near Monnde So, Fulbe had moved in order to cultivate nearby fields. Relaxed, informal participation in livelihood activities was an important means of developing trust.
The poor and those who have migrated to Djibo were involved in intense competition over access to millet fields. Fields were scarce because large areas of fields near Djibo (left) had been degraded due to intense cultivation and had gone out of production during my stay. Monnde so lies in the green belt of vegetation behind the laterite mesa formation in the background.

In a similar way areas of Flub rangeland near Djibo (below) had been degraded due to intense activity. Nearly half a metre of topsoil has been removed from this area by wind erosion.
The Fulbe herd their cattle in various patterns to the north of Djibo in the dry-season (above) and the wet season (below). Participating in herding activities enabled me to appreciate the complex patchiness of the rangelands north of Djibo. Varying spatial distribution of the rains in each season meant that Fulbe shepherds had to adopt different herding strategies each season.
A moring cattle takes a good deal of time and labour during the dry season when Munde So Munde So are seen here watering their cattle in the dry lakebed during the 1992 dry season. During my various stays in Munde So I formed close friendships that enabled me to more fully appreciate rural lifewords.
During the dry season, water at Monnde So is obtainable from wells at a depth of 4 to 6 metres. In negotiating space for dry season gardens it was important to understand where viable areas for wells were, and which social networks had priority of access to these areas. Even though members of all social networks agreed that dry-season gardening was a viable option to improve food security it took many months to negotiate a suitable area for gardens.
Siremba from Mannde saddling his horse in preparation for a trip to the Djibo market. He was the only horse at times to go riding around the lake. In 1992 he sold the horse to Mossi farmers for ploughing work. It was the only working horse in Mannde.

Siremba from Mannde, an eloquent teller of stories and proverbs which is befitting of his caste role. I used many of his stories in my work and dialogue with others.
The cattle wait patiently near the Mazibuko compounds to be milked before being shepherded to dry-season pastures several kilometers to the north. Deval rights from Vnomde So milks the family house cow. She was a close friend of my wife and a member of the village CDR and valuable advocate of women’s concerns. Her help was invaluable in understanding food security issues from a gender perspective. She unfortunately died from malaria in 1986.
At Monde so there were many Family compounds with both mud brick houses and straw huts (above and below). The calves and/or sheep and goats were kept in stick or thorn enclosures. According to the old men the bare area behind the mud-brick houses (below) was dense scrub during their childhood.
Starting with the rains, the corn field looked promising. The central manured area of the field responded well to early rains. This manuring arrangement was a valuable means of understanding the Buloba's annual farming performance.
A field has been harvested, and the workers are seen extracting the rice from the sheaves in the field. A family is helping to bundle the sheaves during harvest. The resultant sheaves of rice are the standard post-harvest unit of exchange in the village.
100 Mango trees were planted in the gardens at Monnde So (above). Attempts at rice growing were also made at by some of the Moodibaabe (below). The gardeners were free to plan the use of their plots themselves. The food-for-work program provided seed, basic tools and fruit trees. In addition to the fruit trees some 6000 trees were planted as hedges and windbreaks.
The action research group at Monnde So negotiated the placement of the dry-season gardens over several months. Once final approval was secured, the group organised the erection of fencing and decided just who would have access to the gardens.
The digging and cement lining of wells at Djibo (above) and Momdoko (right) was an important improvement to the dry-season gardening infrastructure at both locations. The completed wells had abundant water at a depth of 3–5 meters during the dry season.
The propagation of *Andropogon gayanus* in Allay's field at Monnde So was a useful addition to his income generating activities. This grass is used extensively for the weaving of prayer and bed mats and also the loosely woven mats (*dengeleeji*) that are used in hut construction.

Windbreaks of *Bauhinia rufescens* in the gardens at Djibo were both a means of dividing gardens and protection crops.
Gardens near the lake at Djibo (above) were usually surrounded by stick or thorn fences. These stick fences were replaced (below) with both wire netting and an exterior hedge of *Euphorbia* balsimifera, which is both drought resistant and unpalatable to livestock. This double row of fencing protected the gardens from animal damage. The original plan was to remove the wire fences once the hedge provided sufficient protection. After three years of hedge growth this plan proved nonviable.
Some of the key stakeholders at Monnde So (above). Sambo (in the yellow hat) was a key person in the action research group(s) at Monnde So. Members of Dewral (below) on the day of the association’s official registration. Ali Cisse, a key stakeholder and ‘secretary’ of Dewral is holding the official papers in his hand.
I celebrated with Ali Cisse and the others on the news of the official registration of Dewral. It was an extremely pleasing result after three and a half years of collaboration. An unexpected result from the action research process was the usefulness of the skills learned in improving the garden fencing. I trained some Maccube and Wayi lube to cut and drill holes in the steel posts. Eventually I also trained them to repair donkey carts. Several of these men were able to contract out the newly acquired skills to other groups in the area who were erecting steel fences. This became a useful income generating activity for them.
CHAPTER: 7

MONNDE SO DRY SEASON GARDENS.

7:1 Introduction

The activities at Monnde So commenced several months after those at Djibo. The people at Monnde So were well aware of the Djibo gardens and my association with them. I chose Monnde So as a location for several reasons: it had a good permanent source of water; I had some experience of the social networks there and it was in close enough proximity to Djibo to enable interaction with the association members there. I was preposing a very significant injection of resources into a community already active in coping with food insecurity. I was not surprised therefore at the overt and covert struggles that ensued over just whose interests would prevail in decision-making and what issues would be on the decision-making agenda. In the first sections of this chapter I will give some background to the situation at Monnde So and some describe some practical aspects of the food-for-work program.

Many of the important issues at Monnde So were process ones and I will outline these briefly here. Observable conflict between the Fulbe and Maccube was a greater factor in the Monnde So process than the Djibo one. At Djibo there was more of an inclination to defuse or avoid potentially conflictual situations. I was careful therefore not to model the Monnde So process on the Djibo one. It was necessary to develop a participatory process that suited the ‘rhythms of the local community’ (Thrupp et al 1994: 170). There was considerably more pressure from the Fulbe at Monnde So to
‘beg’ for individual help. There was more pressure because I was considered a longstanding guest.

As I cultivated trust relationships with different social networks I tried to develop sustainable strategies that enabled cooperation between the opposing interest groups. It was a matter of creating multiple situations where different social networks would prevail in decision-making at different times. Although there was much observable conflict, there was also a great deal of covert conflict. The Fulbe’s reserve in public was an important factor in negotiations. Even in the context of the action research group there was often considerable difference between public discourse and the private ‘re-interpretation of that discourse. Naturally, both Fulbe and Maccube continually re-evaluated the costs of confrontation.

Consensus around a desirable course of action was an unrealistic goal. There were few grounds for a genuine consensus on courses of action and a pathway for the inquiry to follow. Action on household consumption needs was often required before any form of consensus could be achieved. The focus of much of my activity was therefore the negotiation cooperation pacts with diverse individuals and various opposing interest groups. I was well aware that as a temporary resource-bearing agent I could force concessions and trade-offs in pursuit of an artificial consensus, thereby glossing over deep-rooted conflict. I purposely chose to explore and unpack these conflicts in seeking to facilitate equitable improvements in coping capacity.

In negotiating cooperation it was important to be aware of the various factors that motivated participation and cooperation. Individual and group appreciation of the
severity of the seasonal food insecurity scenario was a motivating. Severe food insecurity scenarios caused some to become more conservative regarding change to traditional ways, for others it increased their willingness to experiment and borrow different techniques.

Both the voicing of opinions and the bringing of certain issues to the decision-making agenda in such a participatory process were not costless. It was obvious the many people viewed participation in the inquiry process as an onerous task. People, especially women were eager to have immediate consumption needs met through the food-for-work program but saw participation in planning it as time consuming and threatening. They needed to get on with their lives. The participation in the inquiry process was multi-layered.

7:2 The Villages at So – background

Gorowol So (Fig 7:1) is the name given to the water course adjacent to the village of Monnde So which, is some ten kilometres north of Djibo (See Fig 6:1 for map). It is an important permanent watering point for the Fulbe. At the height of the dry season (March to June) livestock from up to twenty kilometres away are watered there. The Fulbe village of Monnde So and the Maccube villages of Hubere So and Dadungal are all close to this water course which is transformed into a temporary lake for up to five months following the rainy season.
The Maccube villages (*deber*) are composed of tightly clustered mud huts that are arranged into family compounds. They differ considerably from the more expansive arrangement of mud houses and straw huts that comprise the Fulbe village of Monnde So. At Monnde there is a loose arrangement of mud huts as well as some more traditional straw huts (*bugua*) around a mud brick mosque. The Moodibaabe and the Maabuube inhabit this central area nearest to the lake and mosque (*misiirde*). Scattered around the outskirts are the grass huts and occasional mud brick compounds of the shepherds, including the compound of the Jooro.
Hubere So is a Maccube village in decline. Its marked decline over the last fifteen years is largely due to the degradation of surrounding millet fields and consequent movement of people to Djibo and further afield. In the past, it had a produce and small livestock market on a three-day rotation basis with two other villages nearby. In the mid-eighties the market ceased to function. The remaining fields (gese) between Hubere So and the lake at Monnde So are the prime fields, as they are constantly manured in the dry season by herds of cattle waiting to be watered at the lake. Many people who have left the village to live in Djibo still travel to their fields by bicycle or temporarily camp in the fields while cultivating. However, while maintaining contact with some family networks in Hubere So, they have also joined extra-family social networks in Djibo. Others have moved west to Baraboule or north to Petaga and So Bulle in order to exploit newer bush fields towards the Malian border. The majority of fields along the road between Hubere So and Djibo are no longer viable, as up to one metre of topsoil has been removed by wind erosion.

The picture then is of a relatively rapid decline in field productivity and a re-orientation of social networks as people re-locate to larger urban centres. These factors have diminished the intensity of economic and social exchanges between the three villages of Hubere So, Monnde So and Dadungal. However, political relations between the three villages have remained strained and it was this tension and conflict that shaped the action research process. The actual origins of these tensions were obscure but widely acknowledged in the surrounding area.

Tension over many years between pastoralist and former captive communities eventually caused the provincial administration to create two post revolutionary
village bodies (Committees for the defence of the Revolution – henceforth abbreviated as CDR) where normally there would have been one. The Maccube from Hubere So had memories of being fully or partially excluded from the benefits of previous projects by the Fulbe at Monnde So. Paradoxically, this manipulation had continued during radical reorganisation of village politics following the 1983 revolution.

![Diagram of villages](image)

**Fig 7:2 The villages of So**

Dadungal (Fig 7:2) had better relations with the Fulbe at Monnde So as it was smaller and more cosmopolitan than Hubere So. Along with the Maccube there were several destitute Fulbe Jallube families who had migrated from the Hombori region in Mali and an itinerant Moodibbo who camped with his animals and conducted a Koranic school in a field adjacent to the village. I negotiated a share-farming arrangement
with Allaay, an old pullo, who resided on the outskirts of Dadungal. A large millet stalk shelter near his house became a strategic place for informal dialogue and negotiations, as it was a popular and ‘neutral’ meeting place for Maccube from Hubere So and also the Fulbe from Monnde So.

The relationship with Allaay became very important in the ensuing negotiations and I should diverge here for a moment and explain the significance of this relationship with Allaay. In effect I was Allaay’s guest, and this was a readily understandable social relationship that posed less ‘political’ problems for the intervention. Allaay became a key informant who was not seen by local Fulbe and Maccube as a ‘political’ threat to project negotiations. Local stakeholders often voiced their opinions through him as an intermediary. As mentioned in the preface I spent almost the entire year of 1980 living in the village of Monnde So with my family. Our purpose was to improve our ability in speaking the Fulfulde language. We developed friendships with those in the village, especially some of the Maabuube who lived adjacent to our house. I decided that I should not use some of these close friends to help me facilitate the Participatory Action Research process. I thus chose Allaay who was further removed from the political and social intrigues of Monnde So to help me with the inquiry process.

The traditional jooro (chief) while still resident at Monnde had little influence on the course of events that led to the establishment of the gardens. Since 1983 most power resided in the CDR and especially the ‘delegué’ or chairman of the committee. He
was a wealthy and influential shepherd and not related to the chief. He also occupied official positions in several village associations.

Clearly there was no ‘consensual community’ in the vicinity of the lake at So. However it was in the interest of the gatekeepers and the CDR to paint a picture of community solidarity. They were expert at strategically presenting an image of solidarity to project facilitators.

The Fulbe and Maccube however, negotiated many informal economic and social arrangements between each other. I considered that an ‘aggressive partisanship’ (Mehta 1997) with the Maccube, would have complicated the longstanding informal and dynamic arrangements between the Fulbe and Maccube that undergirded existing coping systems. Taking an overt activist position would have tended to formalised lines of tension and reduced the prospects of negotiating cooperation in the inquiry process. Since I was taking a livelihood focus on food insecurity I had to tread more warily. The lessons I learned from my initial experiences at Djibo indicated that there was a need for a flexible approach that involved a more open and inclusive dialogue yet which strategically supported the Maccube by taking ‘operational clues’ (Mosse 1994) from their ongoing local struggles with the Fulbe. My understanding of the social and political networks at Monnde So was important to establishing the inquiry process. I was much more familiar with these networks than the ones that were influencing the Djibo situation.
7.3 Reinforcing coping capacity—increasing the efficiency of opportunism

There was intense activity around the lake area at Monnde So. Several families had created gardens or mango orchards on the shores of the lake. Both Fulbe and Maccube had experimented with dry and wet season gardens over many years. However, many had given up because they were no longer able to protect their gardens from animals. Underground water is abundant at a depth of three to eight metres. As part of the food-for-work program the action research group organised the planting of 5000 trees (mostly local bush-food species) and 300 fruit trees (mango, citrus and guava). Altogether eight cement-lined wells were dug. The gardens were designed to add to the local portfolio of coping options. The food-for-work activities were locally designed to improve resilience to food insecurity.

At Monnde So the food-for-work activities supported water penetration works in millet fields, local millet field work parties, erosion control and dry-season garden infrastructure development. It was quite common for working parties to be organised during the rainy season. Varying arrangements were made by the action research group to support these work parties. For example, several female-headed families at Dadungal had their fields cultivated by young men. The women were given enough grain to prepare the traditional meal for the young men who also received quantities of grain.

The food-for-work program was locally designed by the action research group to fit in with the rhythm of seasonal work practices. As was the case in Djibo, an important aspect of the design of this program was the disposition to take a livelihood view of
food insecurity. The way in which people choose to view food insecurity is an important aspect of food-for work program design. It is reasonable to suggest that most projects tend to view it from a male point of view. They concentrate on efficient delivery of food to male heads of families and falsely assume that they will behave altruistically. It was clear from my experience that a good deal of food supplied at subsidised prices to the men at Monnde was immediately converted into cash in the market at Djibo. It never reached their families. After some initial distributions of food using this male model the action research group began to incorporate some gender perspectives into the design of such programs. Dewal, the female CDR representative was instrumental in this change.

Rather than reach a consensus about about a rigid style of intervention there was a determination to negotiate cooperation in meeting the needs of different interest groups at different times. Taking a more female view of food insecurity was an example of this. In Sahelian societies such as the Fulbe, women are at the forefront in organising household food supplies and also the modifications to consumption inherent to many coping options. It is often able-bodied men who are the first to ‘desert ship’ in a food crisis, engage in physical conflicts over food or arrange ‘seasonal divorces’. The hungry season is the time of many divorces and temporary desertions.

To a Fulbe woman, food shortage is not just about hunger, but about the erosion of ‘male normative commitment’ (Kabeer 1994) and marital conflict that can lead to the collapse of conjugal entitlements. To a male, one can talk of assuring food supply but to a woman it is a matter of assuring normative conjugal entitlements to food and
shelter. Including gender perspectives meant that women knew when and where the public distribution or sale to men was taking place so that they could ‘negotiate’ its safe arrival home. The accent was on public provision of food to a household. The amount of grain supplied to each household was documented and the women’s representative on the CDR had access to these records. In addition, millet grain was not just sold in 100 kilogram sacks but also in smaller 1.8 kilogram tins (konkooru) suitable to be bought by women themselves with the small amounts of cash they had at hand from milk sales and other commercial activities.

The 1990 season was a bad one and the out-migration of men was significant. Both Djibo and Monnde So experienced an influx of women from bush camps. Various ‘bartering’ schemes were negotiated with women to enable them to access grain supplies as many men had already out-migrated with the cattle or to the goldfields much earlier than usual. This involved negotiating consent to use food for work funds to buy women’s handicrafts (mostly mats or cekke). These mats were either prayer mats or bed mats and as such were marriage gifts. The harshness of the season meant that many marriages were postponed and there was little sale for these handicrafts. It was negotiated to buy and store these mats and guarantee ‘re-sale’ at the same price once potential for sales improved. On several occasions a load of mats was sent to the capital where there was a good market for such handicrafts and the funds realised from the sale were distributed. It must be said that I took responsibility to prioritise women’s needs and issues at that time as the woman CDR member of the action research group had died of malaria during the rainy season.
Penetration of water in the fields was an important issue. Most rain was in the form of storms and water quickly ran off the fields, causing erosion. Fulbe and Maccube had tried woven millet stalk or stick fences or earth contour banks to stem erosion. Permeable rock bunds (Gubbels 1993) were being increasingly used in Mossi areas in the Yatenga and Baam provinces to the south and west. They were being introduced around Djibo but suitable rock reserves were a long way from Monnde So and not many Fulbe possessed carts. Arrangements had to be negotiated with the Maccube or less costly ways experimented with. A learning experience with Allaay can illustrate some collaborative action learning in attempts to stem erosion and increase penetration.

Allaay was an old man with only 2 cows left from a herd of sixty and no older sons to work his field or herd. He owned a field adjacent to the lake at Dadungal. The author had entered into a share farming relationship with him as he was previously in the position of having to hire labour to cultivate his field. Many times his resources stretched only far enough to cultivate half a hectare plus a small lakeside garden. This relationship became important in informally accessing some of the social networks within and between the villages around the lake.

My aim was to be an active participant observer and collaborate with Allaay in action learning. Tied ridges, zai holes and rock contours had often been promoted in the region by NGO groups as effective ways to ameliorate water penetration, reduce erosion and thus stimulate productivity. However, as mentioned in the Djibo case study, they require heavy labour input (usually in the dry season) when many men
have out-migrated to find work, pasture cattle or try their luck in the gold fields at Arabinda east of Djibo.

Normal cultivation practice in the first hoeing (remude) is to hoe away from the emerging shoots and pile the soil into small conical mounds. Allaay and some other people he had hired however had found it easier to pile the soil into longer ridges that coincidentally had slowed water flow down the slope. After inquiry this was not seen to be intentional. With a little extra effort the hoe-ridging pattern on part of Allaay's field was changed to pile the soil into half moon shapes that trap water and allow penetration. Although the rains finished early (September) during the 1989 season the portion of the field that was modified in this way was the only area to yield any millet. The results were enough to cause interest and to allow this method to be used by communal work parties on various family fields during the next season. This 'coincidence' was turned into a process of experimentation and learning. This half-moon ridging pattern was also used to control erosion and revegetate lakeside land in the Djibo gardens in conjunction with the use of 'zai' holes.

Allaay's field also contained substantial patches of Andropogon gayanus. This is a fast disappearing perennial grass used in hut construction when woven by men into dengeleefi (loosely woven mats) and bed and prayer mats when woven by women. Both sorts of mats are important income sources. A forty-centimetre diameter bundle of such grass is worth between 600-1000CFA, depending on the seasonal availability.

The suggestion made during an overnight stay at Allaay's house was that he actually expand the area under Andropogon Gayanus and use it as a cash crop. Discussion that ensued saw plans elaborated also to use the grass in association with permeable rock
bunds in order to control erosion on a badly eroded section of his field. The erosion control could thus potentially yield income directly through grass sales and indirectly through increased chances of crop survival due to increased water penetration. This also helped women at Dadungal who thus had increased access to handicraft materials. The women either purchased the grass bundles or received them on credit which was reimbursed when the mats were sold.

The urbanisation of animals (Dumont 1986) was a problem trend mentioned in the Djibo case study. Every day during the dry season a procession of donkey carts emerges from Djibo and heads out to rake up dry grass to be sold as livestock feed in Djibo. This has also had an effect on the quality and prevalence of pasture around Monnde So. The pastures in the vicinity of Monnde So had already suffered by virtue of the fact that the lake and wells were permanent water points. Concentrations of animals waiting to be watered had reduced the quality of pasture considerably. By cutting hay during the wet season, the quality of fodder is increased as is its saleability and the germination of annuals is not as severely compromised. The people at Monnde and Hubere So were able to profit from this as they lived much closer to viable grass stands.

Haymaking became an important additional coping option and also a lesson in activating some of the existent social networks and making connections to wider networks in the local region. In the context of adding to coping options the aim was to exploit the diversity of knowledge and resources belonging to members of these networks. Each of these networks, had contacts with other NGO activities and government extension programs. Eventually the action research group did have
representatives from most important local networks and people associated with each network were encouraged to use their ‘representative’ to reflect on previous development experiences and bring ideas that would be useful in the Monnde So situation.

The drive to consider haymaking is one such example. It came from Sambo at Monnde So through his contacts with Maccube at Se Ganoua. A Swiss based NGO had introduced haymaking schemes in the region that were combined with credit for animal breeding. Sambo was one of the only people who had profited from the scheme at Monnde So and was immensely proud of his two large haysheds in his compound. He used this hay to feed selected livestock and sold some hay when convenient.

In the 1990 season Sambo and the action research group organised a trip to Se Ganoua to observe haymaking in motion, look at storage options and the equipment needed. On return, the author generated discussion about the possibility of using these techniques in and around the local area and making the innovation available to a wider range of people. Options explored included dry season feeding of livestock and commercialisation of the hay, as a potential market existed in Djibo. Women were included in some discussions, as a viable source of hay could improve the availability of milk to the household and facilitate their commerce in house fed livestock. The outcome was consent to use some of the food for work funds to buy fifteen scythes to more efficiently cut grass and organise some unused granaries to store the hay. The scythes were expensive (13,500 CFA) and beyond the reach of most, but local cutting
implements could not cut sufficient quantities to make the exercise viable. The idea was to pool these tools and make them available to whoever needed them.

The accent was not so much on adoption of technology, as it was doubtful that the scythes were a sustainable technical option, but the aim was to enable locals to explore and critique options and techniques already experienced by some within the local area. After these first trials another aspect was added: the exploration of the possibility of local blacksmiths (waylube) manufacturing the scythes. Different experiments were tried, from altering and retempering Chinese-made machete blades to using steel from old automobile springs. However, no satisfactory product eventuated.

Animal traction was also a concern that emerged from haymaking. Carts were needed to transport the hay, but there were few available amongst the Fulbe. Some Fulbe had carts that were in a state of disrepair, so a linkage was made with the association at Djibo in an effort to repair these carts, as well as negotiating transport with local Maccube.

7:3:1 Facilitating the interaction of local social networks

At Monnde so there was clearly no consensual community. As my understanding of the social networks and the ways in which they were mobilised evolved, I attempted to stimulate interaction between these diverse networks (Fig 7:5). There were elements of both cooperation and conflict in the relationships between these networks. My aim was to increase potential for cooperation and interdependency in
learning in an effort to increase the effectiveness of coping options. These local social networks each had different resources, information flows and relationships with wider networks that had to be maintained and consolidated. As a guest with a long history of involvement in the area I managed to develop trust relationships with key people in a number of these social networks (Fig 7:3).

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**Moodibaabe** network involving Moodibaabe at Monnde So (MMS), Djibo (MD) and itinerant ones (MI)

**Maabube** network involving Maabube at Monnde So (MM), and Djibo (MAD) with a key person being Sambo at Monnde So (SM)

**Fulbe** network involving Fulbe at Monnde So (FM), Djibo (FD), Meena (FME), Baraboule (FB) and Maccube at Dadungal (FD)

**Maccube** network involving people at Hubere So, Djibo Se Ganoua with key people being Kalahaldi (K) at Hubere So and Sambo at Monnde So (SM)

**Literate young men** involving Fulbe at Monnde So (lymMS) and Maccube at Hubere So (lymHS). Key people Lobbo at Monnde So (LMS) and Husseyni at Hubere So (HHS)

**key people**

(Fig 7:3) Principal Networks in the Monnde So Situation
The Moodibaabe network provided the opportunity to informally experiment with growing rice in the garden areas. I had falsely assumed that they would be the most conservative social in coping with change. However, it was clear that this network had initiated and maintained relationships with a number of outside networks. One Moodibbo had gained access to a plot in a rice project near Arabinda to the east. He was interested in helping his brother experiment with rice at Monnde So. He had expertise in rice growing and also had access to heavy yielding seed varieties. I chose also to include some local bush varieties of rice in the experiment. Bush rice (maaro ladde) was an important bush food in the area north of Djibo. I was attempting to re-introduce it to the lake at Monnde So. There had been significant areas of it around the lake in 1980 when I was living there but it had since been grazed out. We also experimented with different sowing methods. After the first rain we sowed the rice directly into small pockets dug in the lakebed. We also complimented this sowing by planting seedlings from the seed nurseries directly into the shallow water when the lake filled. These experiments during the 1990 and 1991 seasons yielded only small amounts of rice but the rice stalks did provide some extra fodder. After the 1991 season there was no discernible enthusiasm to continue with the rice experiments.

Despite my initial reluctance to focus on millet farming several Maccube expressed an interest in experimenting with shorter season millet varieties in their gardens. I decided to use the action research groups to organise some informal experiments. These experiments eventually spread from the lakeside gardens to the surrounding fields and yielded some insights into the adoption of new techniques. Using my contacts with the Fulbe at Meena and Baraboule I obtained some shorter season (ninety-five day growing period) Malian varieties of millet from the Boni region in
Mali (gawri hayre). Some of these Fulbe used such varieties in their fields 60 kilometres north of Djibo and others had relatives who traded in the border markets markets at Petegoli. I also had made contact with some Fulbe Jelgobe who had migrated some four hundred kilometres to the southeast near the Republic of Benin/Burkina border. They had had some experience with shorter season varieties from Niger, which the local Gourma farmers used to compliment their longer-season sorghum crops.

The Fulbe and Maccube at Monnde So were aware of these varieties but it seemed that food crises over the previous years had stimulated conservatism as far as choice of variety was concerned. They tried as far as possible to sow local varieties that were more socially acceptable and which provided the correct taste when cooked. However, after informally interviewing some 50 farmers each season, it appeared that only slightly more than half of those interviewed could actually verify that the grain they were sowing was local millet. Other farmers mixed their supply of local seed grain\(^1\) with grain purchased for household consumption in local markets. Many of the poorest farmers resorted to sowing whatever millet grain they could find or managed to negotiate seed grain on credit. This was usually market grain from Djibo, or grain distributed in the food-for-work programs. By the time of the first rains this market grain usually consisted of longer-season millet varieties trucked up from the south of Burkina. Hence, in actual fact, there were a number of varieties sown each year.

Often each field was sown with a number of different varieties. To complicate the

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1 Local seed grain was expensive if one had to resort to buying it. It was often 3-5 times that of normal grain prices. Local Merchants often bought and stored the best local grain for sale at premium prices as seed. In the second year of the inquiry process I made a concerted effort to buy such seed grain and make it available to those involved in the gardens.
picture even further there were farmers migrating into the area and bringing their own seed varieties with them.

I encouraged these informal experiments with the short-season varieties. This experimentation was aimed at enabling more flexible responses to the variable rainfall scenarios. However, experimentation during the first year was very tentative. The Fulbe and Maccube interviewed advanced several reasons for their tentativeness: these were varieties belonging to other Fulbe/ Maccube social groups; they difficulty in tying the short thirty centimetre heads into the traditional bundles (bulaaje) for trade and storage and the different taste when cooked. It appeared, however, that the dominant reason was that these varieties were associated with other Fulbe/ Maccube groups.

There were also practical difficulties. People who used these shorter season grain varieties suffered problems due to their early ripening. Birds devastated the small areas planted in the fields. They were the only pockets of ripe grain. Those who had planted small pockets of these varieties in conjunction with maize crops in their gardens or house compounds had better results. Theft of this early ripening grain was also another problem.

After consulting the various action research group members it became apparent that the best way of encouraging future experimentation was to ensure a supply of local seed variety. During the second year of the inquiry process the action research groups set sanctioned the purchase of seed. The second year’s rainfall scenario was fortuitous. There were early rains in May and then a virtual drought for six weeks.
Most of the initial sowing had died off. When it rained again in late June Allaay and I sowed our field with a mixture of the short-term varieties. Rains ceased in early September and many of the fields sown to the local varieties yielded extremely poorly. However, Allaay’s field yielded well. During the third year of experimentation, some thirty farmers tried using these varieties to re-sow their fields.

Several observations emerged from these informal experiments. Firstly, there are both technical and social aspects to the acceptance of new varieties and techniques. Many older Fulbe classed these Malian varieties as ‘poor men’s’ varieties. The Fulbe at Monnde So were quite happy to plant hybrid sorghum varieties in the gardens or in their heavily manured house compound areas. However they were reticent to sow some of the low-lying areas in their fields to sorghum. This was too close to a Mossi style of farming for their liking. Any change in technique has social significance and it takes place subtlety, through a dynamic and complex borrowing process.

Secondly, acceptance only occurs after a number of years of experimentation. Small areas of new varieties are sown near house compounds or on the poorer parts of fields. Areas sown are increased if the variety is seen to be effective and social reaction is not too negative. Three years of observation is certainly too short a period of time to enable speculation on the adoption of a change in farming technique.

What is certain is that the Fulbe and Maccube do experiment and borrow techniques from each other and from the various ethnic groups who have migrated into the area. However, it is not obvious that crisis scenarios encourage change, or increase the
propensity for the Fulbe to borrow ideas and techniques. It would seem that such crises encourage conservatism in agricultural practice.

During the early part of 1992 I received requests to establish gardens at Belehede and Arabinda to the east of Djibo. Arabinda is some one hundred kilometres to the east of Djibo and provides a worthwhile example of changes to agricultural techniques. There is a discernible change in cultivation techniques and millet variety as one approaches Arabinda. This variety of millet was associated with the local Kurumba people and the Liptaako Fulbe.

As well as the change in millet variety there is also a change from the hoe to the ‘iler’ (cf. Guillard 1987) as the principal instrument of cultivation. The iler has a long handle with a flat curved blade. It is pushed, in a forward motion, into the soil just below, and parallel to the surface from a standing position. It allows for faster cultivation of the wide expanses of sandy seno soils. Its adoption appears to have been a slow process. According to Guillard (1987) and Raulin (1967), it took over fifty years for the iler to become the dominant instrument of cultivation. It was an instrument introduced around 1930 by the Bella people together with their variety of millet. For a large part of this period the iler became the tool of the aristocracy, as it requires less effort to use. Thus, there were distinct social implications in its use. Another factor that favoured this adoption was an increase in cattle numbers in the area. Cattle numbers increased through the migration of Fulbe into the area and also increases in cattle husbandry by the local population. Manure from the cattle allowed more intensive use of the seno or sandy fields and the iler was an ideal tool to facilitate faster cultivation.
With the migration of Mossi farmers into the area in recent years changes have occurred. Farmers in the area have commenced sowing low-lying areas with sorghum using hoes. Hence, from Guillard’s observations there is a tendency now to user the iler and the hoe together. The hoe certainly allows better water penetration but requires considerably more effort. There is not space here to discuss these changes fully, but it would appear that the various millet varieties and implements of cultivation have been borrowed and adopted after lengthy experimentation aimed at ascertaining their effectiveness under local conditions and their social suitability.

7:4 Process issues

7:4:1 The intervention performance

The use of the word ‘performance’ is intended to convey the complex ways in which the Fulbe and development practitioners form a ‘visible public’ (Habermas 1984: 93) for each other during the intervention encounter. Fulbe normally perform a game of posturing to find out what can be gained from any ‘project’, just who would appropriate the gains and what style of cooperation together with what minimum amount of community work would be required to obtain the benefits. Fulbe’s perception of participation is not based on practitioner’s rhetoric but on previous experience. It has little to do with empowerment or self-reliance but about how best to extract resources from willing agencies. They can manipulate participation by withholding cooperation, feigning helplessness or providing ‘expected’ responses.
Generally, the Fulbe see a project facilitator as a ‘temporary resource bearing agent’ (Cornwall et al 1994) and the intervention process as revolving around a determination of this agent’s usefulness. Clearly, as far as I was concerned the process performance this time was going to have to be different. This was an initial stumbling block in negotiating the cooperation of all parties as it involved a renegotiation of relationships between the intervening researcher and representatives of the local community.

Several of the main 'gatekeepers' at Monnde So distanced themselves from overt collaboration in the initial dialogues. They preferred to be represented by others, such as the Secretary of the local CDR who was a Maccudo from Dadungal. I was not surprised by their reaction. These men were apprehensive about the public group setting of much of the dialogue and the fact that all dialogue would be in Fulfulde.

The mere fact that an extended critical dialogue was to be attempted in Fulfulde meant another modification to the Fulbe’s normal project performance. The Fulbe were used to many major projects being negotiated with non-Fulfulde speakers (either Mossi or European) through a translator. The Fulbe were adept at manipulating this translation process. Some Fulbe and Maccube had some understanding of Moore, the Mossi language, but virtually no one had any fluency in French. Using Fulfulde as the language of discourse allowed to access key informants more informally and confidentially to ascertain their opinions. It was also a more friendly and spontaneous means of gaining access to social networks. The use of translators in such situations usually served to render informal exchanges formal. However, in the group forum of
the action research group especially people were more guarded about what they expressed.

Since the revolution the village CDR committee had become the normal forum for project negotiations and members of the committee were expected to consult with all social strata in the community(s). The committee, whose chairman or Delegue resided at Monnde So, was supposed to represent Hubere So, Dadungal and several other small Fulbe and caste camps in the vicinity. It could be said, however, that most people regarded this widening of consultation as a contrived public performance and still assumed that the Fulbe and Moodibaabe gatekeepers were manipulating the process. Subordinate groups assumed that if the more powerful groups did not achieve favourable outcomes through this more consultative process they were likely to achieve them by other means. Hence establishing of inquiry relationships was a difficult task. I had to negotiate the cooperation of various groups and also show them the usefulness of the intervention.

The unease over cooperation in the process was influenced by a recent experience of community cooperation. Provincial authorities had decided that it would be beneficial to use a food-for-work program to construct a low-level stone bank on the lake’s wet-season ford or crossing point adjacent to Monnde So. The rationale was to raise the rainy season water levels in the lake by use of this permeable barrier of rocks. The CDR and its delegué at Monnde So were expected to organise this. As the Fulbe did not have access to animal traction in the form of bullock or donkey drawn carts it was agreed that the Macube from Hubere So would be ‘compensated’
through extra distribution of grain for the transport of the rocks. Once most of the rocks had been accumulated the Fulbe then refused to give this extra food aid. In response, the Maccube went on strike and refused any further cooperation in the building of the wall or bank.

I had included the delegué in the initial talks with the provincial authorities regarding the action research intervention. During the discussions the provincial Commissioner had made it clear that only those who people who had been involved in community projects such as the school building near Hubere So and stone bank mentioned above could gain access to the gardens. The delegué was well aware that evidence of non-cooperation in ‘community work’ was enough to exclude the Maccube from the garden project. He had thus skillfully used this strike by the Maccube to advantage the Fulbe.

Thus the climate surrounding initial project negotiations was conflictual and conflict was also a reality at later stages. After several months of negotiations, it was agreed that given the current severe food insecurity, the development of gardens was important. Consent was given by nearly all stakeholders in the three communities to embark on a process that aimed at establishing gardens. The word consensus, so often used in popular participatory literature, could not be applied to any of the arrangements negotiated. The initial negotiations, rather than reflecting genuine community participation, were in fact overtly partisan. The Fulbe and Maccube influence was clearly not symmetrical yet all stakeholders agreed that activities should be initiated.
It could be argued that I was dis-empowering the Maccube by maintaining the status quo. However, the Maccube were quite rational in the giving of their consent. Firstly, they realised that the Fulbe would need their expertise and knowledge in well digging and other activities and thus they could further their own interests at a later stage. Secondly, some poorer Maccube were uneasy about me bring this deep-seated conflict to the fore. They were clearly less articulate in stating their concerns but they preferred that I did not evidence solidarity with them at the outset. I did however spend time negotiating an informal cooperation pact with these and other Maccube to introduce a more symmetrical influencing of the agenda as the project evolved over the following three and a half years. I was also aware that the provincial authorities were considering the formation of a separate CDR, and thus an official power base, at Hubere So. My history of involvement as a trusted guest in the Monnde So area and my commitment to a long-term intervention process was a key to negotiating this pact.

What was established with the Maccube was a contract of cooperation: that at some stage over the course of the project, their interests and visions would genuinely influence the course of events. In actual fact, another future partisan phase of action research was being envisaged as part of an emergent and heuristic process. It was a matter of holding conflicting views and claims in tension during a critically reflexive action learning process.

It was important that the process was both flexible and reflexive, as the nature of the struggles between the Maccube and Fulbe varied according to the prevailing severity of food insecurity and environmental resource scarcity. For instance, in some seasons
the rainfall patterns favour grazing; in others cropping is favoured; or in extreme
cases, prospects for both activities are compromised. Thus the seasonal prospects for
these groups varied, as did the nature of their struggles and ultimately the propensity
to negotiate cooperation. Limiting initial dialogue to gaining consent to embark on a
process where various points of view and issues could be explored over time muted
much of the original conflict. Importantly, it was also negotiated to limit protracted
public negotiations and make the longer-term discussions and negotiations the
province of a selected small groups of stakeholder representatives (the action research
groups).

The process of group formation at Monnde So was extremely difficult and eventually
two separate groups were formed (Fig 7.4). The initial group chosen by myself after
consultation with prominent stakeholders at Monnde So, was totally dependent on my
direction. Conflict and tension were suppressed partly by my influence and partly
because of the seriousness of the food insecurity situation at that time.

**Fig 7.4 Research Interactions at Monnde So**
The action research group(s) at Monnde So functioned differently from those at Djibo. I used a number of key informants to generate information and articulate issues of concern. I then used this information to guide debate and discussion within the action research group. The group was acting as a forum for debate about action options and organisation of activities. Much of the information gathering was done, as mentioned, by using diverse people outside the group. During the second year of the inquiry I attempted to lessen my influence on the activity of the group and develop the capacity of group members to articulate concerns and generate useful information. However this attempt at developing more interdependency in learning reduced the cohesiveness of the group. There developed a need to form two action research groups and generate interaction between them.

The need for two groups was validated by a critique from the general action research group and my own critical reflection on early food-for work action that had increased my capacity to identify the various stakeholder networks in the local area and understand the nature of the local conflicts. Once the shift to two groups had occurred I relied heavily on the general action research group to negotiate interaction between them. The Monnde So and the Hubere So groups had different repertoires of skills and different social networks. It became my task to develop relations between them and reinforce the complementarity of their skills, knowledge and resources\(^2\). I was able to develop interaction because the food-for-work program had developed considerable momentum and because I had longstanding friends in both groups. The

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\(^2\) For example, I brought forward the digging and cementing of several wells in the garden area occupied by Fulbe. The Fulbe were involved in planning the placement of the wells using their knowledge of underground water levels, but the digging and cementing was work that only several Maccube with the requisite skills could undertake. I deliberately influenced the action plan in order to demonstrate the need for interaction.
research network (Fig 7:4 above) evolved to the point where there was interaction between several action research groups.

During the later stages of the intervention, the provincial government facilitated the election of a Delegue and CDR committee at Hubere So rather than relying on the one at Monnde So to control all three villages and surrounds. This altered substantially the political relationships. It provided the Maccube from Hubere So with a legitimate new power base that could support their action research group activities. With formal power given to the Delegue from Hubere So, the Maccube from within the original gardens banded together with several disaffected Maabos from Monnde So in an attempt to establish gardens on a site on the opposite shore of the lake. Sambo, one of the Maabo men, who was actually of Maccube heritage, was an important link person between the Maccube, Fulbe and Moodibaabe networks. He was often chosen by the people at Monnde So to negotiate with intervening non-government organisations. He also derived significant income from grain and livestock trading and shoemaking and had recently forged links with NGO programs in the area that had focussed on haymaking and credit for livestock trading.

The Fulbe and Moodibaabe gatekeepers were hostile to this new garden development and Sambo’s part in it. They immediately expressed their displeasure by terminating leasing arrangements they had made with him regarding several prime lakeside millet fields. They strenuously resisted this attempt to enclose two hectares of gardens with wire fencing on what appeared to be unused lakeside land. Despite intensive research leading to a detailed ‘biography’ of the site, I was not able to fully understand why the
choice of this site invoked such hostility. The Fulbe took their grievance as far as provincial authorities in Djibo.

The site that was chosen had, it seemed, been used for gardens previously. The planned site avoided a grove of Piliostigma reticulatum (*barkeehi*) which, in Fulbe folklore, is the nearest to being a sacred tree species. However the Fulbe did not claim that the *barkeehi* were an obstacle to development of the area and during my twelve year association with the people at Monnde So I had not seen it used even for watering cattle. There were conflicting accounts as to why the area remained unused. The only visible activities in the vicinity were old Maccube gardens and a well used by several Moodibaabe families. Several old graves (*caabeeji*) were nearby. However, during extensive interviewing no one claimed that this was a factor preventing the use of the area. It appeared that children of transhumant Fulbe who had died of cholera many years previously were buried there.

The Maccube claimed that they had previously been granted use of the area but had abandoned it because they could no longer afford to fence the gardens. Several old Fulbe men in Monnde So corroborated their account of the site’s history. Their inability to protect their gardens from livestock damage was the main reason for them discontinuing use of the area. Thus following repeated animal damage to the gardens, they had ceased to honour arrangements made with the *Jooro* regarding access right gifts and payments.

Two Maccube owned gardens near the area in question contained twenty year-old mango trees. Normally the presence of these mango trees would evidence a quasi-
permanent right of access to both the land concerned and the production from the
trees. The Maccube concerned were not willing to divulge if they were still making
gifts to the relevant Fulbe to maintain the right of access. The owners of these gardens
were able to evidence productive use of this are for over twenty-five years. Both the
owners and the Hubere So action research group wished to include these trees within
the proposed wire netting enclosure.

The issue of establishing access rights was complex. It was clear, however, that both
the CDR and provincial authorities would have upheld the Maccube’s claims to their
mango trees even if the exchange of gifts inherent to the access arrangements had
been discontinued. In any case, no one at Monnde So disputed the Maccube’s access
goods to the gardens or saw it within their power to refuse continued access. The issue
of access to the vacant land was more uncertain. The Maccube concerned had
discontinued their use of it and naturally had not continued with the traditional access
arrangements. However, with the new CDR at Hubere So supporting a plan to use the
area productively it was likely that the provincial authorities would legitimise their
access claims. Officials in Djibo eventually validated the Maccube claim to the
vacant area, as the Monnde So Fulbe were unable to establish a case for recent current
productive use of it.

Some of the fencing from the original gardens was removed and used to enclose the
chosen area. Attempts at conciliation with the Fulbe, by negotiating the construction
of concrete wells and troughs for watering cattle at a permanent well nearby, failed.
Thus the action research program actually exacerbated conflict at this point, and at
other times over the three and one half years, particularly when I took up a more activist and partisan position in favour of the Maccube.

Fig 7.5 Phases of action research relationships at Monnde So

At Monnde So the intervention was initially negotiated with the CDR committee (Fig 7: 5 above). After consent had been obtained to enact the action research process, it was a matter of developing relationships with key individuals from the three villages and gradually developing cooperation between them in managing the research activities and food for work program. These individuals had started to operate as a group until the formation of a new CDR in Hubere So complicated the politics of the process. After three and a half years there were parallel processes of action research
occurring with two separate coalitions and several individuals and there was no
prospect in the short term to formalise an association as was the case in Djibo.

7:4:2 The begging game

_Nafiude_, or perceived usefulness is an assessment used constantly by both Fulbe and
Maccube to evaluate outsiders. It was therefore critical in a high food insecurity
environment to offer something tangible ‘up-front’ to demonstrate commitment and
usefulness. Fulbe lose patience with the prolonged questioning of more orthodox
research methods, especially when inquirers are endeavouring to ascertain animal
numbers or evaluate asset bundles. They usually superficially involve themselves to
see what can be gained and with what level of effort. The Fulbe were fond of regaling
me with stories of ‘useless’ _tubaakoobe_ (foreigners, usually whites) who had only
come to ask questions or to preach about reducing animal numbers. Often usefulness
was associated with the giving of useful gifts and the ability to speak Fulfulde. The
word ‘useless’ was also used to describe people who had made no attempt to
understand ‘life as lived’, yet treated Fulbe cattle management strategies as
outmoded. To ascertain usefulness the Fulbe seem to constantly ‘test the waters’ by
asking or begging.

In Fulbe camps one is immediately struck by what could be termed, a begging
mentality. Self-sufficiency in the village (_wuro_) seems to be frowned upon, while in
the bush it was not. Money, tools or a loan of a bicycle are examples of constant
requests. The requests do however always indicate a real need, nor is it a matter of
giving or receiving charity. Charity does exist but it usually is confined to alms given
to Moodibaabe and their students or small gifts given to orphans and widows. These requests are intended to show that one belongs to the local social network and that one is also subject to the normal constraints of life in the Jelgoji. One avoids a straight refusal of a request, as this indicates disinterest in the other person’s plight. Fulbe either arrange to have few disposable assets immediately at hand, or attempt to feign incapability to respond to the request. In asking and giving it is a question of cultivating relationships, as in Fulbe society ‘the ultimate proof of the existence of a relationship is the possibility of using it’ (Riesman 1977: 163).

The image that Fulbe have of intervening expatriates is that they are temporary resource-bearing agents. In order to develop rapport and cultivate the relationships necessary for an attempt at cooperative inquiry, one must attempt to transcend this image. One must show the intent to be sociable and thus useful, by attempting to play the begging game. I first experienced this when I requested the chief Maabo’s horse to visit a neighbouring village during the rainy season as the vehicle tracks were impassable. That and similar requests for help over a period of time provoked a response (a laateke pullel joonin ka) from the local jooro. The diminutive (-el) ending on the word pullo implied that the author had made some effort to empathise with the lifeworld of the Fulbe and, in so doing, had literally become a ‘little pullo’.

This begging game was certainly played more intensely at Monnde So than at Djibo and it gave rise to some complications in the food-for-work program. The more formal negotiation of action and distribution of food resources through the action research group, there was also a parallel need to become adept in handling individual
requests. The members of the action research group also faced intense pressure from requests. The resources of the program could not feasibly be distributed by negotiation with individuals, yet the reality of this begging game and the need to maintain personal relationships had to be acknowledged. I was constantly surprised at being given a sheep, goat or even a calf by poorer families. These gifts could not be refused even though they were clearly intended to initiate individual ‘helping relationships’. Thus there was a constant tension between maintaining relationships with various individuals and responding in more corporate ways through the action research structure as it evolved.

7:4:3 Incentives and motives for Cooperation

After protracted negotiations, it was decided that the best way to focus on food security was to make more intensive and organised use of lakeside land through dry season gardening rather than focus on improving dry-grain millet farming. In the general area north of Djibo there is continued expansion of areas under cultivation and a virtual absence of fallowing. Perreti (1976) estimates that in the two decades prior to 1974 there was a 75% increase in land under cultivation in the Sahelian regions of Burkina. This expansion coincided with a population increase of 64%. As Claude et al (1991) in a study of farming systems around the ‘Mare d’ Oursi’ north of Dori conclude, the Sahelian expansion of cultivation and population growth have kept pace with each other since the mid 1970’s.

\footnote{Literally, ‘you have become a small pullo now’.
Similar to many areas in the Sahel, the fallowing of fields around Hubere/Monnde So has become almost accidental. It is usually due to an inability to cultivate because of such factors as ill health or failure to arrange a satisfactory ‘leasing’ of the field. The one hundred and fifty hectares of millet fields between Hubere So and Dadungal provide an example. Family fields range from approximately 0.3 to 2.0 hectares. Typical yields are around 150-200 kilograms per hectare, which typically provides one half to two thirds of the annual family food budget. I can only remember three fields being left unsown during the thirteen years from 1979. These were small marginal fields where the ‘owners’ had left to seek work in Côte d’Ivoire. Field size is closely related to capacity to cultivate. An important aspect in this is the ratio of consumption units in the household to those who could be termed cultivation units. Household is a problematic term, and if one takes the Maabuube compound in Monnde So as an example, then the functional household is rather a dynamic concept. In bad seasons the compound functions as a single entity under the control of the patriarch Bukaari. In better years the compound functions more as three relatively autonomous families.

Given the present constraints of uncertain labour supply, variable and uncertain rainfall scenarios, nutrient depleted soils, absence of fallowing and the very low-input ‘dry-grain’ farming practices there appeared to be little use in looking to ameliorate food security in the short term by focusing on Jelgobe millet farming. The Fulbe clearly do not relish dry-grain farming and use the *seeno* (sandy soil) fields, which demand the least labour.
Gardening provided an immediate focus on food production, and as an important area of commons land was being used, the potential for conflict was evident. People approached this attempt at dry season gardening with multiple agendas and interests, variously seeing it as:

- a useful activity and new association to superficially participate in, thus hopefully establishing access to government food aid;

- a means of enhancing existing gardens by more secure fencing;

- a possible vehicle for increasing the portfolio of coping options, directly through being allotted plots or indirectly through negotiating various share-farming arrangements;

- another vehicle for influential people to exhibit and possibly enhance their place in the social system through increased resources and control of decision making.

Fulbe, Maccube, Moodibaabe and Maabube all brought different dispositions to this attempt at dry season gardening and had different reasons for placement of the gardens. The actual placement of the gardens was extremely complicated. The placement had to avoid encroaching on prime lakeside millet fields as well as traditional well sites and traditional paths of cattle movement to and from the lake. The lake was usually dry by late February and all watering of animals was done from shallow hand dug wells in the lakebed. Various influential families and castes had ‘first access’ rights to different well areas in the lakebed. Therefore each group had reasons for the gardens avoiding their areas.
After much discussion, some forty heads of families were elected to exploit eleven hectares of gardens. It was agreed to embark on a process whereby food security concerns could be immediately attended to through a food-for-work program aimed at establishing the garden infrastructure. This initial action created space for dialogue concerning the best way to reinforce coping options on a longer-term basis. Despite giving consent to the process, the Maccube showed their anger at being under-represented in the group by ‘boycotting’ some initial work in digging post-holes. This left the Fulbe and Moodibaabe to do the work. Some of these men had to learn how to use basic tools in order to dig these holes in the hard ground. This amused the Maccube and they taunted the Fulbe about losing their ‘ndimu’ or birthright by doing slave’s work.

Unlike Djibo where there was a previously ‘elected’ group to work with, the question at Monnde So of just who should be allotted gardens was a vexing one. The lack of direct input by the ‘Delegué’ from Monnde So was a problem, although it was not unexpected. As the secretary of the CDR and one of the most influential resident Moodibaabe were representing him, he did not have to engage in public dialogue. He could thus exert influence on the process without risking loss of face. It became evident after two years that the Delegué, the Moodibbo, and another wealthy itinerant Moodibbo (who travelled frequently to Bobo Dioulasso and Côte d’Ivoire) were a powerful coalition influencing the course of events. The Delegué was given a garden but he never cultivated it during the time of the intervention. No one questioned this despite some other initial participants losing their gardens for similar reasons. Everyone involved seemed to allow him the concession of flouting the nominal rules.
developed by the action research group to regulate access by this loose association of people to the gardens.

7:4:4 The ‘work’ of participation

Facilitating cooperation/participation at Monnde So was very difficult. In popular participatory development circles the benefits of participation appear to be taken as self-evident and, as Mayoux (1995: 63) remarks, are assumed to ‘outweigh any costs for participants’. When socialising amongst Fulbe, one often hears the phrase ‘gondal hoyaa’ (togetherness or living with others is difficult). People at Monnde So (especially women) were not anxious to participate in a process where much dialogue and planning would be in public. There was thus a strong push to organise a small representative group of people who could dialogue, plan and organise the implementation of action options. However, the people who were eventually chosen rarely acted cohesively as a group.

The ‘group’ of people eventually chosen comprised representatives from each of the three villages surrounding the lake plus a man from Hubere So who owned a substantial garden beside the lake that was eventually included in the fenced perimeter. He was an ‘ancien combattant’ who had fought for the French in the Second World War. It was important that he was included, as he was an important gatekeeper in exchanges between Hubere and Monnde So. Kalahaldi So (lit. the bull from So) and his sons also had connections with various local NGO facilitated groups. Together with two of his sons, he farmed five hectares adjacent to his lakeside garden.
Inevitably, there was closer involvement with those who were cooperating in the action research group. As action was taken involving food supplies, well placement and seed distribution, for example, it was assumed by the community that those within the action research group were receiving preferential treatment regarding placement of wells and distribution of materials. Members of the so-called ‘action research group’ became the target of repeated requests for assistance, which placed immense pressure on them. It was therefore difficult to find people willing to join the group and handle such pressure and thus maintain collaboration over long periods of time. The pressure was a major disincentive to participate in the group. The question of re-imbursement for cooperation was entertained and on rare occasions was successfully negotiated. As was the case in Djibo, efforts were made on several occasions to remove one of the group members through gossip and innuendo about supposed profiting from project materials. Because of these factors it took six to eight months to find people who were deemed acceptable by their peers and capable of enduring the process.

The size of the group was not static. Women and poorer people initially refused to be involved in the group, as it was not immediately obvious that it would be to their benefit. There clearly had to be tangible benefits in order to mitigate the risk of involvement. One could have been tempted to immediately voice their concerns and take their side. However, one had to remain sensitive to their fear of involvement. They were afraid that their strategies used in dealing with present constraints could be inappropriately exposed. I had to be extremely careful not to manipulate marginal
sections of the local community to spend time and resources participating in the inquiry process that they could ill afford.

Participation is an emergent process phenomenon that ideally attempts to involve representatives of all social networks within the community and in addition attempts to involve these people in all phases of the inquiry process. However, one has to appreciate the cost of participation for the poor and women. Women were already active in negotiating provision of food or enforcing what Kabeer (1985) terms, 'conjugal entitlements'. It cannot be assumed that increasing women's voice through participation is costless. Women's involvement in the participatory process must be seen to provide superior returns to the normal 'invisible' means of realising conjugal entitlements.

The poor and women have been traditionally assumed to be powerless non-participants, constrained or inhibited by a 'false consciousness'. However, both women and the poor, being social agents can exert considerable influence behind the scenes by enforcing traditional roles of provisioning. They do this by the pervasive force of gossip and strategically playing the begging game.

The major obstacle constraining both these groups contributing to the 'work' of participation is that of time. The work of participation takes time and the capacity of the poor or women to participate is by no means uniform and varies over time. In polygamous marriages, it was the senior wives who had the most potential and capacity to participate. But their concerns and priorities could not be assumed to be consistent with the other wives. It would be extremely paradoxical to facilitate an
increase in workload in order that issues regarding the heaviness and drudgery of the traditional workload be addressed.

7:4:5 The Fulbe notion of mutual helping

While all parties realised that there had been a dramatic decline in livelihood quality, it wasn’t sufficient motivation for community cooperation. As Riesman (1975) says, it is doubtful that the Fulbe Jelgobe see any reason to cooperate for the common good. Co-operation in a common cause to them was thinly disguised coercion, as one couldn’t be sure who the beneficiaries would be. Fulbe cooperation as Riesman (1977) also notes, is bound up in reaffirming pre-existing relationships among wondibe, (that is, those whom one shares life with). In communal work one would end up helping someone whom he would not normally have chosen to help because he had no pre-existent ties with them.

The Fulbe however do have a strong notion of helping (walluide) each other. The benefits of any shared work go to the person being helped. The Fulbe had real difficulties with community work goals imposed on them by the revolutionary government of Thomas Sankara and organised and monitored by the CDR. Fulbe attended work parties to build the school at Hubere So but mostly watched while the Maccube worked. In Jelgobe society, then, it became necessary to facilitate participation around a model of helping where individuals and some coalitions were ‘helped’ through networks to which they belonged. Any notion of community participation in the Fulbe context can only be described as a strategic and ‘temporary
unity of situation, interest or purpose among particular groups of social actors’ (Leach et al 1997: 5). While helping is important, it is not exactly altruistic. There are various forms of reciprocity within informal risk-sharing arrangements but it is a reciprocity without a commitment to help in the future. The point here is that many such arrangements, are not long-term arrangements but contextual to the particular flux of events and often opportunistic.

7:4:6 The local conception of hazards – a motivating factor in participation

Fulbe and Maccube cooperation with intervention processes was contingent on the perceived severity of the seasonal food insecurity scenario. An understanding of local conceptions of hazards and their degree of abnormality was important in facilitating cooperation and understanding cooperation. Increased cooperation was understandably evident during short-term food crises. However, longer-term degradation of the local resource base and the gradual erosion of livelihood capability were not strong motivating factors in cooperation. They were not strong factors as there was no real appreciation of the link between human agency and the degradation. There were also political, social and gender aspects of the appreciation of the severity of food shocks and stresses. The cooperation in the activities linked to the food-for-work program was motivated by the prospect of having immediate household consumption needs met. The link I was attempting to make between meeting immediate household food needs and establishing a garden infrastructure to improve long term livelihood capability was not initially appreciated.
Much conceptualisation of hazards, as Shaw (1992) argues, has focused on the degree to which human agency is involved. A polarisation of nature and culture has underpinned many conceptions of hazards, designating them as natural or human. As I stated previously in Chapter Two, this nature versus culture dichotomy is of limited usefulness and, as Shaw (1992) says, ‘of restricted cultural provenance’. According to Shaw (1992), hazards such as drought are conceived of as ‘discrete discontinuities’ that are distanced from a supposed normal and stable livelihood experience by their ‘un-ness’. Unpredictable and unprecedented are common words used in such situations. These abnormal events, as Hewitt (1983:16) contends, are viewed as ‘outside the responsibility both of society and the individual’, but more amenable to prediction and control by outside specialists rather than by the local people who live with these hazards. Any examination of human action has been limited to the propensity and capacity of people to appraise risks and cope or adapt to hazards. Human agency has been applied more to those socio-ecological problems that are conceptualised as longer-term processes, such as desertification.

The French Marxist Meillassoux (1974) situated drought and famine in the Sahel both historically and ecologically. He links disasters to the outworking of human agency and power that underlies underdevelopment and dependency. This global power and policy results in vulnerable people being forced into marginal ecological zones for subsistence cropping, or being forced into more sedentary pastoral lifestyles in these zones. Richards (1985) talks of social and political disasters rather than purely natural ones. This is underpinned by the notion of people/environment mutuality. Rather than an interaction of culture and environment as discrete entities, there is an ‘inneraction’
as Watts (1983) argues ‘which is internally differentiated according to social relations and inequalities’. While Fulbe have a more holistic concept of hazards, their ability to ‘cope’ and ‘adapt’ is differentiated by an embedded social and economic inequality. Hill (1982) sees inequality as expressed in access to arable land as being a natural component of ‘dry-grain’ farming systems. While differential access to millet fields is an important factor among the Jelgobe, inequality is also associated with unequal ownership of livestock. Social and economic inequality is also an important factor in the motivation to cooperate. The poor and vulnerable are less able to articulate their concerns and negotiate a basis for cooperation. They are also more fearful about linking themselves to interventions facilitated by outsiders.

An interview just three months after the rains with an elderly (fifty-five year old) Moodibbo at Monnde So is relevant here. As we gazed at the bare rocky plain behind the village of Monnde So, the Moodibbo said that as a child he was afraid to venture far into that area as it was so thickly vegetated that he was afraid of lions (dawaadiladde). As he mused about this dramatic decline in rangeland vegetation and Fulbe lifestyles over the last fifty years, he made several interesting statements. In talking about drought and famine he used the phrase ‘rafo pulaaku’ (famine of Fulbe lifestyle). What many would view as a long-term ‘natural’ process of rangeland degradation punctuated by severe drought and health crises, he saw as synergy of natural, supernatural, social and cultural processes. He concluded that a number of factors were behind this decline in pulaaku. He basically concluded that there was some ‘conspiracy’ by the government (in other words the Mossi) and local sedentary peoples to undermine the ability of Fulbe to herd cattle (and thus have free access to milk) and thereby maintain their pulaaku. His expression ‘Nde pullo nyaami nyiri
njoorndi fiu yoorti' expresses it well. It says when a pullo (and by extension pulaaku or Fulbe society) is reduced to eating millet porridge without milk, he is 'dead'. While 'Yoorti' (dries up completely) is a euphemism for death, it is not physical death that is envisaged, it is rather dishonour and deprivation.

Certainly if one looks at Monnde So since 1979, wealth has dried up. In 1980 when I was living in Monnde So, there were upwards of thirty horses in the village and most people were able to buy expensive clothes for the annual muslim Tabaski feast and prayers. In 1992 the last horse was sold to Mossi farmers for animal traction purposes. If one estimates wealth by the quality of clothes (kaddule) at the annual Tabaski prayers under the baobab near the lake at Monnde So then there has been a considerable diminution since the late 1970's. There are fewer people at the prayers and rather than new clothes, most are wearing those recycled from the previous year.

While the Monnde Fulbe are acutely aware of living in hard times, they do not seem to acknowledge responsibility (collective or individual) for degradation/desertification and attendant ecological and health crises. Reference to one informal late night interview with several Fulbe mawbe (elders) concerning a health issue is a relevant example. It was getting towards the height of the dry season and there was an epidemic of cholera in the area. In fact, that day a brother of the Jooro had died of cholera on his way home from the cattle market. A government health agent had warned them about drinking from several wells in the local area. However, during the three-hour conversation the elders rejected any causal connection between drinking water from these wells and contracting cholera. In referring to the death of the Jooro’s brother, the constant rather fatalistic response was, Allaa wadi (God did it).
One elder was asked several times whose fault would it be if he contracted cholera by drinking water from these wells after being warned. His response was, ‘Allaa’s. In other words, it was Allaa’s will. Upon further discussion, one other elder replied ‘Allaa wadi, de min mballi o seeda kal’ (Allah caused it, but we helped him a bit). In a similar way, while Fulbe freely acknowledge their dependence on the bush, they are slow to acknowledge any part in the degradation they see around them or see any tangible benefit in trying to arrest the degradation. Any efforts at planting trees apart from fruit trees or bush food trees, for instance, are usually seen as an inordinate love of trees on the part of Europeans. It took time and patient dialogue to develop an appreciation of the links between livelihood activity and the degradation they saw around them.

Although Fulbe do not seem to have words that correspond directly to nature and culture, they have however a very strong wuro/ladde (bush/village or wild/domestic) dichotomy. They use the word tageefu (God’s creation) to convey the notion that they are conscious of having an ordered place in the world (adunaaru). The use of the word ladde is associated with loneliness, absence of interpersonal communication, and freedom from Fulbe social rules. Upon leaving Monnde So to return to Djibo after conversing long into the night, the author often heard the phrase ‘a wadi min ladde’. In other words, you have made us bush, by virtue of the enjoyable conversation finishing.

The other word linked to ladde is nagge (the cow sg.). The Fulbe depend on the bush and the cow to maintain their lifestyle. The cow is an animal of both bush and village. Two sayings or proverbs are important in this context. In an effort to acknowledge
gratitude after some food-for-work distributions the Fulbe would say ‘nagge barkintaa ladde’ (the cow doesn’t/can’t bless or thank the bush). A popular proverb is ‘Nagge wi’i waawaa yettude ladde, sabu si nagge yetti ladde fun, walaa do fonndoo, sakko heba ko nyaama’ (the cow can’t bless/thank the bush because if it thanked the bush it would no longer have anywhere to go to pasture). The expression is one of incapacity to repay the benefits received, and ultimately it is an acknowledgment of the necessity to maintain the unsymmetrical relationship in order to subsist. If one praises or blesses directly then one is, in a sense, no longer expecting to maintain the relationship.

The cow is seen to have an innate sense of the bush, both of its dangers and benefits. I remember waking at dawn in Monnde So one June morning to find that the cattle were virtually stampeding to the north. A pullo friend said ‘a yi’i Pol nagge na woodi hakkiilo’ (you see Paul, cows have intelligence). The bush some fifteen kilometres to the north had finally received its first rains for the season and the cattle were heading north after having scented (luubtude) the moisture. The cow is conceived of as some sort of intermediary between the pullo and the bush. The Fulbe know their cattle and they come when called, and the cattle are sensitive to the bush from which they derive their subsistence. The pullo only enters the bush long enough to ensure that the cattle are satisfied. The only other reason he enters the bush is to defecate or engage in illicit sexual relations.

The pullo/nagge/ladde interconnections are predominantly in the male sphere of activity. Fulbe envisage female activity as predominantly domestic activity. The woman is jom suudu (chief of the house) or the manager of household activities.
Much Women, Development and Environment (WDE) literature assumes an essentialist linkage between women and nature. It also assumes women are a homogenous group and experience environmental degradation uniformly. Clearly however, as Jackson’s (1993) critique illustrates, women are not inherently environmentally friendly nor do they cope with degradation uniformly. For example, while most women in Monnde So have vulnerable livelihoods, one Moodibbo family comprising two wives and several children survived for two years on remittances from their husband who was herding cattle for a large pastoral development project in Côte d’Ivoire. It was not uncommon for a postal money order transfer to pass through the author’s postal account in Djibo to the order of 75,000 CFA. (1,500 French Francs before the 1994 devaluation).

Women’s relationship with the environment is dynamic over time and mediated by their local ‘livelihood system’. In relating to the environment women themselves have multiple strategies and objectives which are shaped by local political forces and the ‘cooperative conflict’ (Sen 1987) that shapes intra-household relations. WDE literature also assumes that there is altruism ( cf Folbre 1986a &b) within the household and that this flows over into collective action in caring for the environment. However Sen’s (1987: 5) model is more realistic, where he points to the ‘coexistence of extensive conflicts and pervasive cooperation in household arrangements’. There is a constant process of negotiation over food security and general household welfare as well as constant efforts to maximise security in any breakdown of cooperation such as divorce or extended male out-migration. Fulbe women’s potential to cope depends on their innate bargaining ability, position in a
polygamous marriage, ability to claim within family networks, and engagement in income generating activities.

Fulbe women rely on the surrounding rangeland to provide fuel, bush foods, grass for handicrafts, and leaves for domestic livestock. However, Fulbe do not see that women relate to the rangeland environment directly. Rangeland degradation and associated ‘rafo pulaaaku’ is seen mostly as a male problem. Most men interviewed contended that women’s work is domestic and thus has not changed. Women’s focus is on lessening the sheer drudgery of life that is exacerbated in times of food security crises. The question is one of available time. During the dry season it was not uncommon for women from cattle camps north of Monnde So to spend five to six hours a day just getting enough water for the household. Any real involvement on the part of women is problematic, as they are extremely reticent about increasing the drudgery of their daily routines. Many women however, did exert pressure on their husbands and encourage them to actively participate in the intervention process.

The above discussion on the Fulbe’s more holistic conception of hazards and their view of nature is important. They can see the sense in improving prospects for livestock production and food security, but are not easily motivated by efforts at ‘repairing’ the bush through such things as reforestation and erosion control. The danger when the latter aspects are being emphasised is that they only interpret any involvement in these programs as only indulging the whims of the European or other non-Fulbe facilitator. That is the reason why I placed accent on the intervention meeting food security needs through multiple organised efforts to help individuals and/or groups.
The Fulbe Jelgobe are no strangers to drought and hardship. They did not seem to characterize food security shocks and stresses as normal or abnormal. They pictured life as alternating between joy/liberty (typified by the rainy season with plenty of milk) and suffering (often equated with the dry season). An important Fulbe trait in response to suffering, and a necessary component of Pulaaku, is munyal (or patience and forbearance with the hard times). A proverb that expresses it well is Mo munyataa curki hewtataa yiite (those who can’t endure the smoke will not reach or reap the benefits of the fire). Stoic forbearance of hazards and hard times is an important Fulbe trait, but not one that stimulates active engagement in a search for locally viable sustainable practices. Although some older men maintained they were now forced to raise ever-diminishing herds of cattle in a poor and uninteresting fashion, this gradually unfolding scenario did not engender a sense of urgency or notion of crisis that necessitated radical changes to life as lived.

The perception of the severity of natural hazards such as drought and food security shocks is an important motivating factor in local stakeholder participation. This perception is influenced by gender and social/economic position. Motivation to participate based on the perceived severity of the seasonal food insecurity scenario thus varies considerably. Motivation to participate is an important focus for critical reflection on the project process.
7:4:7 The Fulbe’s reserve – a complicating factor in facilitating critical dialogue

This forbearance and stoic reserve also seems to be translated into social interactions. Fulbe men are reticent to fully express their emotions and prefer to couch many responses in vague terms and often through the medium of proverbs. They rarely if ever reveal at any one time their full ‘transcript’ when interviewed or for that matter among themselves. It is not always a matter of being devious but a defence against vulnerability by making measured responses. ‘Shy’ and ‘devious’ are words Stenning (1959) uses of the Fulbe of northern Nigeria, and outsiders such as extension staff often apply them to the Jelgobe Fulbe. Fulbe act in this reserved way ley aduna (lit: in public) or in front of those with whom they must evidence their pulaku. One could label this behaviour ‘formal’ as Riesman attempts to, but it is better described as a ‘roleplay’ where one avoids directly expressing ‘an emotion, a need or a purpose’ (1975: 45). Less reserved or informal behaviour occurs amongst wondiibe (those with whom one shares life intimately) and, seemingly, among maccube. Maccube are rather brash and unreserved in comparison and often ridicule the Fulbe for denying physical needs among themselves but expressing them while in the bush or in the debele maccube (Maccube village).

Any attempt at facilitating dialogue around which collaborative inquiry depends must take into account different attitudes to public dialogue and the varying propensity to give frank accounts. It must be contextualised to the local social environment. A pullo is at liberty to socialise in Maccube villages and they are even more apt to engage in dialogue at night, especially if the tubaaku is providing green tea. Therefore, most interaction and dialogue occurred in Dadungal and mostly at night. Some of the most
fruitful exchanges occurred after a meal of *nyiri* (millet porridge) and *kosam* (milk) while drinking green tea together. Key individuals were consulted discretely or through exchange of letters when necessary. Public group dialogue was kept to a minimum. However, some large group meetings were held with Maccube in Dadungal and Hubere So or at my house in Djibo.

Thus in Fulbe society there are traits and habits that complicate attempts at cooperative inquiry. Past interface performances with development practitioners and extension agents do not provide good models for collaboration in inquiry. The work involved in participation, the Fulbe conception of hazards, and what is often referred to as their shy and devious nature all provide obstacles to facilitating participation in an action research process. Therefore, the process must be both flexible and reflexive in order to connect it with local experience in coping with food insecurity. It needs to be flexible because the nature of ongoing struggles between Fulbe and Maccube, and between both groups and their surrounding environment change constantly. Critical reflection is necessary in evaluating the accuracy of the picture of food insecurity being developed and the effectiveness and relevance of the action being taken. The cooperation of stakeholders in reflection is essential in adjusting the focus and direction of the inquiry process and in understanding the implications of strategic partisan efforts undertaken to enhance the position of various subordinate groups.

Participation, learning/inquiry and action were flexibly linked in various ways during the engagement at Monnde So. During the time available for the inquiry it was not a case of an emergent process leading to authentic collaboration but a more eclectic one where I was, at various times, a virtual participant, a cooperative participant and a
partisan participant. As a ‘virtual participant’ (Drinkwater 1992) the emphasis was on my learning for, and in, action that I initiated to meet urgent household consumption needs. As a cooperative participant I encouraged diverse Fulbe and Maccube stakeholder’s to cooperate in developing a continually evolving rich picture of their food insecurity problem situation that enabled them to design and implement ways of improving food security. As a partisan participant, or more activist action researcher, I strategically supported individual network’s claims and interests over those of other networks in order to achieve more equitable improvements in coping capacity.

7.5 SUMMARY

The food-for-work program at Monnde So supported the development of a valuable dry-season gardening infrastructure. As the process was adapted to the rhythm of community relationships and seasonal events, the program was expanded to support informal experimentation with millet varieties and cultivation techniques. As well as the creation of 5 hectares of new gardens, there were improvements made to existing gardens in the form of fencing, wells and erosion control. As with the process in Djibo, it was important to conceptualise food insecurity as a livelihood problem and connect the food-for-work program with a wide range of livelihood activities.

The program’s design and implementation process was often a conflictual one. There were intense struggles over which social network would prevail in decision-making about the large injection of resources that were envisaged in the food-for-work
program. There was a continual re-negotiation of cooperation between opposing social networks. While the inquiry process was often conflictual, the relationships between these various networks involved elements of both cooperation and conflict. The nature and intensity of this 'cooperative conflict' continually changed, as the advantages and costs of confrontation or cooperation were continually re-evaluated in the light of the emerging food insecurity scenario.

The Participatory Action Research process tended to formalise the conflictual aspects of the social network relationships. It did this by making the negotiations between these networks more public. The Fulbe's reserve, and their reluctance to clearly articulate their interests or concerns. They also continually attempted to by-pass the cooperative process by begging for individual concessions. This certainly complicated my attempts to negotiate the cooperation of various social networks. While I sought to promote cooperation, there were times when my activity was more partisan. On several occasions I strategically supported the interests of one social network over others. This was an informed attempt to develop more equitable improvements in coping capacity.

I attempted to emphasise my potential as a trustworthy mediator between these various networks. I used the dialogue in the action research group to argue for cooperation over conflict and design a flexible program that supported observable social networks in their coping activities and relationships. I used my relationship with each social network and the interaction of their representatives in the action research group(s) to develop an appreciation of each network's knowledge and skill
portfolio and the wider networks to which they were linked. This appreciation was an important element in negotiating cooperation and interaction.

Some interesting lessons emerged from the informal experiments with millet varieties. While these experiments were informal, it would appear that food insecurity shocks do not necessarily encourage innovation in agricultural techniques. Initial responses appear to be conservative ones, where the emphasis is on tried and proven methods. The Fulbe and Maccube are very aware of the variety of techniques that exist in the surrounding area and they constantly experiment. Their propensity to borrow techniques is subject to social as well as technical considerations. Change in technique appears to be a slow and complex borrowing process.

I used the gardens as a means of increasing the awareness of possible new techniques. However, I was careful to connect the introduction of new techniques and crop varieties with the links various social networks had already established with wider social networks such as NGO’s and extension services. In this way I negotiated with various local people to introduce hay production, tree propagation and the growing of rice and cassava. The food-for-work program was designed to support innovation by assuring basic household consumption needs over a period of three years.

I will revisit the issues that emerged from the Djibo and Monnde So experiences in the next chapter. These issues concern both the process of Participatory Action Research itself and its effectiveness in facilitating improvements in Fulbe and Maccube resilience to food insecurity.
CHAPTER 8

CONCLUSIONS

8:1 Introduction

In appraising the prospects and limits to intensification of local agricultural systems in the northern Yatenga province of Burkina Faso, Dugue (1989) points to the need for more originality in engaging local populations through processes of research-development. I have argued in this thesis that attempts at engaging vulnerable populations, who do not receive interventions uncritically, in a more original and effective manner demands a more ‘enriched conceptual and methodological toolbox’ (Leach et al 1997). Participatory Action Research has formed part of my enriched toolbox as a more original approach to food security.

I have described two attempts at using Participatory Action Research to engage a vulnerable rural population in improving their food insecurity situation. I have argued previously that the key to facilitating sustainable improvements in food security is by enhancing local capacity to learn. Participatory Action Research is an effective methodological framework to guide such a learning process. It is an agency approach that views the Fulbe Jelgobe as capable and knowledgeable agents who act skillfully in coping with complex food insecurity scenarios. Their ‘interactive’ (Pretty 1994: 41) participation in co-managing a learning process that generates a rich picture of local food insecurity and organizes action to improve their overall capacity to cope with it is essential.
A learning process is necessary because food insecurity is not just a production or exchange issue but an immediate and complex livelihood one. One cannot arrive at a complete understanding of food insecurity situations before action to support household consumption is necessary. One must therefore facilitate a process in which the requisite sense of urgency in dealing with food insecurity finds expression. Such a process is a learning process where an emerging understanding of the local socio-ecological situation is linked to incremental action. The process begins with ‘optimal ignorance’ (Chambers 1992) and it cycles through phases of action and reflection so that a richer picture of the food insecurity situation is created and more effective action taken.

Jelgobe agro-pastoralists live in a risk-prone area and mix herding with dry-grain millet farming. Many Jelgobe’s livelihood activities could be characterised as ‘survival agro-pastoralism’. Bovine ownership is minimal and they rely primarily on dry-grain farming and herding small numbers of sheep and goats. When food security is threatened they exhibit agency in employing a complex array of coping responses that seek to meet immediate food needs while preserving a base for future livelihood activity. Such strategies involve the manipulation of household asset portfolios, access to common property resources and the activation of networks of social relationships. An effective way of improving food security is by collaborating with local stakeholders in designing and managing a flexible food-for-work-program that seeks to enhance the effectiveness of these coping strategies.
The participatory process used to design and connect such a program to the rhythm of the local food insecurity scenario is an emergent one. There is always a gap between the participatory intent and the scope and intensity of local stakeholder participation achieved. The style and intensity of the participatory process depends on the character of the problem situation, the facilitator's awareness of the various social networks involved and his/her insight as to what motivates local stakeholders to support, change or resist this process. The process is thus contextual.

Consensus in decision making is not readily achievable or necessary. What is necessary is an understanding of the cooperative conflict that shapes the interactions between diverse social networks and individuals in any food insecurity situation. People in these networks continually re-evaluate the implications that conflict or cooperation has for their food security. Thus, the continual re-negotiation of cooperation and the strategic partisan support of different social networks and/or individuals are both components of a Participatory Action Research process that seeks equitable improvements in coping capacity.

Critical reflection on both process and practical action is necessary in order to sustain a learning process that comes to grips with local food insecurity struggles. Provisional interpretations of the situation, the prioritization of emergent issues and initial assumptions about the course that the inquiry should take are all subject to reflexive critique. By cooperating with the Fulbe in reflexive critique I was part of the situation undergoing change. This reflexive critique was thus somewhat of a risk and a burden for all involved as it was not a natural form of discourse and interaction for the Fulbe.
Improving food security using a Participatory Action Research framework means that the researcher/practitioner becomes a ‘reflective practitioner’ (Schon 1983). Such a practitioner takes operational clues from local on-going struggles with food insecurity in facilitating a learning process approach rather than a ‘blue-print’ one. Such a process requires facilitation and negotiation skills to create diverse forums for communication and maintain the cooperation of diverse stakeholders. The practitioner also must be willing to risk change, as he/she has no theoretical basis for remaining to critique and change within the process that has been initiated.

The reflective practitioner is equally concerned about process and practical action. Thus I will now articulate the lessons that emerged from the two experiences regarding the enhancement of Fulbe coping strategies and the processes used.

8:2 Action learning networks

As the action research process progressed at Djibo and Monnde So, so did my ability to identify various social networks among the dense network of social relations in both communities. They were based on caste, gender, kinship, age, livelihood vulnerability, friendships and vocation. These networks were used by various individuals as a means of exerting influence on research activities and thus as instruments of power. Two important networks were those involving literate Fulbe and Maccube young men who had linked themselves to various government and NGO agro-forestry and literacy projects. They were young men who also travelled frequently in search of ‘off-farm’ work (often to pay for marriage expenses). They
had numerous experiences of attempts to organize sectors of the community around
the introduction of innovations.

As my understanding of the social networks evolved I sought to connect my inquiry to
identifiable social structures in the community. In so doing I negotiated changes to the
membership of action research groups so that the various networks were represented.
I became aware that by choosing two local action research groups and one general
group, I had created a research network that connected Djibo and Monnde So. This
more abstract learning network was without precedent in terms of local social
networks. I thus attempted to facilitate a dialogue both within and between these
various networks. In attempting this, it was necessary to appreciate the portfolio of
skills and knowledge that each network possessed as well as judge the possibilities of
exchange and interaction between them. In assessing possibilities for interaction I was
also conscious of various levels of conflict both within and between these networks.
The conflict was analagous to what Sen (1989), in the household food security
context, terms ‘cooperative conflict’ where there are constant trade-offs between
cooperation and conflict. In facilitating interaction between these networks there was
a need to maximize the chances of cooperation. In Djibo for instance I used
knowledge and skills from a Mossi Church network to enhance onion growing and
seedling generation in the whole association. Their skill in producing onion seedlings
became important to the success of onion growing by the Dewral members and helped
to stimulate interaction with the Fulbe networks. I often used the networks of literate
young men to stimulate cooperation in action around re-afforestation, well digging
and innovations in gardening. These young men had experienced the attempted
introduction of many innovations and were a good source of knowledge and skills.
As the action research process gradually tackled more complex issues such as facilitating the interaction of social networks it became more open or impromptu. In the initial phases of action research I made many key process decisions myself and there was a more predictable cycling between sense making, action and reflection. As I tried to facilitate more cooperative management of the inquiry process and sought to deal with more complex issues the process included more opportunistic responses to unfolding problem situations. Part of the evolution to a more cooperatively managed process was an improvement in my ability to discern when it was most advantageous to ‘fade out’ (Elden and Levin (1991) and allow the Fulbe and Maccube to manage their own learning.

8.3 Action Research on supporting coping options

In Jelgobe society food insecurity is one of the more visible aspects of the pauperization process. Each food crisis is, as Watts (1991) maintains, a particular or contextual coupling of human agency and power. Any way of increasing local resilience to food insecurity must acknowledge and support the ingenuity and initiative of local people and their capacity to cope. The Jelgobe are fairly clear about how their livelihoods and landscapes have irrevocably changed over the last fifty years. Insecurity and uncertainty are part of their lifeworlds. Just as supporting local initiative is important in driving attempts to mitigate food insecurity, so also is the enabling of local people to inform these attempts through a more rigorous articulation of their diverse experiences of coping.
Both Fulbe and Maccube have experienced recurrent threats to their livelihood security which has for the most part been based on dry-grain millet farming and pastoralism. The initial motive in responding to food stress is usually to preserve asset status and bridge the immediate food gap by recourse to an array of coping options. The choice and effectiveness of coping options depends on the history of threats to livelihood security, the flow of events that shape the current crisis and whether connections are being made to networks within the local livelihood system or with neighboring ones.

Many Fulbe and Maccube carry out what I have described in this thesis as 'survival agro-pastoralism'. These livelihoods are characterized by minimal, and often opportunistic animal ownership, dry grain millet farming on severely nutrient depleted sandy soils and household decision making shaped by food insecurity. In livelihood security terms, their so-called coping behavior is not easily distinguished from both 'normal' seasonal behavior and what Davies (1993: 60) calls 'adaptive' behaviour aimed at a 'permanent change in the mix of ways in which food is acquired'. Davies (1993) distinguishes between 'insurance strategies' that are used to reduce the likelihood of primary production failure and 'coping strategies' that are enacted when primary production has failed. Coping strategies are thus portrayed as a measure to avert destitution.

There are several issues relevant to supporting coping options amongst the Jelgobe: firstly, understanding the nature of coping options; secondly, knowing which coping options to support in order to help fill the food gap and preserve assets; and thirdly, connecting the support of coping options to longer term livelihood security. Davies
(1993: 60) defines coping as a ‘short-term response to an immediate and habitual decline in access to food’. In this thesis I have deliberately applied the notion of coping to the broad array of options available to the Jelgobe over and above millet farming, livestock management and those reciprocal exchanges and informal credit mechanisms based on friendship, kinship and patronage that belong to the so-called ‘moral economy’. While it could be said that recourse to the exchanges of the moral economy is a coping strategy in itself, these exchanges are a permanent part of life in the Sahel and are very hard to influence through intervention.

I have applied the notion of coping in this way as the Jelgobe must cope with annual ‘hungry season’ food stress and because there is very real difficulty in developing a profile of food secure behavior due to their history of recurrent threats to food insecurity. The action research on coping used local knowledge and initiative to support ‘non erosive’\(^1\) coping options and introduce some others that had potential to become sustainable additions to the mix of food procurement activities. In parallel with attempts to support non- erosive coping options, there were attempts made to circumvent erosive coping options such as the cycle of post-harvest debt entrapment and the re-vegetation of perennial grass species. Thus using a locally planned food-for-work program I attempted to enhance coping capacity and introduce dry-season gardening as a longer-term addition to the mix of food procurement activities.

While it would have been analytically convenient to separate coping options from longer-term insurance or adaptive strategies in attempting to monitor food security, it was not evident that the Fulbe and Maccube thought in those terms. One can argue

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\(^1\) De Waal (1989) distinguished between those coping strategies that provided extra food or income but did not erode the household subsistence base and those erosive ones that did.
that there has been a trend over the last fifty tears for dry-grain farming to assume
more importance in the Fulbe’s mix of food procuring activities and that such farming
has become increasingly unproductive due to the absence of fallowing and uncertain
rainfall. It is equally valid to suggest that in the Jelgoji area there is a trend for what
were previously short-term options in the face of food stress to become part of the
normal livelihood security performance. In such a situation it is difficult to judge the
severity of food insecurity by the timing of coping option uptake relative to the
hungry season.

There was little potential for those who pursued survival agro-pastoral livelihoods to
change their mix of food procuring activities through changes to their dry-grain millet
farming or livestock management. In the context of the action research process the
most feasible option was to facilitate access to dry-season gardening through a
flexible food for-work-program that was locally designed, managed and funded.
However, for most Jelgobe any changes in the mix of food procuring activities were
of a seasonal nature and relied on a synergy between local knowledge, household
capability and the ‘off-farm’ coping options immediately accessible. Thus in facing a
scenario where the only immediate way for local Fulbe to profitably change their mix
of food-procuring activities is through short-term off-farm options, it was preferable
to class most non-primary productive activity as coping for the purpose of the action
research program. Whether any seasonal change to the mix was potentially
sustainable depended entirely on the ensuing seasonal scenario.

In contexts of recurrent food insecurity there is a real problem in differentiating
coping behaviour from adapting. Indeed, there is potential for the same option to be
classed in different ways, depending on whether the synergy between human agency and the seasonal scenario allows the chosen option to be sustained. Hay making is an example. For most of those who participated in the hay making activities that were supported by the food-for-work program, it was a short-term coping option. However, for those, like Huseyni at Hubere So, who had sufficient family labour, animal traction, storage facilities and connections through which to sell the hay as well as animals to feed, this option became a longer term change to the mix of food procuring activities. Davies (1993) would class hay making in this instance as an adapting activity.

Another example can be taken from a Moodibbo family in Monnde So. In 1986 when remittances for intercessory prayers from merchants in Cote d’Ivoire ceased, the head of the family told two of his unmarried sons to go to the capital to find work. One of the sons found work as a translation helper with a linguist. The other, unable to find work, traveled on to Togo where he installed himself as the Imam in a small mosque and made money by selling talismans and trading in cola nuts. There are two strategies exhibited here: one of reducing household size during a period of dry season food stress and one of attempting to find work in a neighboring livelihood system. Normally these would be classed as coping options not intended to endure beyond the season in question. However this arrangement persisted until the early 1990’s and both men sent remittances back to the family. These funds helped pay for hired labour to cultivate the dispersed family fields as well as buy food. Thus there was a relatively long-term change in the family livelihood security arrangements.
It is not helpful to link specific coping options to particular crises such as crop failure or to anticipate a regular sequencing of responses, from food rationing to disposal of productive assets and eventual distress migration. Among the Jelgobe, coping options are used more opportunistically according to the actual crisis and its surrounding events. Muusa at Mehena is a good example. During 1989 which was not a particularly bad year in his area, he chose to sell a prime cow and a large bull owned jointly with his father which left him with only three cows. To the casual observer this exercise would be construed as a reaction to an extreme crisis. However, he sold these two animals to buy a camel at well below market prices from visiting transhumant Bellaabe (servile class of the Tuareg) and place a deposit on a plough in order to plough his own field and gain cash income from contract ploughing other fields. It was an opportunist re-arrangement of his asset portfolio by taking advantage of some transhumant Bellaabe’s desire to establish a long-term seasonal guest relationship with the Fulbe at Mehena as it was a permanent water site in reasonable proximity to the Djibo markets.

It is thus not always easy to judge the severity of a crisis by the options chosen or the timing of their uptake relative to the hungry season. Rationing of household food in the early months of the dry season does not necessarily mean that assets have been disposed of and that they have no other choice except to endure hunger. Similarly, just because Fulbe women at Monnde So mix various leaves with their nyiri (millet porridge) in order to increase its bulk does not mean that food supplies are so low that they have been forced to partly rely on bush foods. This practice is quite regular at Monnde So, and even more so amongst the Bellaabe, as a means of rationing consumption when there are not heavy labour demands and reducing the risk of a real
food crisis during the hungry season. Consumption is mildly reduced over a longer period rather than severely reduced during the heavy labour demand period of the hungry season. However if the same option were chosen in Djibo it would tend to evidence a more severe food crisis. Likewise the use of the same coping option could potentially have a different significance when resorted to in Fulbe, Maccube or Bellaabe households.

Amongst the Jelgobe it was not obvious that there was a sequential choice of options. In many cases several options, such as the reduction in the lumpiness of assets and modifying consumption patterns, are used in parallel. Suyaabu from Monnde So is a case in point. In 1987 he sold his last remaining horse to a Mossi merchant and bought several sheep, sacks of red sorghum relief grain as well as sacks of cottonseed to feed his house cow. In selling a status asset, he reduced the lumpiness of his assets as well as forcing his family to modify consumption by eating the unpalatable red sorghum relief grain. He was able thus to conserve his good millet from the previous harvest to be used for traditional cultivation season dishes such as cobbal which is a mixture of milk, spices and lightly crushed grain. It is a meal that is relatively quick to prepare and easily transported and mixed in the field but red sorghum would have rendered it unpalatable. In the same season he hastily arranged for his junior wife and her son to ‘visit’ relatives east of Djibo for the dry season, thus reducing domestic consumption.

Thus we have three options being used in parallel: the rearrangement of the household asset portfolio to enable incremental responses to recurring food stress, the modification of household consumption using a less preferred grain variety and the
reduction of household size during a period of food stress. Suyaabu had taken advantage of the sale of red sorghum at minimal prices by the Government grain stores in Djibo. The red sorghum had been stored for over five years and was of dubious quality.

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The action research framework was important to the support of local coping options (Table 8.1). It was important because it provided a flexible and reflexive process that integrated learning from the local experience of coping, knowledge generation, practical action to improve food security and community organisation. The action research also enabled the process to be driven by the immediacy of local concerns and the initiative and knowledge that was resident in diverse social networks. The process
made dry season gardening available to a number of local families as a longer-term addition to their mix of food procuring activities. In addition a number of options such as haymaking, animal traction facilities and artisanal production were supported through the program. Essential to the process were the money and resources available close to where action informed by the local experience of coping was occurring.

8:4 The focus on process

In a climate of chronic food insecurity, action research was chosen because its fundamental tenet is that, trying to change/improve situations is an important means of understanding them. The aim was to enable some Jelgobe at Djibo and Monnde So to transcend their present capacity to cope through cooperation in an inquiry process that generated meaning for the action taken within their own situation. The action taken was praxis, where theory shaped by increasing local capacity to articulate experience in coping with food insecurity continually met its response in the lived experience of coping.

Action research seeks a conscious interdependency between theory, research and practical action. One approaches an action research process with the intention of being skeptical about initial theoretical assumptions. As can be seen by chapters 2, 3 and 5, the action research processes I describe in this thesis are underpinned by an array of theory about development interventions, pastoral livelihoods and food security. In action research the theoretical framework that informs reflection and action is contextual to the action learning process itself. This shared sense-making
framework gave rise to contextual theory about improving livelihood resilience. It was an intermingling of my explicit theoretical and methodological framework and the more implicit sense-making framework of the local Fulbe that guided their responses to food insecurity. I attempted to balance my influence on the inquiry process by taking 'operational clues' (Li 1996: 515) from the Fulbe’s continuing struggles within their local social and ecological environment.

The action research differed from my normal practice by the deliberate inclusion of moments of critical reflection and skepticism about assumptions I derived from my previous experiences. One engages in cooperative action learning by purposefully seeking multiple perspectives on the problem situation and accessing bodies of theory that are relevant to process and the emergent issues. One simultaneously reflects on the relevance of the engagement, the views, values and knowledge interests that inform the judgements and choices being made. This is why I organized a ‘general action research group’ to concern themselves with creating and critiquing contextually relevant processes for Djibo and Monnde So.

There is a need to acknowledge process, as both myself as researcher and local stakeholders were social agents who shaped the inquiry process. Any intervention aimed at improving food security must recognize and activate the creativity and initiative of local people and acknowledge their capacity to inquire about the conditions of their own lives. However, there is a heterogeneity of lived experience within Fulbe communities as well as embedded inequality regarding access to resources and decision making dialogue. There was a dense network of social relations in both inquiry situations. Community, in many situations was no more than
a 'temporary unity of situation, interest or purpose among particular groups of social
actors' (Leach et al 1997). Thus the inquiry approach must intentionally value
difference, seek multiple perspectives, encourage cooperation and resolve conflict.

If one assumes that stakeholders have multiple, and often conflicting, views and
interpretations then facilitating the participatory inquiry process is problematic and
consensus is a much more ephemeral concept than acknowledged in popular
participatory literature. The situations in which my action research processes were
embedded required a long-term commitment on the part of the researcher to move
from what was initially viewed by locals as a variant of a 'patron-client' relationship
to one of a regularly re-negotiated 'cooperation pact'. Action research was
intentionally employed to reverse the emphasis that Gubbels (1993) contends that
many NGO's exhibit in the Burkina context: they have tended to be more adept at
doing things rather than reflecting and learning from experience.

Important to the focus on process were the dual processes of 'reflection in action' and
'reflection on action'. These parallel processes enable action contextual to each
season and improved understanding and intervention praxis. Emergent theory is
continually meeting its response during and after action. Brookfield's (1986) notion of
'reflection in action' is somewhat akin to Richards' (1985) notion of seasonal
performance where livelihood activities are continually adjusted in light of the
unfolding seasonal scenario. Reflection in action is informed by experience and is
largely tacit. The emphasis is on intuition and improvisation as one relates to the
context and its series of events. Its aim is to enrich future performances. Reflection on
action is a post-event collaboration that attempts to render a discursive account of the
reflection in action and increase the fruitfulness of future engagement in the learning
millieu.

Action research, being a heuristic process, supports parallel processes of reflection in
and on action. Iterative collaborative action allows one to focus interactively on the
tacit knowing that informs the actions and to build an incremental picture of the
rationale behind coping option choice. Reflection on action allows focus on the
outcomes of actions undertaken to increase the numbers of options and support their
use. Action research thus provides a framework for learning from experience.
Naturally, given the immediacy of food insecurity problems, the focus on process
must be balanced by the implementation of relevant practical proposals.

8:4:1 The question of consensus

Mainstream action research in the United States was shaped by a strong emphasis on
consensus and ‘conflict-free theories of society’ (Levin 1994:38). Similarly, ‘farmer
first’ approaches emphasised ‘consensus solutions to identified problems through
managed research and/or development activities’ (Scoones and Thompson 1994: 21).
However, one cannot assume that consensual communities exist nor is consensus a
prerequisite for effective action research. It is preferable to envisage a process that
uses difference as a resource and facilitates the negotiation of cooperation pacts with
different groups and individuals in the flexible implementation of practical proposals.
Zuber-Skerrit (1992: 122), in her definition of action research in the higher education context, emphasizes group process and rational reflection aimed at consensus. Emphasis on the group is comprehensible in complex and dynamic situations, but it is not clear why action research must involve a group facilitated to reach a rational consensus before engaging in action. It could be argued, as Webb (1996) does, that action research informed by critical theory has taken the idea of the rational voluntary individual, which it treats dismissively, and recycled it in its notion of a rational, voluntary group.

It was necessary to resort to continually re-negotiated cooperation pacts with various interest groups and individuals. The prominence given by some action researchers to the idea of a natural inclination to cooperatively interpret, understand and act is misplaced. It leads, as Weiskopf and Laske (1996) emphasise, to a tendency to suppress potentially creative ideas and perspectives that cannot be brought to a common understanding. One is only left then with relatively unimportant issues. It became far more important to hold conflicting perspectives in tension while negotiating an ongoing commitment to both action and interaction.

8:4:2 ‘Partisan’ action research

Carrying out an action research program two hundred kilometers south of Timbuktu in the Sahel of Burkina Faso is a far cry from its use in organizations or clearly delineated sectors of the community. Critical reflection on the two case studies shows that fostering local participation in complex social and ecological situations is, as
Shaeffer (1992:10) says, a process ‘fraught with difficulties, risks, disappointments, and unkept promises’. Risks are apparent because there is the constant danger of facilitating marginal groups to take risks through a partnership with an outsider that they can ill afford to sustain.

The conventional picture of action research is that it is an emergent process that encourages open and ‘symmetrical communication’ (Grundy and Kemmis 1988: 87) in linking inquiry and action and which aims at the authentic collaboration of all interested parties in the transformation of problem situations. Clearly, in vulnerable livelihood situations not all stakeholders are interested in the work of participation, nor is it feasible to include all of their experiences in shaping action aimed at addressing immediate concerns. The constant dilemmas then are: deciding with whom to cooperate/participate in the inquiry; establishing just what is the most effective and feasible inquiry relationship; and identifying whose concerns, among many conflicting ones, will shape the initial phases of the intervention. Indeed at times, as the Monnde So case study showed, when involved at the community level it may be necessary to align oneself actively with the struggles of a particular group and pursue ‘partisan action research’ (Fisher 1991). The choice of which group to identify with and whom to include in the research group is contingent on the nature of the struggles in focus, the propensity of various networks to articulate their concerns and the assumptions that the facilitator brings to the research experience.

Certainly in some action research literature (cf. Fals Borda and Rahman 1991), there is what (Mehta 1997) calls an ‘aggressive partisanship’ which supports particular social groups or networks within a community in seeking to liberate them from social
arrangements that have been deemed natural or necessary by dominant groups. As Levin (1994) contends, much mainstream action research in the United States was constrained by positivistic social science norms and was dominated by the concerns of the researcher or organizational elite and thus also partisan. In contrast, Reason’s (1988) ‘cooperative inquiry’ model, if enacted at the community level, argues for all diverse interests to contribute to the creative thinking that informs any action. If as argued above in this chapter one assumes diversity in knowledge, strategies and access to resources that are supported by conflicting networks of influence, then organizing symmetrical participation is not necessarily feasible, nor for that matter always desirable. Equally it is not evident that an uncritical partisanship, that often formalizes that which was previously informal, subtle and dynamic in terms of social arrangements, is the best way forward in situations of food insecurity. In such a context a more open, heuristic and inclusive process is necessary, one that allows for the critically reflective support of subordinate groups while holding diverse opposing interests in a relationship of creative tension.

There is a danger when negotiating inquiry relationships to reify the subordination of groups such as the Maccube. The result is a focus on activist research that seeks to change the whole system or at least facilitate a counterveiling power by mobilizing ‘individual forces in search of a common aim’ (Villarreal 1992: 257). In Jelgobe society there is always some space within which people can manoeuvre in order to resist entrenched inequality or pursue their own projects. An uncritical activist stance often ignores these subtle processes of negotiation and compromise.
Sambo from Monnde So is a case in point. The Fulbe tolerated his enroling of people at Monnde So in some of his livestock projects. It enabled them to sell livestock and gave them indirect access to his social network, consisting of Maccube in Djibo and NGO personnel, that underpinned these activities. It was clear that he had social space in which to manoeuvre and he was skilled at exploiting this space. However when he supported moves by Hubere So Maccube to establish gardens he had clearly overstepped his ‘space of manoeuvre’ (Long 1984). The Fulbe reacted by denying him access to fields he had previously leased from them. However in their haste to react, the Fulbe hired Maccube from Dadungal to clear these fields of some trees, an act that could have attracted fines from forestry agents. Sambo, with support from the Hubere So CDR, retaliated by threatening to inform forestry agents. With the support of this network he eventually re-gained access to one of the three fields. Thus as Villarreal (1992) emphasizes, social processes have both constraining and enabling elements. It is especially important to acknowledge this in situations of food insecurity. Uncritical activist action research often overlooks the enabling elements of social relations.

The researcher’s relationship with participants is the crux of the action research process and is shaped by the values held by the researcher. As Brown and Tandon (1983: 281) contend, ‘the values researcher’s hold and the ideological perspectives that guide them exert a powerful influence on choices they make in the course of inquiry’. One can either be an ‘expert’ who co-opts people into a process, a facilitator who cooperates with local stakeholders in action and reflection or an activist who seeks to make an alliance with particular interest groups. Thus the process is necessarily reflexive, taking the dynamic web of power relationships seriously,
seeking to ascertain whose interests are being served by the choices made during the inquiry.

In community level action research, action research groups made up of diverse stakeholders mediate the researcher's relationship with the community. It is almost inevitable in the initial phases of the engagement that the members of this group will be relatively prominent local stakeholders who are capable of articulating their perceptions of the situation at hand. Over the term of the process this group hopefully evolves to increasingly reflect the diversity of lived experience and forms an active interdependent learning relationship with both the research facilitator and the various networks within the community.

Firstly, as it is clearly not possible to include everyone in action research. It should be ascertained to what degree the action research group reflects the heterogeneity of lived experience and to what degree collaboration within the group is achieved. Reason (1988) quite rightly sees the cooperative inquiry group as fundamental in complex social situations. As he also maintains, you can't just set up a group it requires ‘intense commitment and subtle skill’ to ensure cooperation within the group and between the group and the wider community while at the same time valuing multiple perspectives. That is why a third action research group was formed to critique and guide the interventions at the two locations.

One danger in establishing an inquiry group is that it is almost immediately translated by the wider community into an ‘in-group’/‘out-group’ dichotomy which only erects barriers to communication. It thus becomes viewed as a partisan entity in itself. It was
necessary to emphasize at both Djibo and Monnde So that this group was only a forum for exchange of ideas and that information flow within networks was important in achieving greater relevance in action. It became important to demonstrate in the periodical larger group meetings that there was an exchange of information and that various views were being canvassed and debated in the forum of the action research ‘group’. At Djibo the action research group became an accepted entity to the point that it became the management group of a registered association. While one must be wary of being obsessed with groups, the group at Djibo did evolve to become a strategic part of dry-season gardening.

There are thus partisan elements in the action research process as one seeks to weave a diversity of perspectives into an integral pattern of inquiry and action. The researcher either accommodates certain groups’ agenda in order to initiate the action research process itself, or reacts to perceived asymmetry of influence in later phases of the inquiry. For example, to initiate the inquiry process at Monnde So it was necessary to accommodate the agenda of the Fulbe while at the same time negotiating a cooperation pact with the Maccube to facilitate their involvement in the process. The action research group’s input into designing the food for work program and adapting it over time to changing situations was explicitly aimed at circumventing the cycle of entrapment perpetrated by local Mossi merchants and influential Fulbe.

Often people indebted themselves in order to establish fields, buy medicine or buy food during the hungry season. Repayment was generally arranged in terms of millet bundles immediately post-harvest when prices were lowest. Such prices usually doubled within three months of harvest. The grain obtained by the merchants was
stored and re-sold to the same people the next year at grossly inflated prices. Locals were thus trapped into reimbursing debts when prices were lowest. It was the interests of the ‘entrapped’ that informed food-for-work planning during the hungry season and immediately post harvest. People were made aware of the option of selling post harvest grain to the food for work program. The prices were fixed at early dry season levels if cash was needed or alternatively they could sell to the program at the low prices and re-buy it at the same price when needed. A flexible program was organized by the action research group to meet requirements of those most at risk of being entrapped. The Djibo merchants certainly did not appreciate the overt circumvention of their methods of entrapment.

Since some moments of the action research process placed at the disposition of two vulnerable communities were partisan it was important that the process was both heuristic and critically reflective. The heuristic nature of the process made it responsive to the uncertain and dynamic seasonal problem scenarios and the changing nature of the Fulbe and Maccube’s ongoing struggles. Critical reflection was necessarily part of the ‘culture’ of action research as I constantly had to re-evaluate the wisdom of strategically supporting subordinate groups while negotiating the cooperation of diverse networks in an open and inclusive yet critical engagement. The action research framework that underpinned the long-term critical engagement included moments of activist support of certain social networks moments of cooperative inquiry and, when relevant, moments of co-opting people into locally planned initiatives.
8.5 Conclusion

I have described and reflected on two Participatory Action Research engagements that were co-managed by local Fulbe and Maccube. Each engagement involved a recursive flow of analysis/understanding local experience in coping with recurrent food insecurity, and action taken to improve local capacity to cope with it. The credibility of both engagements is related to the generation of workable improvements to a problem situation that local stakeholders owned and established as important through dialogue.

The action research process enabled 160 families at Djibo and Monnde So to access dry-season gardens on a long-term basis. In Djibo, the process also led to the creation of a locally legitimate association (Dewral). This association improved the capacity of its members to voice their concerns and defend their access rights to their gardens. They also had improved capacity to access government and NGO development resources. However, in Monnde So the process involved intense negotiations of cooperation among opposing parties because of more overt conflict. People in both situations were left with securely fenced gardens that included extensive windbreaks, hedges, fruit trees, erosion control banks and cement-lined wells.

Using a locally managed action research process to reinforce or enhance non-erosive coping options makes an important contribution to local livelihood security. A focus on coping treats food insecurity as a holistic livelihood problem and places emphasis on people’s agency in responding to food stresses and shocks. However, such a focus is not intended to lock people into coping behavior. A locally designed and co-
managed food-for-work program that factors in social difference and variations in coping capacity creates space for local people to pursue less risk-averse responses to food stress. Using such a program to build an infrastructure for dry-season gardening is a credible way to improve food security. In a climate of improved food security afforded by dry-season gardening, the recursive flow of understanding and action, that is inherent to action research, allows for the reinforcement of coping options to be linked to more sustainable improvements in livelihood security.

Engagement in such an action research process has a number of implications for the practitioner as he/she joins with local stakeholders in co-managing a sustained learning process that uses the respective strengths of each participant. Firstly, in terms of process skills, it is important to show sincerity and patience in improving the local situation. In food insecurity situations sincerity is important as the practitioner is actually engaged in a process that has enormous implications for the lives of others. Both Fulbe and Maccube were adept in sensing insincerity, but regarded patience highly. Humor and irony have an important part to play in lessening tension and creating the conditions for cooperation and more open feedback. Humor and sincerity are important tools in developing forums for discussion and dialogue between diverse stakeholders. The fact that I had a history of real interest in the Fulbe and my ability to joke in the local language were important components in alleviating tension at Monnde So.

Secondly, critical reflection is important as it enables the outside practitioner/facilitator to learn from experience and tease out some of the tacit knowledge that informs local livelihood activities. In the first instance it is important
for the facilitator to reflect on his/her status and power. This power resides in the expectations that many locals have that he/she will take a major role in designing and managing the process. Continual co-operation in critical reflection on experience is a key to judging what is necessary to keep the change process moving. However, too much critique and feedback in the early stages of the inquiry process can stifle activity. There are always tacit agreements, even between opposing parties, not to discuss certain issues or canvass some options. In engaging in critique, the practitioner must risk changing both initial assumptions, and the direction of the process. It is important to use reflection to understand what factors motivate participation in both dialogue and action.

As far as the action research process is concerned, it is unhelpful to get bogged down in the search for consensus. In Participatory Action Research it is assumed that conflicting perspectives and interests pervade social life. Thus, one purposely chooses to interact with diverse participants. The iterative nature of the learning process allows for the creation of diverse forums where diversity of interest, competency and experience can be used to develop creative responses to ever evolving problem situations. To work collaboratively with these diverse perspectives does not mean that there is an imperative to synthesise them into a consensus. It is quite possible to overrate the possibility and value of consensus, or attempt to force a consensus and thereby suppress those perspectives and interests that cannot be accommodated by such an agreement. Reflection on resistance to decisions made, and practical proposals implemented, is a valuable learning experience. It is preferable therefore, to acknowledge social difference and negotiate multiple and evolving 'cooperation pacts' (Weiskopf and Laske 1996:121) during an iterative learning process.
There are obvious implications for development institutions in supporting the use of Participatory Action Research. Many government agencies and NGO’s espouse participatory approaches. However, this is often limited to negotiating local involvement in pre-planned packages. The advantage in using action research to improve food security is that it involves a sustained recursive flow of interactive analysis/understanding and action. There is an appreciation of social difference and the complexity and uncertainty of food insecurity situations. The implications for institutional support for such a process are many.

Most government organisations and larger NGO’s do not have a culture that would support action research. They would need to change and become adaptive learning organisations and encourage their professionals to be responsible and creative in facilitating locally designed and evolving processes. They must be able to facilitate rapid feedback in order to enable adaptive responses. There must also be a willingness to embrace error and negative feedback in developing adaptive and context specific responses rather than fixed project packages.

However such organisations face severe funding constraints. In Burkina Faso for example, structural adjustment agreements have reduced funding and encouraged a more narrow production focus on export crops such as cotton (Harsch 1998). It would seem that smaller NGO’s would be better equipped to support Participatory Action Research activities and take a more holistic approach to rural community problems. However, Gubbels (1994) critique of Oxfam’s Projet Agro-Forestier would indicate
that it is difficult even for NGO’s to design and implement equitable responses to community concerns through adaptive participatory approaches.

However there is cause for some optimism. Support for Participatory Action Research as a credible framework for intervention in complex problem situations is increasing (Greenwood and Levin 1998). NGO’s are entering the development scene as major players and they are increasingly using Participatory Rural Appraisal (Chambers 1992) as a means of gathering baseline data and creating space for local stakeholder action. Participatory Rural Appraisal seems to borrow from Participatory Action Research, Farming Systems Research and Rapid Rural Appraisal techniques. While some agencies confine the participatory dimension to rhetoric and intellectual debate, some Participatory Rural Appraisal’s do lead to action. Participatory Rural Appraisal’s are short term. Thus, they cannot gain an appreciation of the complexities of local power relationships that is essential to good Participatory Action Research. However they do place an accent on participation. This is helpful to the cause of Participatory Action Research. The way to advance the cause of Participatory Action Research would be to facilitate effective forums for dialogue between practitioners from diverse organisations. In such a climate one can encourage the design of more sustained and activist appraisals that can be linked to effective action.
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Improving Sahelian Food Security through Facilitating Action Learning Networks: A Case Study among the Fulbe Jelgobe of Northern Burkina Faso

By

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PLEASE NOTE

The greatest amount of care has been taken while scanning this thesis,

and the best possible result has been obtained.
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ABBREVIATIONS

CDR  Committee for the Defense of the Revolution
CFA  Communaute Financiere Africaine franc Burkina Faso is a member of the
     West African Monetry Union. The seven countries involved share a common
     currency, the CFA (Communaute Financiere Africaine) franc. It is tied to the French
     Franc. Until the mid 1990's devaluation fifty CFA equalled one Franc. Currently the
     exchange rate is 100 CFA to the French Franc.
FEME  Federation des Eglises et Missions du Burkina Faso
NGO  Non Government Organisations
PAF  Projet Agro-Forestiere
Six-S  Se Servir de la Saison Seche en Savanne et au Sahel
# Glossary of Fulfulde Language Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Aduna</td>
<td>People or crowd</td>
</tr>
<tr>
<td>Adunaaru</td>
<td>The world</td>
</tr>
<tr>
<td>Alla</td>
<td>God</td>
</tr>
<tr>
<td>Be’I (pl) mbeewa (sg)</td>
<td>Goats</td>
</tr>
<tr>
<td>Baali (pl) mbaalu (sg)</td>
<td>Sheep</td>
</tr>
<tr>
<td>Bangal</td>
<td>Wedding</td>
</tr>
<tr>
<td>Ceedu</td>
<td>Hot,dry season</td>
</tr>
<tr>
<td>Cobbal</td>
<td>Crushed millet and milk dish</td>
</tr>
<tr>
<td>Dabbunde</td>
<td>Cold season</td>
</tr>
<tr>
<td>Debere</td>
<td>Maccube village</td>
</tr>
<tr>
<td>Dengeeleji</td>
<td>Loosely woven mats used in hut construction</td>
</tr>
<tr>
<td>Dodaade</td>
<td>To weed a millet field the second time</td>
</tr>
<tr>
<td>Duubi</td>
<td>Year-literally number of rainy seasons</td>
</tr>
<tr>
<td>Fulbe (pl) Pullo (sg)</td>
<td>The Fulani people</td>
</tr>
<tr>
<td>Fulfulde</td>
<td>The Fulbe language</td>
</tr>
<tr>
<td>Gargasabe</td>
<td>Leather workers</td>
</tr>
<tr>
<td>Garibu</td>
<td>Muslim or koranic student</td>
</tr>
<tr>
<td>Golle</td>
<td>Work</td>
</tr>
<tr>
<td>Gondal</td>
<td>The fact of being together</td>
</tr>
<tr>
<td>Haala</td>
<td>Talk from the verb haalude</td>
</tr>
<tr>
<td>Haabe (pl) Kaado (sg)</td>
<td>Black non-Fulbe Africans</td>
</tr>
<tr>
<td>Herferbe</td>
<td>Heathen or non Muslim people</td>
</tr>
<tr>
<td>Hudo</td>
<td>Grass</td>
</tr>
<tr>
<td>Indeeri</td>
<td>Child’s naming ceremony-eight days after birth</td>
</tr>
<tr>
<td>Jalo</td>
<td>Long handled hoe</td>
</tr>
<tr>
<td>Jooro</td>
<td>Head or master of the village</td>
</tr>
<tr>
<td>Kaananke</td>
<td>King or paramount chief</td>
</tr>
<tr>
<td>Kosam</td>
<td>Milk</td>
</tr>
<tr>
<td>Ladde</td>
<td>The bush</td>
</tr>
<tr>
<td>Lokkuure</td>
<td>Leather or rubber pouch used for drawing water from a well</td>
</tr>
<tr>
<td>Loonde</td>
<td>Earthenware pot used for transporting water</td>
</tr>
<tr>
<td>Maabrubu(pl) maabo sg)</td>
<td>Bard or minstrel</td>
</tr>
<tr>
<td>Maccube(pl) maccud sg)</td>
<td>Captive or slave</td>
</tr>
<tr>
<td>Moodibaabe(pl) moodibbo</td>
<td>Man of God or Islamic clergy</td>
</tr>
<tr>
<td>Munyal</td>
<td>Patience</td>
</tr>
<tr>
<td>Na’I (pl) nagge (sg)</td>
<td>Cattle/cow</td>
</tr>
<tr>
<td>Ndunngu</td>
<td>Rainy season</td>
</tr>
<tr>
<td>Nyiiri</td>
<td>Millet porridge staple dish of the Fulbe</td>
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<tr>
<td>Pulaaku</td>
<td>Fulbe-ness – to act like Fulbe</td>
</tr>
<tr>
<td>Rewbe (pl) debbo (sg)</td>
<td>Fulbe women/woman</td>
</tr>
<tr>
<td>Rimmaaybe</td>
<td>Descendent of enslaved people – often used interchangeably with Maccube.</td>
</tr>
<tr>
<td>Seeno (cêeni pl)</td>
<td>Dune</td>
</tr>
<tr>
<td>Semteende</td>
<td>Shame</td>
</tr>
<tr>
<td>Semtude</td>
<td>To be ashamed</td>
</tr>
<tr>
<td>Tayre</td>
<td>Harvest</td>
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</table>
Tubaaku
Unude
Wondude
Worbe (pl) gorko (sg)
Wuro
Yimbe

European
To pound millet
To be together
Men/man
Village
People
DECLARATION

I hereby declare that this thesis has been composed by myself, and has not been submitted for any other degree. The work presented is my own, and all work of other authors is duly acknowledged. The assistance of others in the execution and presentation of this thesis is also acknowledged.

[Signature]

Paul Weekley
November 1999
ACKNOWLEDGEMENTS

The activities and time period which are the focus of this thesis were only a part of a fourteen year period spent sharing the lives of the Fulbe and Maccube in and around Djibo and Monnde So in northern Burkina Faso. Needless to say, the friendships formed during this period have left an indelible impression on my life. It is with deep gratitude that I thank Allaay, Huseyni, Lobbo, Haamidi, Sambo and my many other friends at Monnde So for their hospitality, patience and help in learning the Fulfulde language. At Djibo I am grateful for the constant help and wise counsel I received from Ali Cisse, Baylo and Baa Muusa as well as many others. I am also grateful for the assistance rendered by the various provincial officials of the Province of Soum, Burkina Faso.

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None of the activities of the action research program would have been possible without the generous support and funding from Australian Baptist World Aid, Simaid Australia, World Vision and AUSAID. I am grateful, as are the many Fulbe and Maccube whose livelihoods were made more resilient through this financial support.

Without the encouragement, patience and mentoring of Dr R Fisher and the vision and passion for innovation in learning of Dr R Bawden none of what follows in this thesis would have eventuated. I thank you both for sharing the struggle to get to this stage.

Paul Weekley
November 1998
ABSTRACT

The Fulbe Jelgobe, like many other Sahelian pastoral groups, are becoming increasingly vulnerable to chronic food insecurity. They live in a landscape that exhibits a complex patchiness and extremely variable rainfall patterns. When their food security is threatened, the Fulbe Jelgobe act skillfully on the basis of local knowledge in employing a complex array of coping responses that seek to meet immediate food needs while preserving a base for future livelihood activity. These responses involve the manipulation of household asset portfolios, modifying household consumption patterns, access to common property resources and the activation of networks of social relationships. The reinforcement or enhancement of such responses is a credible means of improving food security.

Food insecurity is a complex livelihood problem. Attempts to improve Fulbe food security are not so much about facilitating the adoption of a supposed backlog of innovative technical packages as is commonly proposed in pastoral development. It is rather about engaging with the Fulbe in a learning process that recognises and reinforces their agency in coping, and seeks to understand their complex food insecurity situations by taking action to improve them. Participatory Action Research is a credible methodological framework to guide such a process.

Participatory action research is proposed as an emergent and heuristic process that involves a recursive flow of inquiry, action and reflection.

This thesis reports on an attempt to apply action research amongst the Fulbe Jelgobe in northern Burkina Faso, focusing on case studies of action research in two Fulbe communities. These communities provide the context for understanding a particular food insecurity situation by taking action to improve it. The process was co-designed and co-managed by action research groups formed in both locations. These groups included diverse stakeholders who cooperated with me in learning how to contextualise the Participatory Action Research process to improving local food security. A third, general action research group was formed to engage in reflexive critique on process. The action research process is underpinned by ten years of previous experience in the area and ethnographic research that provides an understanding of the context for Fulbe subsistence strategies.

While the process of Participatory Action Research is perceived to be useful in such vulnerable livelihood contexts, the participatory process itself is viewed as problematic and frequently more partisan than many adherents to the process would accept. There is a complex web of motivations driving local stakeholder participation. Rather than extended dialogue aimed at achieving consensus, as many popular participatory approaches envisage, it is a matter of continually re-negotiating cooperation among stakeholders with diverse interests and capabilities in order to secure their continuing participation in a heuristic learning process.
Treating Fulbe agro-pastoralism holistically as social praxis, a locally managed Participatory Action Research process facilitated improved food security by reinforcing coping options and enhancing local organisational capacity to interface with development organisations. Participatory Action Research provided a framework for the design and management of food-for-work programs aimed at developing an infrastructure for dry-season gardening in both locations. The action research group in one location became the management committee of an association of some 80 people that was formally registered with the government under the name of Dewral. This association, which is still functioning, facilitates the cultivation of 25 hectares of lakeside gardens. These gardens are an important addition to the members’ mix of food procuring activities.
Preface

My facilitation of the Participatory Action Research processes described in this thesis occurred during the last three years of a fourteen year stay in northern Burkina Faso. After studying French in Albertville France for a year my family and I arrived in Burkina Faso in 1979. We spent the first years at Djibo and Monnde So learning Fulfulde (the Fulbe language) and participating in Fulbe and Maccube livelihood activities. I consciously engaged in informal participant observation to improve my understanding of Fulbe culture and society.

In the period up until 1988 I was asked several times by different NGO’s to coordinate food relief activities. The pressure of food shortages on my family and myself during these times was immense because I had access to substantial quantities of grain. There was also the pressure of complex negotiations with local officials. These experiences strengthened my resolve to find ways of linking such rehabilitation activity to more sustainable improvements in food procuring activity.

My first opportunity came in 1985 when several Swiss friends asked me use my agricultural training to help plan and implement some dry season garden programs around the lake at Djibo. This involved negotiations with the local Committee for the Defense of the Revolution (CDR), the funding NGO as well as planning the physical layout of the gardens. The CDR sanctioned the gardens as well as a list of potential gardeners and the forming of these people into a loose association. The association was modeled on local village associations in the area. I had some input into garden activity and occasionally attended association meetings until I left for Australia in 1988.

During my time in Australia I became familiar with Participatory Action Research and I saw it as a credible framework to improve local food security. When I returned to Burkina in 1989 I found that the Djibo association was foundering and people were anxious about continued access to the gardens. After a brief appraisal and discussions I decided that a credible focus for Participatory Action Research was the re-invigoration of the association at Djibo and the establishment of dry-season gardens at Monnde So.

I considered that I was in an ideal position to facilitate the critical dialogue necessary for Participatory Action Research: I spoke French and Fulfulde fluently; I was known and trusted by people at Djibo and Monnde So and I had a good appreciation of local social networks. The accent on discursive reflection and critique demands that participants Participatory Action Research have similar abilities linguistically. It is practically impossible to collaborate with Fulbe in critical reflection without using Fulfulde. The use of Fulfulde is important as it increases the bond with locals whereas the use of translators is fraught with difficulties. It was my fluency in Fulfulde and the fact that people with diverse interests trusted me that enabled me to continually re-negotiation cooperation in the inquiry process.
APPENDICES
APPENDIX 1

BURKINA FASO: A brief development history

1: Introduction

Burkina Faso or the 'Land of the people of integrity' is a landlocked country of about 8.5 million people, around 90% of whom eke out a subsistence type existence through farming and herding. Some sixty ethnic groups speaking at least fifteen languages make up the country's population. They were used at various times during the French colonial period to provide manpower for plantations, construction sites etc in Ivory Coast and irrigation projects in the river Niger delta in Mali (Office du Niger). Even today nearly one million Burkinabé support their families by living and working outside the country. Seasonal migration to the coastal states is a big factor in agricultural labour availability in the northern areas of Burkina. However since the late 1980’s the coastal states of Ghana and Ivory Coast have not been as receptive or hospitable as they were formerly.

Seasonal and long-term migration to urban centres influence agricultural labour availability and places pressure on urban services. The population of the capital Ouagadougou has risen five hundred per cent in the 20 years up to 1990 and expectations are that it will expand to accommodate over 1.5 million people (Sharp, 1990). Burkina Faso is a youthful country with over half the population under 15 years of age. As these people start families, there are fears that the current population growth rate of 2.7% will be surpassed. It is uncertain as to how much the spread of HIV will influence the health and productivity of the population.

Tribes such as the Gourounsi, Senoufo, Dogon, Gourmantche and Bwa are ancient inhabitants of the territory that is now called Burkina Faso. The Mossi and the Fulbe are more recent arrivals. The Mossi who now make up half the population of Burkina invaded from the south some 500 years ago and established themselves in the central plateau area. They were able to resist the Fulbe inspired expansion of Islam but not the arrival of the French.

For the Mossi everything emanates from the centre, whether it be administrative, judicial, or religious. People look to the local chief for most important decisions. In comparison the Fulbe jooro or chief seeks to rule through a skilful combination of cooperation and compromise leading to consensus. Mobility provides an option for expression of rebellion against unacceptable authority. Mossi socio-political structure

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1 On the 4th August 1984, the first anniversary of the revolution, the name of the country was changed from Haute Volta to Burkina Faso. The name is composed from two local languages and signifies 'La patrie de l'homme digne, integre et noble' (Beti 1986). In English the meaning approximates to, 'the land of the people of integrity'. Burkina comes from the Mossi language Mooro and signifies worthy men or men of integrity. Faso is derived from the Dioula language of southern Burkina and can be translated as, Englebert (1986) says, as house, village, country or republic. Thus, one calls the President of the country the President of Faso. The country can simply be designated as Burkina in the same way one talks of France rather than the French Republic. The people are known as Burkinabe, a term derived from the Fulbe language Fulfulde.
has been used to model some collaborative development models used in Burkina, for example Groupements Naam, sponsored by the NGO Six-S (Se Servir de la Saison Seche en Savane et au Sahel).

While the population of Burkina Faso is ethnically heterogenous there has been little ethnic conflict. Animism is by far the major religion. Both Protestant and Catholic Christianity have made inroads (about 10% of the population) and have been especially influential in the area of education. Islam is rapidly accumulating adherents and is especially strong in the Sahelian areas of the country among the Fulbe. However as Englebert (1986) submits, neither religion nor ethnicity have been determining factors in Burkina Faso’s political evolution. By far the biggest influence has been a very diverse and militant trade union movement.  

2. Recent political history

Perhaps the most decisive event in the post independence history of Burkina Faso was the August 1983 revolution instigated by the very charismatic Captain Thomas Sankara and three other young army officers. The revolution set about dismantling traditional tribal power structures as well as the privileges of the urban elite and bureaucrats who were all classed as reactionary. The salaries of bureaucrats were slashed and they were forced to declare their assets. As Sharp (1990) submits, Sankara saw the need to create a new iconography to underpin his plans for radical change and on the first anniversary of the revolution he gave the country a new name, flag and anthem.

Sankara, impatient for change, formed Committees for the Defence of the Revolution (CDR's) were formed to implement reforms and act as village level political agents. While many were effective, some were arrogant and oppressive. Sankara also saw the country's rich and varied cultural heritage as a resource for development. As Margaret Novicki (1987: 57) claims, 'perhaps no other government in Africa has made greater use of its cultural wealth in service of its economic, political, and social goals than

---

2 See Englebert (1986) for a detailed description of Burkinabè trade unions and their interaction with pre- and post revolution political regimes.
3 Controlled by the Conseil Nationale de la Revolution and composed principally of young people, the Committees for the Defence of the Revolution (CDR) were the organs of mobilisation in each village, urban suburb and workplace. Their fifty three pages of statutes published in May 1984 stipulated that each committee should be composed of one village ‘Délegué’ and his/her assistant as well as a person responsible for political education, propaganda/information, socio-economic activities, cultural and sport activities, security, mobilisation of women and finances (for a full text of the statutes see Englebert 1986: 238-254). Any person linked to organisations of previous regimes was not eligible. These committees had links to the judiciary and administration at provincial and national levels. During the later years of the revolution two other village level organisations were created. On the 22nd of May 1985 the ‘Mouvement Nationale des Pionniers’ was created for children ten to fourteen years old. The aim was to increase political awareness and stimulate their involvement in agricultural and cultural activities. Sections of the ‘Pioneers’ were also created in primary and secondary schools, much to the chagrin of teachers. The 19th September 1985 the Union des Femmes Burkinabè was created to make up for the poor integration of women into the CDR and to work against the exploitation of women. Later still the Union Nationale des Anciens du Burkina was formed to try and encourage those over fifty years old to mobilise for the revolution. This union of the elderly was linked directly to the CNR. It was a conciliatory gesture from the President Sankara and recognition that the elderly were not necessarily ‘reactionary’, and that they had been dangerously alienated by the initial fervour of the revolution.
that of Capt. Thomas Sankara. He acted quickly to reduce taxes, the cost of education and set in motion ‘grass roots’ development programs. He also placed an emphasis on women’s needs to such an extent that upon his assassination in 1987 many of his detractors labelled him a ‘paranoid misogynist’ (Harsch 1988). It was the pace of change and his efforts to dismantle the privileges of the urban elite, officials and merchants that bought about Sankara's undoing. Sankara’s revolutionary comrades were also afraid of his efforts in establishing a presidential guard and his efforts to give real power to the people. Sankara, paradoxically, also managed to alienate the trade unions, which had been significant forces in post independence politics.

October 1987 saw Blaise Campaoré and his men assassinate Sankara and twelve of his aides. Campaoré’s violent coup was extremely unpopular. It was so unpopular initially that Campaoré resorted to restoring relationships with France and conservative neighbouring regimes such as Cote d’Ivoire. He also sought to create bases of domestic support by cultivating relationships with prominent members of pre-revolution political parties, dismissed civil servants and customary chiefs. Campaoré, however, seriously underestimated the grass roots popularity of Sankara. For some time he remained a pariah both within the country and with other African heads of state. The Popular Front replaced the National Revolutionary Council (CNR) and revolutionary committees took over from the CDR's. With Campaoré came a shift to the right under the banner of ‘rectification’ and consensus building. The trade unions were once again in favour. Power, in a sense, was ‘urbanised’ after a brief excursion to the bush. Under the banner of rectification there was a clear shift in emphasis away from the rural poor and back to urban elites (Otayek 1989).

The process of national reconciliation seemed to most a way of undermining the egalitarian principles that had been the moral roots of the revolution. Henri Zongo and Jean Baptiste Lengani, the other two ‘co-authors’ of the 1983 revolution, opposed this shift to the right. Even though holding ministerial positions they found themselves progressively alienated from the political process and eventually they were summarily executed in September 1989. The early nineties saw a consultative body established to draw up a constitution. Freer public debate was allowed through the media. However the attempt at democracy that ultimately ensued also included some attempted assassinations of some opposition spokesmen.

3. Structural adjustment and human development

As Harsch 1998 notes, Burkina Faso has had a tradition of structural adjustment. This ranges from Sankara’s (1983-1987) period of national adjustment to the negotiation of a formal structural adjustment loan in 1991, and an enhanced one for the period 1996-1998. Sankara’s regime was very much one of ‘revolutionary self-adjustment’ (Guissou 1996:164). This involved a concerted effort to shift resources away from the privileged sections of society to the rural and urban poor. This self-adjustment ended with the 1987 coup orchestrated by Campaoré. This abandonment of revolutionary self-adjustment as Harsch (1998) shows, led in part to the gradual worsening of Burkina’s financial position. There were shortfalls in tax collection and a revival of bureaucratic corruption. Campaoré also increased spending on urban services and public service salaries in order to increase the acceptance of his regime. At the same
time there was a 50% decline in remittances from Burkinabe workers in Cote d’Ivoire (Zagre 1992: 185).

The regime’s belated acceptance of a structural adjustment loan in 1991 was portrayed as a ‘deepening’ of the adjustment process begun by Sankara and continued during the early years of Campaore’s rectification. As Zagre (1994) notes Sankara’s ‘strict budgetary rigour’ and anti-corruption measures slashed the budget deficit from 24.5 bn CFA to 4.5Bn CFA between 1984 and 1985. However parallel to this budget severity was an un-structural adjustment like increase in investment in health, education and infrastructure. As Harsch says, these investments relied on budgetary reallocations, local financing and ‘campaigns of popular mobilisation’. There were significant improvements in vaccination of children, the number of schools and village health posts as well as rural water facilities such as wells and dams. The World Bank in its 1989 report (World Bank 1989: 108) argued that a number of adjustment measures ‘taken since mid-1984 were beginning to bear fruit. However, these measures were not part of any formal adjustment program but they help explain the World Bank’s (1994) characterization of Burkina as a top reformer in its Adjustment of Africa report.

Burkina Faso’s belated excursion into the adjustment stable meant that Burkina was able to avoid the indiscriminate cuts of earlier adjustment programs and where ‘human development’ was more of a concern. Burkina was able to secure as Harsch (1998) says, ‘budgetary allocations for primary education, basic health care, clean water, additional teachers and so on’. However, the increased human development concerns expressed in policy pronouncements and program negotiations ‘has not prevented the erosion of income levels and social services for many Burkinabe’ (Harsch 1998: 631). The emphasis has been on reducing the role of the State in favour of the private sector. The national grain-marketing organisation OFNACER was liquidated and import restrictions were abolished together with price controls on domestic and imported goods. Burkina’s second IMF Enhanced Structural Adjustment Facility for 1996-1998 required further deregulation even of public utilities. The relaxation of foreign investment provided increased incentives for foreign investment, particularly in the area of mining. The Burkinabe saw many of their State firms privatised. These included the national railway, two breweries and a cement plant. The sale of some of these firms to Burkinabe investors aroused public bitterness. There were accusations that business people closely aligned to the ruling CDP (Congress for Democracy and Progress) party had been involved in restricted insider bidding for these firms.

4. Rural development

Numerous rural development programs have been initiated over the years to address transport infrastructure, access to potable water and health care as well as agriculture extension and input problems. Large numbers of associations cooperatives and other organisations have developed since the late 1970’s, to the extent that Burkina Faso is often cited in NGO and donor circles as an example of rural empowerment (Atampugre 1997). In the 1970’s government sponsored ‘groupements villageoise’ (village associations) and Animation Rurale programs attempted to address village concerns holistically. Previous post –independence efforts at rural mobilisation
centred on ‘Animation Rurale’ (Moulton 1977). This was a non-formal adult education program aimed at facilitating rural organisation and development through cooperatives and credit schemes. The aim was to replace both traditional and colonial institutions. The program falsely assumed that communities were homogenous and collaborative. It ignored embedded inequality and the various ways traditional elites insinuated themselves into the newly organisational structures. The governments did not support emerging leaders of local organisation against local elites. ‘Animation Rurale’ workers (animateurs) were poorly trained and instead of maintaining dialogue with locals, they often reverted to more authoritarian techniques. As Moulton (1977) documents, members of communal work groups associated with ‘Animation Rurale’ did not expect equity in the distribution of benefits from such work. They expected the elites to gain the largest share and subsequently access such resources through individual patron-client insurance relationships.

‘Animation Rurale’ highlighted the problems associated with state agencies attempting to facilitate the emergence of village associations. Many West African countries have witnessed an emergence of various ‘associations for development’ often initiated by bureaucrats pushed into early retirement by structural adjustment programs. These bureaucrats tended to maintain their contacts within the bureaucracy and thereby often influence local administrative decision-making. However such people have a history of involvement in ‘top-down’ approaches and therefore remain paternalistic. They have little interest in the empowerment of local people and the use of local knowledge.

Burkinabe seem to have a great capacity to organise and most communities have several associations based on different agricultural or gender-related activities as well as the political ones. They are either linked to government bureaucracy or various non-government organisations. At the time of the 1983 revolution there were over two hundred non-government organisations operating in Burkina Faso with little coordination of their activities. Among the plethora of organisations are two interesting examples of tripartite relationships between emerging village associations, NGO’s and government services: the Six-S sponsored ‘Groupements Naam’ and OXFAM’s ‘Projet Agro-Foresterie’ (PAF). Mossi modes of social organisation for communal work have been used in the development of the ‘Groupements Naam’ that are linked to the NGO ‘SIX-S’ (Se Servir de la Saison Seche en Savane et au Sahel) (Ouedraogo 1990).

A management committee, which normally includes both men and women, directs each ‘Naam’ group although some sub-groups are gender specific. The group as a whole decides on its objectives, while the committee decides on the management of funds, identifies communal work sites and negotiates the appointment of a local facilitator. Six-S, as a facilitating NGO for the Naam groups or associations had its fair share of problems in the early nineties. The rapid expansion of these groups led to an increasing bureaucratisation of the association that decreased adaptiveness and effectiveness at grass roots levels. The non-reimbursement of credit also led to strained relations with its international donors. Further, its basis of collaboration, a

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4 Animation Rurale literally means the enlivening of rural populations through informal education. It involved the identification and training of ‘animateurs’ who were to act as innovators and change agents in linking broad national goals and policies to the level of the village and its resources.
concept born out of Mossi culture proved relatively ineffective in the Sahel provinces that are populated largely by Fulbe pastoralists.

The Projet Agro-Forestier (PAF) was initiated by OXFAM (UK) in the late 1970's and focussed on environmental degradation in the Yatenga province of northern Burkina Faso. Its literature, as Gubbels (1993) notes, frequently used terms such as 'participation', 'consciousness raising', 'self-reliance' and 'action research'. It focussed on community organisation around soil and water conservation and developing strong relationships with local government services. The program promoted water penetration techniques such as rock bunds or diguette techniques, zai tillage and composting. Its problem, however, was not with practical outcomes but process. Its style of 'action research' while recognising agency failed to appreciate how conflicting interest groups shaped both the intervention process and local institution building.

Despite some promising examples of participatory research and extension, rural inequalities seem to have been exacerbated by a strong structural adjustment inspired push since 1995 to re-vitalise cotton production. In the current rural development context 'rural marketing systems have been liberalised and most credits and agricultural inputs have gone to producers of export crops, above all cotton' (Harsch 1998: 633). The impact of this renewed focus on cotton has been highly inequitable as many of the benefits have accrued to a new rural elite comprising unemployed graduates and public servants who have been made redundant. The cotton industry has been re-vitalised through improved transport infrastructure and agriculture inputs and credit arranged through cotton producer associations. Such associations have not been organised to address wider village concerns outside of cotton production.

The Burkina countryside has seen many attempts at participatory style development. In many cases, as Michener observes, local people's perception of participation;

is not shaped by academic rhetoric but rather by past experience. For them, participation has little to do with self-reliance, empowerment or even efficiency. Instead, it is an opportunity to extract resources from willing agencies. Communities can manipulate participation by bargaining with the agency for more benefits and less work, feigning helplessness, or providing anticipated/conditioned responses (Michener 1998: 2116).

There is no doubt that implementing a participatory approach that addresses broad community concerns is a profound challenge. The challenge is profound, given structural adjustment pressures for increased rural production and local people's individual and collective memories of past participatory approaches. Such approaches are more likely to succeed in equitably improving local problem situations if they are locally designed and managed.
### APPENDIX 2

**From ecological sustainability to sustainable growth – a range of concepts**

*(Hatzius 1996:5)*

<table>
<thead>
<tr>
<th>Subject Matter</th>
<th>Ecological Sustainability</th>
<th>Sustainable Development</th>
<th>Sustainable Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major concerns</td>
<td>ecosystems and biosphere</td>
<td>people's livelihoods, economy, society</td>
<td>economy, markets and prices</td>
</tr>
<tr>
<td>Major goal</td>
<td>ecological viability</td>
<td>social efficiency, justice</td>
<td>economic efficiency</td>
</tr>
<tr>
<td>Major disciplines/ theoretical base</td>
<td>natural sciences, biology, ecology</td>
<td>agricultural and social sciences: ‘old’ and some ‘new’ institutional, evolutionary and ecological economics, bioeconomics, sociology, ethnics, anthropology, ethology</td>
<td>neo-classical and new institutional economics, new political economy, rational choice theory</td>
</tr>
<tr>
<td>Basic world view</td>
<td>equilibrium focused pessimist, nature centred</td>
<td>basically evolution focused optimist, anthropocentrists</td>
<td>equilibrium focused optimist, anthropocentrists</td>
</tr>
<tr>
<td>Principal activities</td>
<td>information gathering and diffusion, lobbying, action research on ecosystems, traditional and organic agriculture, education, define carrying capacities</td>
<td>case studies on sustainable social systems, FSR, improving methodology, policy analysis</td>
<td>modelling, refining theory and methods by challenging assumptions of basic model: behaviour, transaction cost; policy analysis</td>
</tr>
<tr>
<td>Research methods</td>
<td>participatory action research, cumulative learning seeking diversity, group inquiry, facilitating expert, change debate, ethno-histories, mapping</td>
<td>participatory rural appraisal methods, farm-household-models, systems analysis, games of competition and conflicts in natural resources use in real life settings</td>
<td>applied welfare economics, econometric and analytical growth models, game, dynamic programming, general equilibrium (analytical/computable) and partial market models</td>
</tr>
<tr>
<td>Research approach</td>
<td>value led activist (values explicit)</td>
<td>value interested analyst (values explicit)</td>
<td>value neutral analyst (values implicit)</td>
</tr>
<tr>
<td>Major advantages</td>
<td>strong ethical base as source of energy to present and push ahead alternative concepts of development and help in implementation, concern and involvement</td>
<td>addresses problems of equity, culture, institutions, social structure, governance, entitlements, distribution, conflict solution based on thorough case studies</td>
<td>widely accepted theoretical and methodological basis for hypothesis testing, structuring of problems and modelling of economic decision-making situations</td>
</tr>
<tr>
<td>Major flaws</td>
<td>analyses equilibria, lack of theory, often dogmatic, north-based, avoiding issues of political and economic feasibility, heterogeneous organisations</td>
<td>lack of formal theory for rigorous testing of hypotheses, descriptive, multiplicity of disciplines hinders communication</td>
<td>analyses equilibria, applies only to market exchange, behavioural assumptions restrictive, avoids issues of entitlements, equity</td>
</tr>
<tr>
<td>Major concerns with respect to quantification of sustainability</td>
<td>rates of growth of population, loss of rain forests and top soil, reduction in biodiversity, increase in deserts, pollution and corresponding projections</td>
<td>specific and aggregate social indicators, case-studies on people's livelihoods, coping and conflict solving strategies, time and space specific carrying capacities</td>
<td>rates of growth of income or consumption based on national accounts resp. market-valued flows of goods and services; social welfare and utility concepts non-operational</td>
</tr>
<tr>
<td>Major policy prescriptions</td>
<td>protect nature, educate people</td>
<td>empower people, develop institutions</td>
<td>develop markets and internalise externalities</td>
</tr>
</tbody>
</table>

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# Appendix 3

## Changing Professionalism

<table>
<thead>
<tr>
<th>From the old professionalism</th>
<th>To the new professionalism</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assumptions about reality</strong></td>
<td>Assumption of multiple realities that are socially constructed</td>
</tr>
<tr>
<td>Scientific method</td>
<td>Scientific method holistic and constructivist; local categories and perceptions are central; subject-object and method-data distinctions are blurred</td>
</tr>
<tr>
<td><strong>Strategy and context of inquiry</strong></td>
<td>Investigators do not know where research will lead; it is an open-ended learning process. Understanding and focus emerges through interaction; context of inquiry is fundamental</td>
</tr>
<tr>
<td>Who sets priorities?</td>
<td>Professionals set priorities together</td>
</tr>
<tr>
<td>Relationship between all actors in the process</td>
<td>Professionals enable and empower in close dialogue; they attempt to build trust through joint analyses and negotiation; understanding arises through this engagement.</td>
</tr>
<tr>
<td>Mode of working</td>
<td>Multidisciplinary – working in groups</td>
</tr>
<tr>
<td>Technology or services</td>
<td>Rejected technology or service is a failed technology or service. Careers include outward and downward movement – professionals stay in touch with action at all levels</td>
</tr>
</tbody>
</table>

(From Pretty and Chambers 1994: 186)
APPENDIX 4

Two extracts from Mme C. Seydou's (1972) 'Sillamaka et Poullori, epopee peule du Macina' translated by Riesman (1977: 118-119) were used to stimulate dialogue about the differences between Maccube and Fulbe. The extracts show the pullo's taste for cattle and the Maccudo's indifference or ignorance regarding cattle. The second extract emphasises the Maccudo's choice of comfort over hardship and his submission to his physical needs.

Extract 1

A haanaa maydude e nage
You do not deserve to die with the cow.
A hebaay ndakam nage
You have no taste for the cow.
O wii sabu nyende 'yuwoonde tobii
He said: because the day the rain falls
Lewru walaa e kammu
[And] there is no moon in the sky,
Si 'yuwoonde nde heliti a fukotoo
When the storm stops you lie down—
A wurtotoo pukkoda e dow didal faa naange fuda
You go out to lie down right near the fire until sunrise.
Minen so rewii faa 'yuwoonde nde tobii heliti
As for us, when it goes on until the storm rains and stops,
Faa min maati jemma oo feewi
And we feel the coolness of the night,
Mi ummotoo dey
I get up, I say,
Mi 'yuwur juungo am ngo mi hoo'ya tumbude
I stretch out my arm, I take the calabash,
Joodiinde hakkunde daangel basinde
Sitting in the middle of the bedside table,
Mi tawa kosam dam feewi mi suukko faa e hoore muudum
I find the milk cooled down, I plunge my lips into it [to drink it]—
do leembol wonno ehe am fuu fina
All the hairs of my body awaken.
O wii ko nyalahol ngootuwool njoorakol 'yuwara gada ga happo endi didi
He said: when a yearling heifer recently weaned [from her mother] comes up behind her and takes two of her teats into her mouth—

Keddi caggal di
Those at the rear—
Sooba
[When she] sucks,
Ngufo na saama e leydi
[While the] foam falls to the ground,
O wii mido nana wakkati on
He said: I understand such moments,
O wii an a andaa dum e na'i
He said: as for you, you do not know that about cows.
Extract 2

Si be nyaama
Pulloori e Silaamaka
Silaamaka wattaa naa lonnge tati
Pulloori wada lonnge jeegom
Si kosam warii
Silaamaka
Kore tati
Pulloori
Kore jeegom

When they ate
—Poullöri and Silämaka—
Silämaka took three mouthfuls,

Poullöri took six mouthfuls.
When the milk came,
Silämaka
Took three spoonfuls
Poullöri
Six spoonfuls.
APPENDIX 5

Registration certificate for the Dewral Association.

BÜRKINA FASO
La patrie ou la mort nous vaincrons
FRONT POPULAIRE

MINISTÈRE DE L'ADMINISTRATION TERRITORIALE

PROVINCE DE GOU.

HAUT COMMISSARIAT DE DJIBO

CERTIFICAT D'AGREMENT

Je soussigné, Maurice Arsène, Haut Commissaire de la province de DJIBO,

Certifie que le Groupement pré-coopératif DUERAL:
Village ou secteur DJIBO:
Département ou commune DJIBO:

est agréée sous le n° 91-002/HAT/PSU/NG

Haut Commissaire
témoin, Commissaire Civil.