

*Dryland Networks Programme*

**ISSUES PAPER**

**The State and Rangeland  
Management: Creation  
and Erosion of Pastoral  
Institutions in Mali**

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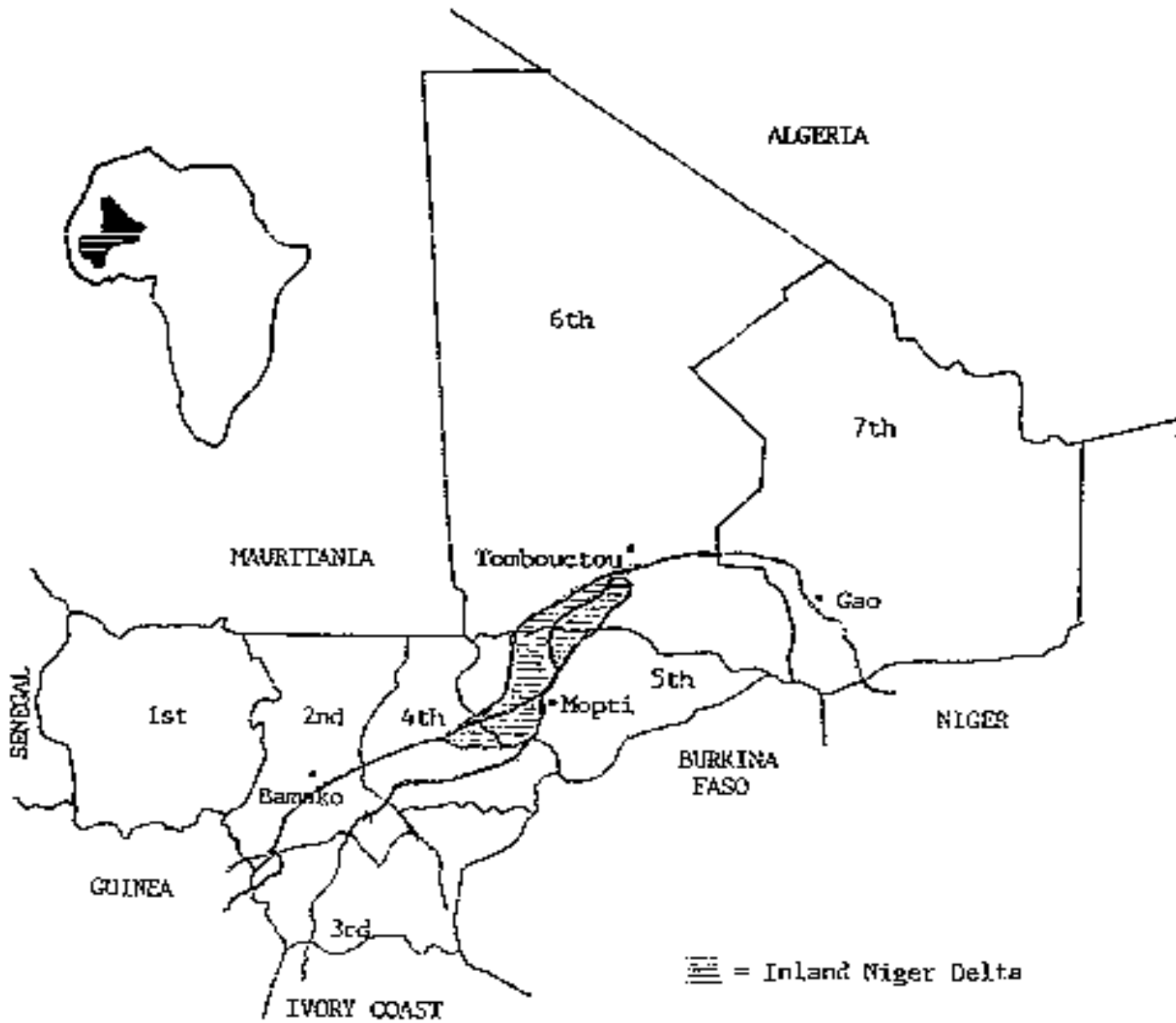
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This paper was initially presented as a case study at the Research Workshop on *New Directions in African Range Management and Policy*, held in Woburn, UK in May 1993. The paper draws largely upon work under a World Bank financed study headed by this author, (World Bank Discussion Paper no. 75, Shanmugaratnam et al 1992). Field work by the study team was carried out in 1990 and 1991. Hence, the paper does not fully cover some recent positive achievements (see Bonte 1993 and Ba 1993a). The initial Mali case study for the Discussion Paper was prepared by N. Shanmugaratnam. The author has since spent five months in Mali doing field work in the same region for a new research programme (1992-1995) on the state and common rangeland management among Fulani-dominated communities in the Niger Delta. The paper also draws upon work among the same pastoral associations by Bonte (1991 and 1993).

# **The State and Rangeland Management: Creation and Erosion of Pastoral Institutions in Mali**

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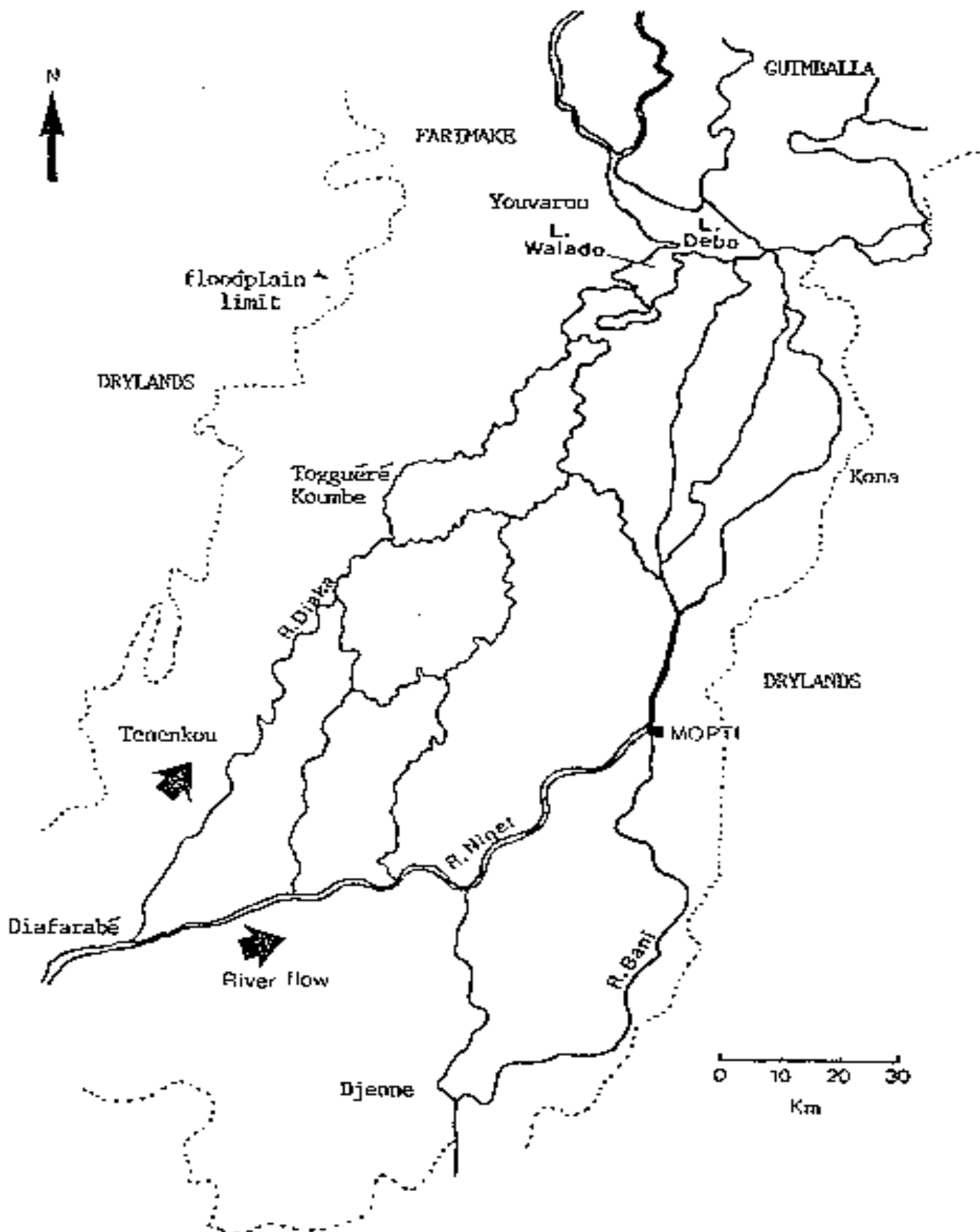
Map 1: The Republic of Mali  
 (source: Moorhead 1991)



Regions:

- 1st = Kayes
- 2nd = Koulikoro
- 3rd = Sikasso
- 4th = Segou
- 5th = Mopti
- 6th = Tombouctou
- 7th = Gao

Map 2: The Inland Delta of the River Niger  
(Source: Moonhead 1991)





## **The State and Rangeland Management: Creation and Erosion of Pastoral Institutions in Mali**

### **Background**

Several Sahelian governments have made local institution building a core element for rural development and land management policies. Local institution building is also a priority for most donors and NGOs operating in the Sahel. State-sponsored institutions are seen as possible focal points for the provision of services, resource management and development. This matches the political rhetoric of decentralisation, but rolling back an interventionist state will not *automatically* lead to improvements at local level. This paper points to some of the possibilities, problems, and dilemmas that decentralisation and local institution building will face in Sahelian countries.

The devolution of power from central government to pastoral and village associations stems from concern over the state's inability to provide adequate services and support for local development and resource management. Decentralisation is also seen as part of the process of building more effective, responsive and democratic institutions related to local needs and popular demands. Local governments have seldom been given the mandate and resources to become effective, while at the same time customary institutions have been undermined and lost their legitimacy. A variety of new formal and informal organisations are evolving - often sponsored by donors, NGOs or the state - but their viability is still uncertain.

This paper reviews the process of establishing pastoral organisations in Mali in the Mopti region under a government programme supported by the World Bank and other donors. It also makes reference to a recent assessment of pastoral institution building in Mauritania, Niger and Senegal as well as Mali (Shanmugaratnam et al 1992, Vedeld 1992). Among the four countries reviewed, pastoral institution building had received the lowest priority in Mali.

Pastoral organisations have different forms and functions. In general they can be defined as institutions which are meant to regulate individual and collective actions by pastoralists to safeguard their economic, social, cultural, and political interests (Shanmugaratnam et al 1992). My preoccupation here is with state-sponsored pastoral organisations - or **pastoral associations** as they are termed in Mali (*Associations Pastorales*). But the paper also refers to constraints faced by **customary institutions** concerned with resource management in the same areas as state-sponsored associations. A well established pastoral organisation can carry out functions related to natural resource management, provision of services, communication of information, external relations and political lobbying, and building of community cohesion and morale. This paper deals mostly with natural resource management, such as operation of water and land rights, water-point management, grazing schemes, bushfire control, sand-dune stabilisation, tree protection and planting, as well as resolution of resource-use conflict and animal husbandry measures with a bearing on grazing management.



## The State and Local Institutions

Rules governing the use of natural resources generally depend on the customary tenure regime and the state's laws, policies and practices. Such rules interact with market forces to create the overall pattern of incentives within which individuals or groups may act.<sup>1</sup> This paper does not treat the role of the state at any depth. But looking at the history of state intervention in Mali, and in many other Sahelian countries, there is obviously a need for more attention to be directed to the role of the state in decision-making and development.<sup>2</sup>

The attempt to form pastoral associations as a decentralised mechanism for resource management in Mali shows many of the problems which arise when a centralised state administration tries to move from the rhetoric of policy declarations to practical operations.

The Malian state set out to form new pastoral associations for improved resource management within programmes supported and influenced by various donors. However, at the same time, state policies and practices outside these programmes have led to a dissolution of customary institutions responsible for the same basic resource management activities, often within the same or adjacent localities. The new state-sponsored pastoral

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<sup>1</sup> Effects of the international and national markets on input and output prices in livestock and crop production respectively - will not be treated here. But the market - adjusted by state policies - have significant effect on local land use systems - and in turn - on tenure relations.

<sup>2</sup> "It has to be explained why so many governments encourage unsustainable resource practices, and how they are going to be persuaded to change their policies". (Pezy 1989:61).

associations are mostly dominated by customary leaders and institutions whose legitimacy depends on the maintenance of customary power relations, family and kinship ties. Many of the factors which have contributed to the disintegration of the customary institutions also constitute major constraints to the new associations, which are therefore likely to remain dependent on external programme assistance to 'counter' an otherwise hostile political environment. Inevitably, they will collapse when donor funds dry up.

Conflict over access to resources is not primarily the result of land pressures from increased human and livestock populations. More important have been changes in political, economic and legal relationships, and the effects of drought. "Overgrazing" and "the progressive degradation of pastures" have not been the principal constraints on livestock production, as thought at the time of project appraisal in 1974 (World Bank 1987:3). Rather, new evidence from satellite imagery, supported by studies on the ground, indicate that vegetation has recovered since the 1972-73 drought in many zones. Serious concern should, however, be raised about conflicts between livestock and agricultural production systems, particularly regarding cultivation of the remaining productive dry season pastures of the Inland Niger Delta. These conflicts are also related to ethnic, caste and social class dimensions.

Recent research describes the disintegration of customary institutions, more open access to rangelands, and more frequent and severe resource use conflicts. A breakdown of customary institutions and transhumant patterns among Fulani and Tuareg pastoralists and further erosion of local management regimes in the Mopti region will not only have severe negative effects on resource use and environmental sustainability, but it would also further threaten political and economic stability in these regions. In this

chaotic context, the reconstitution of viable common property regimes has become an urgent priority (Moorehead 1991, Turner 1992, Cissé 1993, Vedeld 1993).

These basic findings have important implications for the formulation of economic, institutional and administrative strategies for dryland management. Such strategies require effective participation by all players involved: the central government, the local government, the project, the nascent pastoral association - as well as other individuals or groups of actors with interests in local resources.

This paper suggests the need for a broader approach to local institution building than often envisaged. Such programmes should be conceptualised as creating an enabling environment for local institutional development - which might stimulate a real devolution of power and grassroots movements within state-sponsored associations as well as within customary institutions involved in resource management.

### **Crops or Cows ?**

Today, pastoralists and agro-pastoralists in Mali are caught in a protracted crisis due to a combination of factors: i) unequal control and access to resources; ii) erosion of customary institutions, tenure systems and human capabilities; iii) technological stagnation in agriculture and livestock and accelerated conversion of range land to crop land; and iv) conditions favouring the necessity of large families and population growth.

Local land use and tenure regimes are greatly dependent on the state's law, policies and practices. The state administration and the court system have become very influential in resolving conflicts. But decisions are often unpredictable and tend to favour the wealthy or those who are willing to pay (Vedeld 1993). Tenure claims by crop cultivators are often supported at the expense of herders (Moorehead 1991). Historically, the local tenure regimes have been controlled by Fulani and Tuareg aristocratic families. But they are now losing customary rights and positions in many localities. An important reason for this lies in the decline of the livestock economy. Many pastoral leaders are no longer able to produce a surplus from livestock production sufficiently large to maintain close relations with their dependants, with influential people within their community as well as with other actors who have interests in the resources under their control. As a result, the basis for their authority is undermined.

It has been claimed that the livestock sector "is by far the most important contributor to regional monetary income" in the Mopti region (CABO vol.4 1991: 133). But despite its potentials, there is very little investment in and government support for the livestock sector. At national level, the livestock sector in Mali accounts for about 16% of GDP and 30% of export earnings, but government allocations for the livestock service represent less than 1% of the annual state budget (OECD/CILSS 1990).

Although crop cultivation is the most important source of energy in the local diet, and hence in securing subsistence, it contributes little to the generation of cash income at household level (CABO 1991). Rice cultivation brings low returns. With the new liberalisation policy on cereals in Mali, the rice price has dropped further and made rice cultivation even less profitable at

farm level.<sup>3</sup> The performance of millet, sorghum and fonio is a little better. The move to crop cultivation is often a necessary and logical response to resource pressures, since productivity per hectare is so much higher than for pastures. But when this takes place without assessment of conflicting interests and uses, development opportunities are easily lost.

### **Enabling Institution Building and Mobilisation**

Since the initiative for forming pastoral associations came from above, the progress and success of the institution building process will depend on how quickly and effectively this initiative can be turned into a broader participatory process. This depends on the identification of "rallying points" or key functions around which pastoral associations can be established.

It is crucial that an approach to institution building is sensitive to existing processes. The rallying points should be identified in dialogue with the intended beneficiaries. If natural resource management is to be chosen as one such element, this approach must also acknowledge that local pastoralists have their own perception of environmental problems and which management activities should be given priority. Knowledge about these priorities is essential to work out strategies for mobilisation and to achieve participation.

There is an urgent need to bridge knowledge gaps between local pastoralists, rangeland managers, development planners, and policy makers. New thinking in range ecology - which questions the idea that "overgrazing" is the main factor behind changes in range productivity in drier ecosystems -

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<sup>3</sup> Although this might change again with the recent (January 1994) dramatic increase in rice price on the World market.

may provide a more fruitful basis for dialogue between the state and local people. If the drier rangelands prove to be more resilient than assumed by the "desertification school" and if rangeland degradation often can be reversed with a few years' better rainfall (UNSO 1992), then the "desertification controversy" becomes more of a "development controversy" - i.e. how to assist poor and risk-prone producers to manage uncertainty.

With such considerations in mind, several basic conditions have to be satisfied from the national to the local levels to create an enabling environment for pastoral institution building. At central government level these include commitment and effective action at all levels to empower pastoralists and support institution building, as demonstrated by:

- legal recognition of pastoral associations to function as autonomous bodies;
- enforcement of effective property rights;
- decentralisation of decision making;
- provision of basic infrastructure and services like health, education and literacy training through national programmes;
- appropriate livestock prices (relative to grain) and marketing policies;
- support for pastoral associations' participation in privatisation of animal health and other services;

- co-ordination of policies and operations at field level, mechanisms for conflict resolution and proper assessment of the trade-offs between agricultural and pastoral use of dry season grazing areas;
- respect for ethno-cultural identities of pastoralists.

Such policies need backing by donors concerned with local institution building. Other important factors include:

- the project's commitment to pastoral institution building;
- the approach to building pastoral associations;
- the building of appropriate systems of enforcement of existing tenure systems (Toulmin 1991);
- professional competence in the project and the presence of women project staff;
- the existence of mutual respect and confidence between staff and pastoralists;
- communication and co-operation between project manager, field staff and central government authorities.

## Key Factors for Measurement of Success at Local Level

At the pastoral association level, the main conditions for the successful formation of pastoral associations are the type of pastoralism and the ecological context. Are conditions nomadic, transhumant, or sedentary? Pure pastoralism or agro-pastoralism? Are ecological conditions highly variable or not? Such factors are important for the identification of rallying points and for deciding on the size and spatial spread of the groups which will constitute the basis for a system of associations.

It is also important that the rules governing behaviour are clearly understood by everyone, that there is a system of membership which guarantees members certain tangible benefits that non-members do not obtain, that rules are enforced efficiently, that decision makers are accountable to some degree to the members, and that the organisation is given sufficient autonomy in the management of its resources, in the determination of priorities, and in the collection of revenues. This raises the issue of "leadership" regarding capacity to mobilise people, and to deal with external relations. The operation of pastoral associations may require particular management skills like simple book-keeping and accounting, technical know-how in natural resources management as well as literacy. This also relates to the issue of how the customary institutions operate and to what degree these institutions can serve as a basis for improved management regimes. Customary leaders are generally not literate and may be unable to fulfil the new roles demanded of them. It may often be necessary to replace them by the more literate and skilled.



Most importantly, the viability of a pastoral association will depend on the efficiency with which it can contribute to food and resource security of its members and maintain a certain economic and financial independence. This requires fulfilment of the conditions listed above and provision of services to members such as credit, animal and human health services, literacy and other type of training, assistance in marketing and provision of basic consumer goods and animal feed.

### **The Rationale for Forming Pastoral Associations in the Mopti Region**

At the request of the government of Mali, the World Bank has supported livestock development in the Mopti region since the start of the Mali Livestock Project (1975-84). A principal aim of this project was to rebuild herds after the 1972-73 drought - which had resulted in a fifty percent loss of cattle. The drought had "spurred the need for long term projects aimed at more rational land and pasture use" and development of more efficient beef and milk production (World Bank 1987:v). The overriding problem facing livestock development was considered to be "the progressive degradation of pastures" (World Bank 1987:3). A combination of animal health, water resources development and formation of pastoral associations were the main components under the project. A special agency *Opération de Développement de l'Élevage dans la Région de Mopti (ODEM)* was established in 1975, under the Department of Livestock to implement the project. The second phase of the project - the Mopti Area Development Project (1985-91) - recognised the increasing importance of agriculture in the region. It included both livestock and agricultural components which were meant to promote integration of crop and livestock production, particularly in

the more densely populated Niger Delta. My concern here is mostly with phase two.

A pilot component was identified to establish 35 pastoral associations outside the Niger River Delta - to the west (Mema), east (Seno Mango, Seno Bankass, Plateau) and to the north (Gourma). Inside the Delta, the project planned to establish livestock co-operatives and village associations, but with no defined functions in land management, except that the co-operatives would play a role in controlling the annual crossing by cattle of the rivers Niger, Bani and Diaka into the Delta pastures. The associations would be established around new water points with the aim of stabilising pastoralism in these areas and delaying the annual transhumance. Overgrazing and resource use conflicts were considered particularly severe in the Delta. The project strategy recognised the Delta as an integral part of a larger resource base for pastoral, agro-pastoral, agriculture and fisheries production.

The approach to forming pastoral associations involved identification of coherent groups and spatial delineation of land (according to kinship or social affinity, settlement patterns or simply interest in management of particular water sources or pastoral areas). The aim was to make these the core elements of a community-based system for natural resource management. The associations would be attributed water and grazing rights, legal recognition, provision of development services (veterinary health, training and mobilisation, credit, human health), infrastructural support to rangeland development, mainly water points and improved management techniques (grazing schemes, fire-control, tree planting).

## **The Context : Population and Resource Use Systems**

The project intended to benefit about 100,000 pastoral families in an area of 95,000 square kilometres - which encompasses the Inland Niger Delta. The target populations for the pastoral associations were mainly Fulani and Tuareg (Tamachek) pastoralists outside the Delta. The total population of the whole ODEM zone (Fifth Region plus two other cercles) was 1.3 million people in 1987, a 10% increase since 1976. The 1987 census indicates an annual population growth rate of less than 1%. The total population in the central Niger Delta was 290 000 in 1987 (i.e. about 18 persons/sq. km) (CABO 1991:vol. 1).<sup>4</sup>

The Inland Niger Delta plays a vital role in sustaining livestock production and pastoralism in Mali and in this region<sup>5</sup>. Overall, the Mopti region encompasses about 23% of the total national cattle herd (1991 census). The Delta represents a major resource for livestock, agriculture, fisheries, and wildlife. It is also a complex and uncertain environment whose productivity depends crucially on rainfall (3-500mm) and annual flood levels of the Bani and Niger Rivers. About 16,000 sq. km is flooded under "normal" flood levels - leaving several thousand sq. km of pasture for dry-season grazing and land for flood retreat crop cultivation (rice). Most of the cattle in the project area use the Delta pastures as dry season pastures for seven to eight

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<sup>4</sup> Due to migration and internal redistribution of people during the drought, as well as other measurement problems, the population figures are uncertain.

<sup>5</sup> Possibly 20% of the entire Malian herd use the area each year (Moorehead 1988).

months of the year - from October/November to May/June. The Delta is therefore the most critical rangeland resource.<sup>6</sup>

There are different interest groups involved in the use of the Delta and surrounding rangelands; with distinct ethnic identities and production strategies - ranging from purely pastoral production (Fulani and some Tuareg and Moors), via agro-pastoral (Fulani, Rimaibe) to agricultural (Bambara, Marka, Rimaibe, Sonrai) and agro-fisheries (Boso, Somono) production. There are also absentee investors in livestock, agriculture and fisheries such as traders and government officials. The Tuareg mainly inhabit the northern part of the project area and their herds have a higher proportion of small ruminants than those of the Fulani. Camels are found almost exclusively in the North. The Fulani live mostly in the southern areas - and have their stronghold in the Niger Delta. The Rimaibe - the former Fulani slaves - have historically specialised in flood-recession rice cultivation. Many have now become enterprising livestock owners and agriculturalists. Since the 1972-73 drought many Tuareg families have settled around permanent water points and adopted crop cultivation. Often their Bella slaves have left to take up agriculture or waged work.

### **'Overgrazing' and Rangeland Degradation**

Figures on animal numbers in the project zone are uncertain. Some sources indicate about 1.3 million cattle in 1975, increasing to about 1.8 million in 1981-82, falling to 800,000 in 1988-89 after the drought (IRAM 1991). The

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<sup>6</sup> The cattle depend on the Delta wetland-pastures to survive the dry season. It is, however in the rainy season pastures outside the Delta that the cattle put on weight under optimal conditions.

1991 census estimated the Mopti region to have 1.1 million cattle and 2.5 million goats and sheep. While this indicates a significant increase, the livestock populations north of the project area in the Gourma are decreasing (Hiernaux 1993). At present about 1,000,000 cattle depend on the Inner Delta for dry season pasture. The small ruminants survived the drought much better than the cattle. Cattle populations are still below earlier peaks, but the density of livestock in relation to available dry season pasture is probably much higher - due to the drought, drop in flood levels and land use changes in the Delta.

The Delta has the highest density of animals in the region.<sup>7</sup> According to available ecological studies, grazing has had little negative impact on the productivity of perennial pasture during the dry season (Hiernaux and Diarra 1986, CABO 1991: vol. 2). Recent research by Turner of grazing pressure on annual rainy season pastures on the western border outside the flood plain "does not support the general notion of a strong negative impact of Sahelian transhumance systems on the quality and quantity of pasture production on sandy substrate. In fact, the net effects of historic rainy-season cattle actions on overall production could best be characterised as subtle or non-existent." (Turner 1992:396).<sup>8</sup> Rainfall has been the dominant factor affecting

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<sup>7</sup> In 1987 cattle numbers in the Delta were estimated at about 800,000 (density /sq. km 23) and small ruminants at 764,000 (density/sq. km 23) - which represented close to a 40% reduction in cattle numbers and a 66% increase in small ruminants compared to pre-drought aerial surveys (1981). According to staff of the local livestock service some 60% of the cattle are herded by pastoralists residing in the Delta (but mostly not owned by them). The rest is herded by pastoralists with their home base in regions adjacent to the Delta i.e. to the east (Seno Mango, Seno Bankass, Plateau) and to the west (Mema). To lesser extent cattle also come from the north (Gourma). These 'outsider' herds are only allowed to enter the interior Delta during the dry season (see also RIM 1987).

<sup>8</sup> There has been no systematic evaluation of the extent of rangeland degradation in the Delta and the surrounding areas. Earlier studies and reports indicate that

vegetation. An increasing problem, however, is the degradation of bush and tree vegetation by goats and sheep. Recent evidence from satellite imagery in the Gourma, to the north of the project area, shows a recovery of vegetation from 1975 to 1986, assumed to be related mostly to improved rainfall rather than changes in grazing pressure (SSE 1993). A north-south transect study by Hiernaux has monitored vegetation changes between 1984-1990 in some of the same areas of the Gourma and shows similar findings, implying that the resilience of these rangelands is very strong (Hiernaux 1993).<sup>9</sup>

The main conflict over resources within the Inland Delta arises from the invasion of deeper lying areas which receive flood-water even under present low flood levels by farmers. These areas often coincide with the best remaining perennial pastures. Different surveys of the Maasina flood plain (Western Delta) show that the growth in agricultural crop land only slightly exceeded human population growth rates up to the mid-1970s, and the cultivated area seems to have dropped substantially during the 1980s. Research in one part of the Delta shows that the cultivated area in the 1980s constituted only 35% of that in 1975 (Turner 1992). A similar reduction in the cultivated area has been found in the northern parts of the Delta (Moorehead 1991). However, outside the Delta, crop expansion is the main problem. In the Cercle of Mopti about 82% of the total cultivable land is under production or fallow which leaves little reserve of arable land for the future.

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<sup>9</sup> "overgrazing" takes place in more localized areas on susceptible soils in rainfed pastures (CABO 1990: vol. 2).

<sup>9</sup> But no measurement of changes in soil physical or chemical properties has been carried out.

## **Progress with Forming Pastoral Associations**

The formation of pastoral associations began in the second phase of the livestock project, which started in 1975, although this was also one of the objectives of the first phase. ODEM was expected to be given sufficient authority by the government to form pastoral associations, and to adjudicate in cases of conflict.

Until 1986-87 ODEM had a concept of a three-tier model of pastoral organisation beginning at the local level with voluntary groups of ten families each, several of which would unite to form a Pastoral Cell. These Cells would undertake actions of common interest. When reaching a certain management level, several such Cells would form a Pastoral Association (PA). The pastoral associations would be autonomous and legally recognised organisations responsible for the management of certain areas and activities. The philosophy was that pastoralists should take the initiative to form voluntary groups while ODEM would promote the process by raising awareness, and later playing a more active role in formalising the pastoral associations and granting them water and land rights (ODEM 1987).

However, the mobilisation of pastoralists did not take place according to this vision, and only one association was established before 1985 (Boni/P 17 in 1980). While ODEM had an organisational model and strategy for forming pastoral associations, they did not launch an appropriate socio-economic study to identify coherent groups. There was little attempt to identify pastoral tenure rules and areas for each association in which activities would be developed. It appears that ODEM never made a concerted effort to mobilise pastoralists. Instead, the model was abandoned without a serious

re-examination of the constraints on its operation and no attempt was made to develop an alternative approach.

One reason for slow progress was that ODEM changed from the original idea of forming the associations before the construction of water points, on the grounds that some quick benefits would help motivate the pastoralists and improve dialogue with the project. But it disregarded the idea of mobilising the pastoralists first and making them active partners of ODEM in selecting the locations for permanent water points. The well and borehole construction component then ran into serious technical and logistical problems because of inadequate hydrological data, cost escalation, and administrative bottlenecks. ODEM also tried to place some of the wells meant for the pastoral areas in farming communities. Other sites were chosen in rangeland areas on the edge of the Delta where absence of water did not allow longer stays by transhumant groups but where the land appropriation systems are very unclear. While it may have made sense to select these zones, by opening up new pastures, it complicated the institution building process (Bonte 1991).

Even though 35 pastoral associations had been created by 1992, none of them had reached the final stage of a legally recognised pastoral association. And less than ten could be characterised as a new organisation of pastoralists with any meaningful functions (Bonte 1991). The rest exist merely on paper. Total membership, which is entirely male due to household heads being male, does not exceed 3,000, i.e. not more than three percent of the targeted beneficiaries of 100,000 pastoral families. In other words, the vast majority of the target population remain outside these associations.



The record of institution building looks unimpressive given how long the project has existed. This stands in contrast to ODEM's achievements in animal health and herd regeneration.

## **Failures by State and Project Administration**

### **1. The State and Decentralisation**

Project progress has been hampered from the start by a political and bureaucratic system unwilling to relinquish power to the regional level in Mopti/Sevare.<sup>10</sup> Initiatives by ODEM were often overruled at central levels. The government failed to delegate authority to ODEM to deal with land rights, adjudicate resource use conflicts, and carry out administrative matters. The Livestock Department in the Ministry of Rural Development thought ODEM should undertake only veterinary activities. Nor did the government provide adequate funds on time, or purchase vehicles for the field operations. Such shortcomings at national level are important to bear in mind when evaluating the performance of the project.

At the same time, the government financed a huge rice development scheme under the same project on advice from the World Bank. This was meant to facilitate crop-livestock integration, but in reality the crop production component was implemented by another agency, Opération Riz de Mopti (ORM), in almost complete isolation from livestock activities. The rice project involved the rehabilitation and clearing of new areas, totalling 40,000

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<sup>10</sup> As a general rule, decentralization options debated at the central level have tended to "emphasize the extension of State and Party authority out from the Center" and participation has most often referred to "popular mobilization for national objectives rather than for objectives as determined by local populations" (Gellat et al 1990).

hectares. It took land away from pastoral production, and blocked traditional transhumant routes. Pastoral tenure rights were in this way nationalised and leased to village or urban people for farming, which obviously worsened relations between pastoralists and the state in the area.<sup>11</sup>

## **2. Competence, Capacity and Efficiency**

ODEM's field staff lacked professional competence in assisting pastoralists to organise themselves, being mainly trained in animal health. There were only two sociologists at headquarters and no staff with such competence in the field. Foreign technical assistance was short term and did not perform well in the field of institution building. There was also a lack of committed field personnel to animate and organise the intended beneficiaries. Very few of the field and headquarters staff, for example, knew the local languages. The failure to monitor and review the process at early stages and take appropriate steps to solve problems may also reflect a lack of innovative thinking at the higher management levels of the project. Finally, the project failed to develop institutional linkages between pastoral associations in upland range areas and their possible counterparts in the Niger Delta.

## **3. Identification of Coherent Groups**

The identification of coherent groups in relation to rangeland management is fundamental to the institution building process. For example, while a small cohesive group can more efficiently manage water points, management of a viable unit of rangeland requires a much larger group. The right choice of

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<sup>11</sup> The rice schemes never yielded as expected. Due to drought and reduced flooding, water only enters about 1/3 of the total area developed. The combination of drought, slack management of the perimeters, and no use of fertilizers lead to extremely low yields.

management unit is a function of at least two considerations; local needs and aspirations on the one hand, and the requirements for an overall water and range management policy on the other. The latter concern came to dominate ODEM's strategy work. Several of the pastoral associations were formed around a few influential families or charismatic customary leaders. Conflicts have surfaced with neighbouring groups after the delineation of the pastoral association and the allocation of management rights. The dialogue did not sufficiently involve the broader spectrum of user groups.<sup>12</sup> The best functioning associations are those which correspond to socially coherent units - where customary access rules to water and range are known (for example those of Boni, Karwassa, Kagnoumé, Daidourou, Yirma, Sangana, Koba, and some in Méma-North). But spatial delineation remains incomplete, and in most associations there has been no firm concept of 'membership', by which to distinguish members from non-members. There is, for example, no system of a membership fee or card. In general, non-members are provided the same services and given the same privileges as members if they reside in the same area. People therefore do not see the point of being a member.

#### **4. Problems of Establishing the Associations**

One of the greatest shortcomings has been the top-down approach to establishing pastoral associations. The project was never able to decentralise its approach and turn top-down initiatives for pastoral associations into a bottom-up process of mobilisation. This can be illustrated by the Méma-North case. In 1985 ODEM created a pastoral association (PA) out of nine

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<sup>12</sup> Problems also arose when one Fulani association (Boni/P17) was allocated particular rights around a certain water point within a larger coherent group of Fulani from Boni. The rangeland has been well managed, but all Fulani from Boni continue to have customary rights of access to rangeland in the area. Hence, the new association is largely fictive in relation to water and rangeland management (Bonte 1991).

Tuareg settlement points (Kita, Almamor, Talma, Karal, Oustaka, Antari, Al-Beyda, Feyadji, Toubabélé) without due consideration of what constituted cohesive groups. Each of these groups was made up of about ten families - installed in the proximity of a water point - and corresponding to a fraction, or parts of a fraction organised around a local tamachek leader. The first of these Tuareg settlements was established in 1968. The various leaders were engaged in local power struggles and ODEM never adequately negotiated an agreement for the new PA. As a result, the PA-management committee became defunct in a short period and the PA was dissolved. The hierarchical social structure of the Tuareg also posed a barrier to the formation of the PA. Later on, a new pastoral association was formed for each of these settlements.

But local problems may also help constitute a pastoral association around an influential leader. The support of the administration may give leverage for these leaders to solve potential resource use conflicts. This is to some degree the case in Boni, where several associations were created after 1980. Here, ODEM has been instrumental in creating a relatively dynamic movement of associations.

### **5. Institutional Models and Legal Recognition**

The three-tier model chosen by ODEM may provide a good basis for the structure of pastoral associations, but the fact that none of the associations has attained legal approval reveals a problem. This is partly a result of the ambiguity in the legal status accorded to associations. One law relates to the "régime des associations, ordonnance 41 PCG du 28 mars 1959" which recognises the autonomy of certain types of association. The other concerns the cooperative movement in "loi 88/6Z/AN-RM du 10 juin 1988" which

regards an 'association' as a pre-cooperative without the full rights of a co-operative. Reference to the latter implies, for example, that a pastoral association would not be allowed to take up credit from the Agricultural Development Bank. The leaders in Boni have attempted to claim status as co-operative in order to get access to credit (Bonte 1991).

### **Issues at Local Level: Performance of the Pastoral Associations**

The problems at central government levels combined with constraints in project management have had their impacts at the local level. The performance of the pastoral associations can be judged in terms of their main objectives:

#### **I. Food Security**

The socio-economic security of the herders in the area has been severely weakened due to loss of animals and rights to control land. Many herders are heavily dependent on wage labour. There are four ways by which they could improve their situation. One is by reconstituting their own herds. For this, they need credit support which is not available. Customary systems of redistribution cannot meet the demand for new animals. Another is by getting their employers to pay them higher wages. This would require the pastoral association to act as a trade union. The third way is to strengthen their own crop production and food security, which is a strategy often preferred, although prone to uncertainties of both weather and pests. Finally, the herders might get involved in non-land based activities in rural or urban settings. This would require better education and training facilities, and possibly access to credit to start new activities. At present the government is unlikely to provide these services, but pastoral associations

could have a role to play. A few pastoral associations have operated cereal banks - with a revolving fund - as a buffer against the fluctuating terms of trade between livestock products and grain (see Shanmugaratnam et al 1992). But neither the associations nor the project has achieved much in terms of food security of local people, other than indirectly through facilitating herd regeneration by improved provision of animal health services.

## 2. Rangeland Management and Resource Security

Improving security of land and water tenure is critical to strengthening resource management. There are many conflicts between the traditional *shari'a* and the pre-Islamic customs that still endure on the one side, and modern property laws on the other. Interpretation of rights vary, and several channels exist for resolution of tenure conflicts. But the final word is often left to the state administration. Usufruct or ownership can be granted to a user to "develop" ("*mettre en valeur*") the land. This notion of *mise en valeur* does not however apply to pastoral land use. Despite the lack of clear tenure laws, ODEM has on a few occasions intervened to delineate pastoral areas and the conditions for utilisation by the pastoralists concerned. The legal status of these areas, however, remains unclear. Overall, the establishment of territorial boundaries for the associations has not been completed. Tenure rights to the rangeland have not been issued. Territorial limits are not respected, nor do many of the board members of any association know their spatial limits. Of the five pastoral associations visited by us only two knew their boundaries. The other three had a vague idea of their territory. This reflects perhaps the interest paid by herders to access rights to key resources (water, dry season pastures, salt licks), rather than to less productive rangelands.

Most of the associations have been formed around water points. ODEM alone has constructed more than sixty boreholes and eleven wells, so that now only about 15 percent of the project area is outside the reach of a permanent water point. Associations have shared the cost of new water points to varying degrees.<sup>13</sup> There has been very little attempt to manage grazing areas, and this has generally been limited to the temporary closing of some water points during certain periods. The installation of wells and pastoral associations has also substantially modified former patterns of transhumance. Herds are maintained for a larger part of the year in the dry, rainfed pasture areas (March-January), and only depend on grazing the flood plain bourgoutières of the Delta for a few months. The reduction in time spent on transhumance is due to loss of animals (Bonte 1991).<sup>14</sup>

ODEM is faced with another problem at Tin Habou over whether to allocate a vast pastoral area of 53,000 hectares to a recently established association led by an influential and dynamic leader. This association covers a strategic area for many transhumant pastoralists passing to salt-licks. ODEM believes this personality and his family will dominate the association, even if he claims to be speaking on behalf of forty Tuareg sub-groups. On the other hand, this customary authority would probably install an efficient surveillance and range management system (Bonte 1991).

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<sup>13</sup> Other donors operating in the area (European Development Fund) have provided wells at no cost, fuelling resentment against the ODEM scheme of cost sharing.

<sup>14</sup> There are however conflicts with transhumant Fulani herders, particularly regarding crop-harvest destruction. A larger pastoral association uniting several of the associations - as originally envisaged - could be a mechanism to solve this problem.

Several pastoral associations have organised bush-fire control, and range-patrolling groups (including Tin Habou and Boni), and a few firebreaks are also being maintained. The pastoralists recognise the need to protect and plant trees and stabilise sand dunes, but practical actions are very limited. Reforestation has mostly been carried out by the project, with paid local participation. The project has developed valuable technical knowledge on the regeneration of flooded grassland, and has regenerated several thousand hectares with local participation. In and around the Delta, ODEM has marked out trekking routes for animals, to limit the risk of animals entering farmers' fields. These exercises have not always been carried out with appropriate dialogue, and have often created conflicts between pastoralists and farmers.

A continuing problem is how pastoral associations manage water points. Although associations have committees that levy water charges, none of the five associations visited had a surplus to meet the cost of major repairs or pump replacement. Only running costs were covered. Well and borehole management is also seriously hampered by the unresolved problem of land rights. In Boni, the President complained of outside herders moving into their dry season grazing area in the rainy season, against the rules set by the association.

### **3. Herd Ownership**

Neither the Malian Government nor ODEM has recognised absentee herd ownership as a major issue affecting pastoral institution building. Absentee herd owners are not pastoralists, nor are they involved in the affairs of the pastoral associations. As much as 86% of the livestock herded by one group



of 18 Fulani families were found to be owned by others.<sup>15</sup> Over the last two decades, it is particularly government officials and merchants who have accumulated cattle (Turner 1992). Absentee herd owners create problems since they have less interest in long term land management. A Fulani who mainly herds other people's animals may care less about following the rules, and be less careful about the animals entering and causing destruction in farmers' fields. Absentee herd owners favour open access rangelands which allow their herds to exploit grazing resources at no cost. The large growth in absentee herd ownership in the Delta is conducive to neither natural resource management, nor the reconstitution of viable common property regimes, nor livestock development (Shanmugaratnam et al 1992).

#### **4. Animal Health and Agro-pastoral Production**

Animal health has been the most important service provided by the project, and has increased local awareness of animal health problems and greatly facilitated herd regeneration. The major diseases are now under control. Animal health was, however, never used as a rallying point for forming associations, as has been done in other Sahelian countries. Drug distribution is in the hands of private pharmacies and the veterinarians in the field. The participation of the associations in animal health services has been marginal, and there are legal barriers to training pastoralists in animal health and administering drugs. Many vaccination parks have been constructed, which

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<sup>15</sup> Some 18% of these were entrusted by other Fulani - meaning that 32% of all surveyed cattle were Fulani owned. The Rimaibe owned a further 32%, while the remaining 36% were mostly owned by government officials, merchants and marabouts. While cattle herders have been dispossessed of wealth over the last decades, sheep herders have been able to accumulate wealth during the drought. Sheep are considered the most profitable livestock investment in the Maasina (Western Delta). Since rice cultivation has also been on the decline, the other means of wealth accumulation in Maasina has been mainly from migrant remittance (Turner 1992).

have also been used to gather cows during the lactation period and provide feed supplements. A few cases of fodder harvesting and silage making have also been carried out.

## **5. Marketing**

Milk is the main product from the pastoral economy. It is mostly bartered or sold locally. For the marketing of animals, pastoralists are entirely dependent on private intermediaries. These brokers mostly belong to a particular caste of the Fulani - the Diogaramé - who use their economic and political influence in the control of livestock marketing. Only in one case has a pastoral association been able to facilitate the marketing of cattle, and there has been no active institutional arrangement to promote export of livestock. The marketing system was completely unable to cope with the massive sales during drought and as a result animal losses were very high. While better organisation of marketing among pastoral associations at higher level could facilitate sales to Côte d'Ivoire, it can do little to counter falling export prices caused by increased dumping by EEC countries, imports from South America, and development of the livestock sector in Coastal West Africa.

## **6. Literacy and Human Health**

The level of literacy in the project area and its coverage by a national literacy programme are important to consider. It is essential to create as large a pool as possible of literate members of both sexes at the local level to challenge continuously the minority of illiterate customary leaders, who hold board positions in most pastoral associations. Village associations in Mali, for example, only took off with the "introduction and rapid spread of functional literacy programs" (Gellar et al 1990:59). Illiteracy rates are high

among pastoral communities, and the national education programme hardly reaches the pastoralists. Some attend Coranic schools. ODEM embarked upon a literacy programme in 1986, too late to have any significant impact on institution building. Participation in these programmes has been generally low and irregular, particularly amongst women. The literacy trainers are chosen locally but paid by the project.<sup>16</sup>

A human health service is almost non-existent in the project area. ODEM launched health service activities early in the project period at the demand of local people in order to establish confidence, but it is not an integrated part of the association building programme.<sup>17</sup>

## 7. Leadership and Management

All the pastoral associations are dominated by customary chiefs and their close relatives. "This may be inevitable in the early phases, and not necessarily undesirable if the leaders have the imagination, competence, and will to see the new organisational challenges and needs of the pastoralists" (Shanmugaratnam et al 1992:21). ODEM never developed any systematic training, hence leadership capacities depend on the existing competence and commitment. Most lack basic training in book-keeping, financial management or skills in natural resource management, such as construction of firebreaks or tree management. They lack an understanding of modern law, government and ODEM affairs. While the need for training is clear,

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<sup>16</sup> The literacy programme progressively touched 44 villages and 1,100 pastoralists, of whom 33 were women.

<sup>17</sup> Part of this programme involved training of 'barefoot' nurses in primary health care, who would also run local pharmacies. About 28 primary health care centres have been created, but only 8 or 9 are working due to budgetary constraints and problems in renewing revolving funds for drugs by ODEM.

the main barrier is the low level of literacy. Customary leaders tend to maintain their posts, in spite of their lack of competence and dynamism, and only one or two of the older leaders have been replaced by younger more educated men. Only one attempt was made to establish a women's group to develop handicraft activities in Méma.

### **8. Economic Viability**

The only revenue generating activity common to all pastoral associations has been the collection of water charges. None of the five associations reported any accumulation of surplus. Membership fees are not collected on any regular basis. Animal taxes collected by the customary chiefs go to national coffers and 10% for the chief. The associations are not authorised to collect taxes or receive any of the tax revenue. Possibilities for raising revenues, a precondition for expanding activities, lie in more efficient management of water points, more active mobilisation of potential members and collection of membership fees on a regular basis, or acquisition of credit to be used for profitable activities (e.g. veterinary drug stores, feed supplements, cereal banks).

### **Dissolution of Customary Institutions in the Delta <sup>18</sup>**

The rangelands of the Inland Delta are vital resources for the maintenance of viable pastoral transhumance systems in the Mopti region.

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<sup>18</sup> My present studies focus on the breakdown of customary institutions within the Delta. I have little data on such processes of change in communities surrounding the Delta, but they are likely to be affected by the same factors and undergo similar processes of disintegration.

Historically, relatively effective regimes evolved for managing natural resources in the Delta. Local institutions under the control and dominance of pastoral Fulani groups regulated access to land, as well as relations between the pastoral economy and agricultural and fishing communities. 'Outsiders' had to pay tribute for access to local resources. The complexity and sophistication of these management systems have intrigued many scholars (Gallais 1967).

Customary structures and common property regimes have, however, come under increasing pressure. Conflicts over resources have been severely aggravated by drought. The lower flood levels have, for example, reduced the area of flooded pastures to 1/3 of its former area.<sup>19</sup> Both state and customary laws are losing legitimacy among local resource users. There is "no longer a widely accepted set of rules governing access" (Turner 1992:408). The conversion of remaining floodplain pastures to crop land is provoking increasingly violent conflicts. In a clash on 7th December 1993, 29 people were killed and 42 injured in the Delta over tenure rights to pasture between two Fulani groups, the Sossobé and the Salsabé (Ba 1993). Resource use conflicts are particularly severe between pastoralism and agriculture, while the resolution of such conflicts lies in improved integration of the crop- and livestock production systems.

State policies and practices have opened up former controlled-access property regimes to new user groups with preferential links to various structures of the post-colonial state. These groups can be local elites or 'outsiders' like

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<sup>19</sup> According to a crude estimate the production value in monetary terms from livestock, fish and agriculture dropped 60% from 1975 to 1985 in the Delta (IRAM 1991).

absentee herd owners or agricultural investors. They often have only short term interests in management of natural resources and tend to "...'free ride' upon local management systems" (Moorehead 1991:i, see also Moorehead 1989, and 1988). This has put in jeopardy the sustainability of livestock and pastoral production in this region, which depends critically on maintaining transhumance and mobility.

The French colonial administration and later the independent government have facilitated the break-away by the Rimaibe from share-cropping arrangements with their Fulani ex-masters. These former slaves have been able to invest their agricultural surplus in livestock rather than paying tributes. This trend became pronounced after independence as the state actively supported land claims of rice cultivators at the expense of the pastoral Fulani. Many of the aristocratic Fulani pastoralists now find themselves dispossessed of animals and reduced to being the impoverished herders of other people's cattle (Turner 1992). Changes in people's control over resources and allocation of surplus have therefore contributed to fundamental changes in property relations between various users of the Delta. For the Fulani pastoralists the situation has changed from one of wealth and power over land, cattle and people, to one of increasing poverty and a daily struggle for survival. In most communities the Fulani have lost political and economic power and their customary institutions are, seemingly, not able to assert claims over resources. There are, however, still some wealthy Fulani pastoralists and Fulani leaders, who through patronage, collection of tributes or grazing fees; sale or lease of land and other contributions in cash or kind, are able to accumulate substantial control over key resources.

Thus, the power relations which once guided the customary management of the Delta have changed. A new more market oriented economy has evolved in which ethnicity is less important in who controls land and economic opportunities (Turner 1992).

Frequently Fulani pastoralists, as well as Tuaregs, diversify into agricultural<sup>20</sup> or non-land based income generation activities. Migration has become a common survival strategy. Overall, this diversification implies a reduction in the household labour available for taking herds on transhumance. Moreover, the impoverishment of pastoralists and the bleak prospects of rebuilding herds and wealth have eroded the cultural values and discipline which supported transhumance. "We're tired" is a phrase often used by the pastoral Fulani of the Diaka flood plain of the Delta (Turner 1992:410).

The project never attempted to strengthen the resource management regimes of the Inland Delta in any systematic way. The erosion of customary regimes has weakened the protection of the remaining rangelands, made access rights for pastoralists visiting the Delta annually more conflict-ridden and costly, and in general weakened the ability of local leaders to mediate in local tenure conflicts.

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<sup>20</sup> Traditions are changing; even in areas where in the past the Fulani and Tuareg would never carry out agricultural tasks, they now do so. However, in some areas where traditional structures are stronger and the Fulani and Tuareg can still afford to hire labour, the Rimaihe and Bella continue to carry out the agricultural work.

## **Lessons Learned**

### **1. Project Expectations too Optimistic**

"Expectations on project implementation were from the beginning too optimistic" (World Bank 1987:25). The project was the first livestock project to be financed by the World Bank in Mali and among the first to be started in West Africa. Neither the implementing agency (ODEM), the ministry concerned, nor the World Bank had the experience needed to tackle such complex livestock projects and the formation of pastoral associations. Although considered a pilot operation with particular risks, sufficient precautions were not taken regarding planning and implementation.

### **2. Project Objectives vs. Local Priorities**

When the Mali Livestock Project (1975-84) first entered the Fifth Region, it raised expectations among pastoral and agricultural populations. These expectations were not necessarily based on the objectives of the project, but rather on people's more deeply felt basic needs, following the 1972/73 drought. 'Overgrazing' and rangeland degradation were conceived as the main problems facing livestock development by the project's designers. But the pastoralists - for whom rangeland management is not an end to itself, but a means towards better food security - conceived the problems differently. Although generally aware of resource degradation, pastoralists normally give low priority to pasture management measures, such as controlled grazing, destocking, bush fire control, tree planting, and re-seeding. They are not concerned about overgrazing leading to permanent rangeland degradation, except regarding effects of goats and sheep browsing on the more bushy vegetation. Pastoralists clearly perceive grass availability to be a function of rainfall and flood regimes, not an effect of overgrazing.



Furthermore, the project was set up in an area which lacked basic infrastructure and services, due partly to long-term neglect by the state. It may be difficult for pastoralists in an area without basic health services to see the logic of a project giving higher priority to rangeland management and veterinary health than to human health. The success of pastoral institution building in the long term depends on a close collaboration with other services working particularly with health and human resource development. But when such services hardly exist - like in these areas of Mali - this is not possible. Such weakness and failure of the government are reflected as weakness and failure of the project.

In addition, the project never embarked upon a drought contingency plan. A major drought did occur in 1984, wiping out almost fifty percent of the cattle. ODEM was not in a position to alleviate the effects of this disaster, which also caused major delays in the formation of pastoral associations.

### **3. Need for Mutual Confidence Creation**

Long term neglect, coupled with the low accountability of public services, had created very low confidence in state initiatives among local people, and particularly in pastoral communities. This was recognised by ODEM rather early in project implementation. ODEM therefore felt obliged to build confidence before starting the establishment of pastoral associations. This meant that the initial sequence of the pastoral association programme was changed to produce some quick benefits to the local pastoralists. But, as indicated, this had negative effects for the progress of the pastoral association building component.

#### **4. Institutional Competence Building in the Implementing Agencies**

The project faced serious implementation problems and delays related to administrative and organisational deficiencies of ODEM and the Department of Livestock. Particular problems were weak economic planning, accounting, and auditing, local institution building, and rangeland management. Decision-making structures were hierarchical and inefficient. There was no attempt systematically to develop capacity and build competence within ODEM. This would have needed to include such aspects as creating an institutional culture of accountability, transparency, openness and efficiency related to the participation of the local population in decisions *of importance for their own future.*

#### **5. Territorial Limits and Size**

Where territorial limits exist and are recognised, they are considered as flexible borders by the members of the associations. The territorial limits are more like 'administrative' boundaries indicating which villages and settlements belong to a given association than strict territorial limits under the control of the association. This could change if territorial limits were legalised and enforced more strictly, as discussed earlier.

Appropriate territorial size and membership numbers of such associations can be difficult to decide upon. In general it has been a matter of local negotiation and related to the task of identifying coherent groups. No figures are available for the size and membership numbers in Mali. In Mauritania - under dry climate, low population density and semi-nomadic systems - each association encompasses on average 2,500 sq. km and 14,000 people, while associations in Senegal in more humid and agro-pastoral conditions encompass 240 sq. km and 1,200 people (Shannugaratnam et al

1992). Customary territorial institutions also vary a lot in size and populations. The 'leyde' or customary pastoral units of the Inland Delta established by the Dina in the 1820s had an average size of 590 sq. km., ranging from 106 sq. km to 2,600 sq. km (CIPEA/ODEM 1983:vol v). The population per 'leydi' today is on average about 7,000 people, ranging from 900 to 12,000. It would seem logical for associations to be bigger in the drier and less densely populated zones, where more opportunistic and nomadic grazing is common.

#### **6. Towards Bottom-up Mobilisation**

Turning top-down approaches into bottom-up mobilisation of people requires the conscious promotion of wider participation from below. There are no universal models for the creation of pastoral associations in the drylands. Rather, a flexible system, involving different levels, forms and functions may best serve the pastoralists in a given locality.

There should be a more explicit focus on resource management and institutional aspects in programme planning to make these better understood in government agencies. Natural resource management activities should take place, step by step: first water management; second regulation of grazing; and third the introduction of resource-conserving activities which may not be income-generating for the pastoralists even in the long term, but may represent a loss to society if neglected. Such activities could include tree planting for protection of water-sheds or wildlife conservation. Under relatively predictable, equilibrium ecosystems, management interventions should focus on the regulation of livestock numbers, based on estimated carrying capacity). While "under non-equilibrium conditions management focused on movement and opportunistic response will be more relevant"

(Behnke and Scoones 1991:22, Behnke et al 1993), as in most of these Malian rangelands outside the Inland Delta.

### **7. Political Commitment to Dryland Development**

Long term neglect and lack of commitment to dryland and pastoral development are obvious from the weak or non-existent investment in services in the project area. Bad governance by the state is reflected in the views of local people. During interviews with village chiefs and elders in twenty villages, none of these expressed any perceived benefits from the work of the state services, except in animal health.

### **Customary Organisations as the Basis for New Tenure Regimes**

Although weakened over the last few decades, customary institutions in these areas still play a major role in decisions regarding resource use, ownership of water rights and willingness to accept new forms of territorial organisation. According to some reviewers, customary institutions may often "be the best starting point for new regulatory approaches" (Swift 1989:148, see also Swift 1988)

This requires an understanding of where and how these institutions are operating today. It also requires an understanding of which elements within customary institutions operate the best and to what degree they can serve 'modern' or new requirements - including objectives of environmental protection and equity. Local tenure systems mostly reflect social relations of power between different people. The fact that the Dina of the Delta worked as a common property regime, regulating access and maintaining an environmental 'balance', might have been an historic coincidence. The

motivation for establishing the Dina was mainly political, economical and religious, i.e. to facilitate the introduction of Islam. The gradual dissolution of customary institutions since the colonial period reflects a shift in local power relations. Today, the customary tenure rules of the Delta are not tailored to meet the particular needs of sustainable crop and livestock production (Cissé 1993, Helland 1993, see also Cissé 1991, 1985a and 1985b). Customary tenure rules are under constant change, are sometimes loosely defined, and not based on precise or written principles. The Dina tariq on the tenure rules of the Inland Delta written in Arabic provides an exceptional case. But even here conflicts easily surface once the state tries to interpret and fix customary rules.

Programmes for local institution building cannot and should normally not bypass customary leaders. Traditional social hierarchies can, however, be a major barrier to the bottom-up mobilisation of people needed for new institutions to evolve. Customary leaders may resist the broadening of participation in decision making and distribution of benefits. They are not 'accountable' to the people, in a normal democratic sense, and may use their position in the local community for self-enrichment. It is also important to realise that particular elements from traditional institutions cannot readily be transferred and "engineered" into a new property regime which follows a different rationale. Would for example the transhumance system of the Delta

- based on customary rights of different families - be viable if the Jowro<sup>21</sup> were suppressed or removed? Based on first impressions from the field, it is difficult to see the Jowro institution surviving long in its present form. However, it may prove worthwhile to maintain important elements of the tenurial and transhumant systems, such as dates and rules for entering the Delta, territorial limits, and demarcation of traditional trekking routes.<sup>22</sup>

Another limitation of customary institutions is that they generally do not include procedures for internal regulation of livestock numbers within the clan or the community (see also Swift 1989, Haaland 1990). Under pasture scarcity, rather than reducing livestock numbers, a pastoral group will often react by trying to expand their grazing territory.

### **Other Experiences with Pastoral Institution Building**

An evaluation of pastoral and livestock development programmes in Mali, Mauritania, Niger and Senegal, supported by the World Bank, indicates that while there are positive achievements in the establishment of pastoral associations, their performance has been mixed (see Shanmugaratnam et al 1992, Vedeld 1992 and 1993, see also Sihm 1989, Cernea 1993, Bonte 1991).

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<sup>21</sup> The Jowro or 'masters of pasture' were instituted under the Dina in the 1820s to manage access to pasture in each of the thirty pastoral territories (leyde) dividing the Inland Delta. The Jowro were meant to manage the pastures on behalf of Delta residents. Outsiders using the leyde had to pay a grazing fee. Today, many of the Jowro have started to lease or sell the rangeland to crop cultivators. In this way they have become like feudal land lords controlling thousands of hectares of highly productive land. So far, they have got away with this because the local population do not protest, while the Jowro themselves often buy support for their actions from the state administrators.

Pastoral associations can organise various management activities (awareness raising, bushfire control, range and water resources management) and provide services to local communities (animal health, training, provision of food and animal feed). Management of water points provides a good starting point for building institutions and from which they can raise charges for water from absentee herd owners. Many pastoral associations are able to run certain activities with some profit (e.g. veterinary drug stores). But in general they have very low income-generating capacities and financial viability, and depend on continuous external assistance. Mauritania provides an exceptional case. Here, a dynamic set of pastoral association presidents, after only a few years, have established a National Herders' Association. This works as a pressure group, working for pastoral interests and represents a political movement from below.

Experience suggests that influential, competent and responsive customary leaders, relatively homogeneous social groups, in combination with appropriate state services and genuine dialogue, are all crucial for the establishment and operation of pastoral associations.

## Conclusions

The state and the project administration in Mali have never made a concerted effort to mobilise the pastoral communities. Pastoralists have never really participated in the identification of groups or location of water points. Their associations are often not clearly recognised legally, nor their territories well defined, and no rangeland management plans have been developed. The new leaders are basically the customary leaders. They have never received training in how to manage the new associations, and little new competence

was developed amongst other members of the new associations. Few associations provide a service to their members, and their economic viability is weak.

But there is at least one exception which indicates that when conditions are favourable pastoral associations may operate well. In Boni, the existence of a influential and charismatic Fulani chief, a strong aristocracy and a relatively homogeneous social group made the task of re-grouping the Fulani easier than in other areas. The association of Boni village was formed around a new well, which opened a large new area for grazing. The association embarked upon a diverse set of activities, such as the construction of a market place, five animal vaccination parks, firebreaks, reforestation, a veterinary drug store, rehabilitation of a watering pond, and it is also envisaged to construct a small dam. Boni is an area where activities such as literacy training and human health have been particularly successful (Bonte 1991).

The Malian government is starting to recognise the importance of developing local capacities and involving the people in resource management. But this may be as much a consequence of a general 'trend' as a direct effect of this particular project. The government has increasingly taken steps towards decentralisation, which could become a first step in the right direction. This process gained momentum after the fall of Moussa Traore in 1991. These attitudinal changes in government agencies also reflect changes in policy thinking among important donors, including the World Bank.

However, the situation in the project area casts doubts on the role played by the state in providing the legal framework for the pastoral associations, as



well as in efficient enforcement of tenure rights, provision of development services and infrastructure to support institutional development in the long run. Government price and investment policies still favour crop production and irrigation at the expense of small scale producers and pastoralists. For example, the deviation of water from the River Niger to irrigation schemes reduces the flood water available and the area for wetland pastures and flood-recession agriculture downstream in the ODEM project area (Turner 1992). The Mali case also shows the importance of long term government commitment of resources to pastoral areas. It also shows that the establishment of new pastoral associations requires more systematic efforts in building competence in the agencies which are meant to implement these programmes.<sup>23</sup>

While poor project management helps explain failure with state-sponsored pastoral associations, the effects of government policies, market forces and drought are crucial for understanding the dissolution of customary institutions.

The devolution of control to local institutions needs to find the right balance between the state, market and other actors. Decentralisation, and more reliance on the market, should not become an excuse for the central government to withdraw its services and support to pastoral areas. On the contrary, the government has important roles to fulfil, among others in

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<sup>23</sup> The World Bank has now closed this project. But two new initiatives financed by France and Norway now attempt reinforce efforts on local institution building under two new programmes. The approach to pastoral association building is better conceptualized in the new planning documents, and the projects will receive technical support from an external anthropologist and more competent Malian professionals (see Bonte 1993).

mediating conflicts over access to resources (Toulmin 1991). A firm and proven government commitment to local empowerment seems to be a necessary, although not a sufficient requirement for sustained institutional change and development in these dryland communities.

Finally, the establishment of pastoral associations was recognised to be a complicated and innovative pilot exercise. Despite this, the World Bank did not provide adequate supervision by experts with particular competence in this field, while the government never mobilised adequate technical competence to implement the project. New complex pilot operations of this type require much firmer technical support within the donor institution to deal with socio-economic and ecological aspects of range management. There is no evidence from World Bank documents that their personnel understood the complexity of the systems in which they were intervening, nor the need to re-think their simplistic view of "overgrazing" as the main problem to be tackled. Neither did they fully acknowledge the negative effects of the rice development schemes they were also funding in the Delta.

If programmes for state-sponsored pastoral associations are to have a future beyond scattered initiatives, they must place greater stress on the policy, institutional and infrastructural framework for human resource development in general, rather than focusing on rangeland management and technologies for rangeland productivity increases. An important lesson from this paper is that an accountable and efficient state has an important role to play in supporting the mobilisation of local communities.

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