INTRODUCTION

This paper seeks to provide a brief overview of the World Bank’s involvement in pastoral development in arid areas. It focuses on practical aspects of project implementation, describes past trends and the current status of the Bank’s involvement in pastoral areas, and highlights some of the key issues emerging from the current ‘state of the art’ in pastoral development.

PAST TRENDS

Four distinct phases can be distinguished in the design of the World Bank-funded arid zone livestock projects. However, there has been considerable overlap between the different phases and most projects contained elements of more than one of the phases. The phases are described below:

(i) The Ranching Phase (mid sixties to early eighties) with its transfer of Western ranching technology to arid tropical areas, this phase included heavy capital investments (fencing, water development, exotic breeds introduction, etc.) on parastatal ranches. Typical examples of this category were the ranching projects in Botswana, Kenya and Yemen.

(ii) The Range/Livestock Project Phase (mid seventies to late eighties) focused on the development of communal areas through the funding of water, roads, markets and other infrastructure. In many instances, projects in this category had a strong involvement in grazing and land rights adjudication (to pastoral groups). Key early examples of this category are the Bank-funded Eastern Senegal Projects, the Somalia Central Rangeland Projects, the Kenya Group Ranches (the concepts from which were later introduced in Burkina Faso) and the Communal Area components of the Botswana Livestock Projects.

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1Paper presented at the Donor Consultation Meeting on pastoral natural resource management and pastoral policies for Africa organised by UNSO (United Nations Sudano-Saharan Office) held in Paris, December 1993 and will appear in the proceedings of the meeting.

2 Livestock Adviser, World Bank. The views expressed in this paper are those of the author, and do not necessarily reflect the official policies of the World Bank or its affiliates.
(iii) *The Pastoral Association Phase*, which to some extent overlaps with the previous phase (pastoral organisations have already featured prominently in the Eastern Senegal Project), is still on-going. With continuing emphasis on the development of pastoral organisations, this phase distinguishes itself from the previous category in giving more attention to the overall policy framework, and the need for mobility and flexibility in grazing rights allocation. A less rigid establishment of specific land tenure rights and grazing control, and more attention given to the organisation of herder-managed services such as animal health, etc.) are characteristics of this phase. Before any development of, for example, water points takes place, a key condition is the transfer to pastoral organisations of exclusive user rights over water points and the transfer of responsibility for their management and maintenance. This key condition is an important part of the dialogue between the World Bank and the Governments concerned. The Bank-funded livestock projects in Chad, the Vth Region of Mali, Mauritania, and Niger are typical examples of this type of project.

(iv) *The Integrated Natural Resource Management Phase* is evolving from pastoral association projects, to give more comprehensive attention to natural resource management and involve all stakeholders (cultivators, traders, etc.) in the project. Support to private institutions for the provision of services and management of resources and attention to the incentive and institutional framework is developed. Recent examples of such projects are the Mali and Egypt (Matruh) Natural Resource Management Projects.

PAST PERFORMANCE

As is well documented (Sandford 1983, World Bank 1985), the first generation of projects produced generally disappointing results, due to the parastatal organisational form, inappropriate technologies combined with a lack of appreciation for the efficiency of the traditional system, and the wrong project objectives (yield per animal versus yield per hectare of land).

The second and third generation projects had a more varied performance. These range/livestock projects on average performed below expectations, although some, especially in the slightly higher rainfall areas, such as the Eastern Senegal Projects (Cernea 1993) and the Morocco Middle Atlas Project, were successful in developing a user-based system of natural resource management. In the Sahel, projects in Mauritania and Chad, although certainly not successful in all aspects, showed some encouraging results in involving herders’ organisations in resource management.

Important causes for failures in the range/livestock category include:

(i) Inappropriate incentive frameworks, especially in the early phases, when projects suffered from government-controlled marketing monopolies and livestock prices;
(ii) Overly rigid imposition of grazing and land rights;

(iii) Major institutional weaknesses in the implementing agencies, especially in the integration of an inter-disciplinary approach into single-disciplinary livestock departments;

(iv) In West Asia and North Africa (WANA), subsidised crop cultivation (through high intervention prices, and subsidised tractors and fuel prices) caused key resource areas for the pastoral systems to be ploughed up, and subsidised animal feed prices interfered with the natural equilibrium, especially in times of drought (de Haan 1990).

It is too early to provide an assessment of the results of the integrated resource management projects. While conceptually appropriate (one can not approach pastoral land-use issues in isolation, without attention to the other users), implementation will be complex, with many institutions involved. Performance of similarly complex projects, i.e. area development projects, did not produce satisfactory results.

CURRENT STATUS

The poor performance of the early projects, which has not been sufficiently compensated for by the varied performance of the more recent ones, caused lending for pastoral development in the arid areas to fall over the last decade, especially in Sub-saharan Africa. In the early eighties, the World Bank funded pastoral development in most East and West African countries with major arid zones. Currently, pastoral development projects are only being implemented in Chad and Mauritania. A limited number of arid land projects with smaller pastoral development components (Kenya, Mali) are also being prepared or implemented.

However, lending for pastoral development elsewhere is stronger. Important pastoral development projects are currently being prepared and implemented in Asia, the Middle East and North Africa, notably in China (Sinjang Province), Egypt, Iran and the Yemen Arab Republic. Overall3, it is safe to assume that the Bank’s contribution to pastoral development has been more than halved from about US$150 million per year in the eighties to an average of about US$50 million per year now, of which less than half would be directed to pastoral development in Sub-saharan Africa.

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3 The increasing integration of pastoral development activities in a larger context makes it more difficult to assess the exact size of the World Bank’s lending for the pastoral development per se.
ISSUES

In planning and implementing pastoral projects, and especially in applying some of the principles of mobility and flexibility emanating from the ‘opportunistic range management strategies’ (Behnke et al. 1993) important issues are emerging and are described below:

(i) **Herder organisation.** With the strengthening of pastoral associations being a key component in most Bank-funded pastoral projects, two important gaps still persist.

First, a reliable methodology to assess the capabilities of a target group to handle increased responsibilities is still lacking. Although social cohesion has been shown to be remarkably resilient, taking such ability for granted in all cases is simply a romantic, populist stereotype (Cernea 1993). Entrusting the responsibility for resource management to users without ascertaining that they have an organised ability to do so, is a sure recipe for failure. However, the tools to make fast and reliable assessments of the cohesive strength of social organisations is lacking. The more recent Bank-funded pastoral projects (Chad and Mauritania Projects) approach this in a somewhat roundabout way, by first introducing the easier-to-implement, producer-managed services, such as animal health and other input supply services, before introducing the more difficult interventions of grazing and water rights, protection of key resources and the organisation of marketing.

Second, the sustainability of pastoral organisations has generally been poor. Even pastoral organisations supported for a long (about 15-year) period, such as those in Eastern Senegal, still had major difficulties in surviving, once project support is phased out. More cost effective approaches of creating pastoral organisations must be identified.

(ii) **Drought contingency.** While drought is a recurrent feature of pastoral systems in the arid zones, World Bank-funded projects have not (yet) been able to identify a coherent set of measures, which effectively reduces losses. Results of some individual interventions which have been used are:

1) *Drought fodder banks, introduced in some projects (e.g. Somalia Central Rangelands):*

Fodder could not be efficiently and equitably distributed in times of drought. Although adequate data are lacking, the provision of subsidised drought concentrate feed supplies, frequently used in WANA may work as a double edged knife: on the one hand, it keeps herds alive in times of drought, on the other hand, it introduces a heavy burden on the range during post-drought recovery. It takes the disequilibrium out of a
situation, where such disequilibrium is a critical part of the long-term sustainability of the system (Behnke et al. 1993);

2) *Increased marketing infrastructure (especially in cold storage capacity) to accommodate massive supplies of animals in times of drought:* Such investments are difficult to justify economically under conditions of high energy and capital costs and where unfair competition from subsidised imports from the European Union prevail as, for example, in the Sahel;

3) *Other interventions, such as drought insurance, food security and food for work schemes:* These have been shown to be difficult to sustain without continued outside assistance.

(iii) **The public sector role.** One of the more difficult issues of most official donor agencies is how to channel funding effectively through the public sector to empower a decentralised grassroots group (Shanmugaratnam et al. 1992). This is a difficult issue because:

1) Herder empowerment is generally viewed with considerable apprehension by government institutions and employees, who are afraid to lose their own prerogatives. Still, with frequently no viable alternative channels, and with a need to maintain and even strengthen public sector involvement in some areas (e.g. providing the ‘public goods services’ such as compulsory vaccinations, quality control of privatised services, securing access to key resources [Umali, et al. 1992]), the public sector needs to be involved. The division of responsibilities between the public and private sector for the implementation of decentralised projects is therefore often difficult to define, and even more difficult to enforce;

2) The problem of division of responsibilities between the public and the private sector is exacerbated by top down attitudes of public sector officials. Major attitudinal changes are required, but these are hard to prescribe in project documents’ conditionality or to capture as key indicators. The influence of an institution such as the World Bank is therefore limited. Project design and conditionality can only marginally influence this delicate balance, the key factor is the degree of political will of Governments, at all levels, to work towards a decentralised system.
The management of cost recovery schemes. Decentralised management implies a higher level of cost recovery and financial participation. It is also needed because of the particularly poor state of government finances. The introduction of grazing, watering and other service fees is therefore necessary and inevitable. Questions of the management of the proceeds of these measures have not yet been adequately solved. Management by government services impinges on the decentralisation strategy, and generally precludes reinvestment in pastoral development. Management by the groups themselves frequently raises issues of equity and accountability.

THE FUTURE

Partly as a result of the increased interest in sustainable resource management, the World Bank’s interest in pastoral development has grown over the last few years. This is especially manifest outside Sub-saharan Africa. At the same time, new concepts (Behnke et al. 1993) are emerging, which provide an improved conceptual framework for pastoral development, but still need to be translated into implementable actions and the identification of viable institutions. Many problems have not yet been adequately resolved. I would therefore foresee the same or slightly increasing funding levels from the World Bank for pastoral development over the next five years.

REFERENCES

INTRODUCTION

Until the 1980s the ‘art and science of range management’ was dominated by the North American experience. Pastoral development programmes in Africa and the Near East have been designed using precepts and methods developed in the U.S. and Canada. Increasingly the limitations of this approach have become evident as research in Africa, Australia and North America has revealed that the assumptions of equilibrium, that undergirded traditional American range management, do not hold in many environments. In late 1990 a group of ecologists met in Woburn, England to discuss these new developments in rangeland ecology. At that conference it was concluded that the new models of range ecology could have a profound influence on the way that pastoral development programmes were designed and implemented. A second Woburn workshop entitled ‘New Directions in African Range Management and Policy’ was organised for May 31-June 4, 1993 to address these issues.

At the second Woburn conference a debate developed over the role of the World Bank in African livestock development. Some present accused The World Bank of being the world’s principal advocate of inappropriate approaches to range management and pastoral development. Cornelis de Haan, the World Bank staff member present, argued that this portrayal of the Bank’s pastoral development activities was outdated and that the Bank’s current approach to pastoral development did not conform to this stereotype. Each side in the debate cited examples of Bank-funded projects to support their position, but neither side’s arguments prevailed. Then, Jere Gilles proposed that a sample of World Bank projects be examined to see exactly how the World Bank has approached livestock projects. To resolve the issue, project papers from thirteen World

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Bank-funded livestock projects were evaluated in order to determine what approaches to pastoral development the World Bank has used. The results of this exercise are reported here.

**METHODOLOGY**

Appraisal papers are prepared as part of the project planning process for every World Bank project. Jere Gilles examined appraisal reports from 13 World Bank livestock projects involved in range livestock development in order to describe exactly how the World Bank approached the design of livestock projects it financed. Projects were not chosen at random. A purposive sample was used in order to have examples of the variety of livestock projects financed by the Bank over the past 15-20 years. For example, we started with all of the World Bank’s African livestock projects initiated since 1982 for which appraisal papers were available. We then selected three additional projects from the late 70s or early 80s with which we were familiar to help us to ascertain if a ‘paradigm shift’ had occurred at the World Bank. Using these cases also provided a check on our method because we could bring additional information to bear to validate our findings.

Each project appraisal paper was examined to obtain the kinds of information that was relevant to the discussions at the Woburn workshop. Information was obtained in the following areas:

- approach to range ecology;
- the role of ranching;
- potential applicability of the ‘new range ecology’;
- project priorities;
- local involvement in planning;
- the role of pastoral associations;
- drought planning;
- flexibility.

The following programmes were examined:

- Morocco — Middle Atlas Central Area Agricultural Development Project
- Egypt — Matruh Resource Management Project
- Mali(a) — Mopti Area Development Project
- Mali(b) — Natural Resource Management Project
- Senegal — Eastern Senegal Livestock Development Project
- Mauritania — Mauritania Second Livestock Project
- Somalia — Somalia Livestock Health Project
- Niger — Niger Livestock Project
- Guinea — Livestock Sector Rehabilitation Project
- Nigeria — Second Livestock Development Project
A simplified content analysis approach was used. A rubric was designed that outlined the rules used to classify different projects and then the articles were read by Jere Gilles and evaluated according to the rubric. Then instead of having a second ‘neutral’ reader apply the rubric, the results of the classification were presented to Cornelis de Haan, who possessed an intimate knowledge of these projects. Where there were disagreements as to the classification of a project, we returned to the appraisal papers to resolve these disagreements. Cases where the appraisal papers did not contain enough information to classify a project with complete certainty were noted. Following is an abbreviated version of the rubric used to classify projects. The results are presented in Table 1. Please note that whenever a question mark (?) is found in the table, there is not sufficient information available in the appraisal report to conclusively classify a project.

**Ecological approach**

Since it was asserted that all World Bank projects use Clementsian approaches to pastoral ecology it was important to first identify what approach to range ecology provided the foundation for a project’s design. To do this, each paper was examined for references to degradation and stocking rates. If statements were included that indicated there was widespread deterioration and that a key to livestock development was the regulation of stocking rates, then the ecological approach was classified as ‘traditional’.

**Ranching**

Ranching is often viewed as a production system that is based on traditional approaches to ecology. If a paper described the funding of ranches or the use of a pastoral development model based on the ranching ideal, it was coded as having a ranching orientation.

**Applicability of ‘new’ range ecology**

Traditional ‘Clementsian’ approaches to range ecology are appropriate in settings where it is relatively humid and/or there is not a high level of variability in forage production. Descriptions of the project area’s climate were examined. If there was evidence that forage production was highly variable or that rainfall levels were low (<400mm unimodal or 700mm bimodal), then the new rangeland ecology was defined as applicable. In some cases, a project area would include zones of low rainfall and variable forage production as well as some areas where the new ecological approach did not apply, the term ‘mixed’ was used.
Table 1: Summary of projects

<table>
<thead>
<tr>
<th>Projects</th>
<th>Year</th>
<th>Ecological approach</th>
<th>Ranching</th>
<th>Applicability</th>
<th>Project priority</th>
<th>Local planning</th>
<th>Pastoral associations</th>
<th>Drought</th>
<th>Flex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niger</td>
<td>1975</td>
<td>Traditional</td>
<td>No</td>
<td>Yes</td>
<td>Groups/rebuild</td>
<td>Yes</td>
<td>Yes</td>
<td>No?</td>
<td>No*</td>
</tr>
<tr>
<td>Senegal</td>
<td>1976</td>
<td>Traditional</td>
<td>No</td>
<td>Mixed</td>
<td>Range/groups</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No?</td>
</tr>
<tr>
<td>Zaire</td>
<td>1977</td>
<td>Traditional</td>
<td>Yes</td>
<td>No</td>
<td>Production/groups</td>
<td>Yes</td>
<td>Yes</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Morocco</td>
<td>1981</td>
<td>Traditional</td>
<td>No</td>
<td>Mixed</td>
<td>Range</td>
<td>Yes</td>
<td>No?***</td>
<td>No</td>
<td>?</td>
</tr>
<tr>
<td>Botswana</td>
<td>1982</td>
<td>Traditional</td>
<td>Yes</td>
<td>Yes</td>
<td>Range/income</td>
<td>No?</td>
<td>No?</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Somalia</td>
<td>1985</td>
<td>None</td>
<td>No</td>
<td>NA</td>
<td>Health</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>?</td>
</tr>
<tr>
<td>Mali(a)</td>
<td>1985</td>
<td>Traditional</td>
<td>No</td>
<td>Mixed</td>
<td>Groups/range</td>
<td>Yes</td>
<td>Yes</td>
<td>Econ</td>
<td>No?</td>
</tr>
<tr>
<td>Mauritania</td>
<td>1986</td>
<td>Traditional</td>
<td>No</td>
<td>Yes</td>
<td>Range/groups</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Guinea</td>
<td>1986</td>
<td>Traditional</td>
<td>No</td>
<td>No</td>
<td>Groups/inputs</td>
<td>Yes</td>
<td>Yes</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1986</td>
<td>Traditional</td>
<td>Yes?</td>
<td>Mixed</td>
<td>Credit/reserves</td>
<td>Yes</td>
<td>No</td>
<td>No?</td>
<td>No?</td>
</tr>
<tr>
<td>Chad</td>
<td>1988</td>
<td>Traditional?</td>
<td>No</td>
<td>Yes</td>
<td>Groups/water/range</td>
<td>Yes</td>
<td>Yes</td>
<td>Econ</td>
<td>Yes</td>
</tr>
<tr>
<td>Mali(b)</td>
<td>1992</td>
<td>?</td>
<td>No</td>
<td>Mixed</td>
<td>Groups</td>
<td>Yes</td>
<td>?**</td>
<td>No</td>
<td>?</td>
</tr>
<tr>
<td>Egypt</td>
<td>1993</td>
<td>Traditional</td>
<td>No</td>
<td>Yes</td>
<td>Range</td>
<td>Yes</td>
<td>No?*</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

* While the project plan did not emphasise flexibility, the project was organised and implemented in an extremely flexible manner.
** Project was redesigned midway and the new design had a larger role for pastoral groups.
*** In these cases local traditional organisations were given responsibility for the management of pastoral resources. These were not pastoral associations but represented wider local interests.
1 A question mark indicates that there is not enough information in an appraisal report or end of project report to conclusively classify a project.
Project priority
Not all pastoral development projects have range management as an objective. Project objectives were examined to determine the principal programme objectives. If the priority was conservation of rangeland, ‘range’ was coded. If the creation of pastoral groups or local resource management groups was the priority then ‘groups’ was coded. Other possibilities were ‘credit’, drought recovery (‘rebuild’), animal health (‘health’), water point development (‘water’), increased production (‘production’), grazing reserves (‘reserves’) etc. Finally where a reading of the appraisal paper could not identify a single priority objective, more than one were listed.

Local involvement in planning
The more changeable an environment, the more important is local planning and management of rangeland interventions. The documents were examined to see whether or not local user groups participated in the design of the project. If the paper called for active participation of local users in the design and implementation of the project, a ‘yes’ was indicated.

Pastoral associations
Some projects made the creation of viable pastoral associations the foundation of the project. In these cases the provision of inputs, services and/or infrastructures depended on the existence of such groups to manage them. Under pastoral associations a ‘yes’ was assigned only to those projects that gave pastoral associations a pivotal role in the implementation of projects. In the cases where traditional social organisations were given the responsibility of implementing the project, a ‘yes’ was given only when it was clear that the viability of these institutions had to be demonstrated before project benefits flowed. If this issue was not discussed, a ‘no’ was assigned under this rubric.

Drought planning
In areas where non-equilibrium systems are common, drought planning must be an integral part of project design because droughts are a normal part of production systems. The question was asked as to whether a project explicitly planned for droughts. That is to say whether or not the implementation plan included a contingency plan for drought. If no such contingency was indicated, a ‘no’ was assigned. If the financial evaluation included a sensitivity analysis as to the effects of drought on benefit streams ‘econ’ is indicated. If droughts were not likely to occur NA was coded.
Flexibility
Flexibility refers to the importance given to mobility and opportunism in describing the pastoral production system and proposed interventions. Flexibility is the key to survival in non-equilibrium systems. Projects which included discussions about mechanisms to enhance movement (transhumance right of ways, etc.) and projects that expressly discussed flexibility were assigned a ‘yes’. In humid areas where flexibility was not a crucial issue NA was coded.

Limitations of the present study
This report is based upon reading documents from 13 livestock projects. Although these reports appear to be representative of projects funded by the Bank in the late 1970s and 1980s, the sample does not include all such projects. Furthermore, the documents reviewed were descriptions of general intentions and plans and did not always indicate how projects are actually implemented. Project completion papers were available for five of the projects and they underscored the fact that projects are often not implemented in quite the same way as they are designed. For example, the Zaire appraisal paper had a ranching component but this component was never implemented. Likewise some projects whose appraisal papers did not discuss the importance of droughts and flexibility were implemented so as to enhance flexibility and drought response. Since many of these projects were still operating in 1993, completion papers do not exist for many of them. Thus, we limited our analysis to appraisal reports.

FINDINGS
The principal results of this exercise are displayed in Table 1.

Pastoral ecology
All of the appraisal papers for the projects studied, used the language of ‘Clementsian’ models of range management. This is not surprising because most were designed before ‘Clementsian’ ecology had been widely challenged by research. In addition, traditional approaches to range management were appropriate to some sites. Nonetheless it is clear that World Bank Range Livestock projects continue to be based upon the conventional range management paradigm.

Ranches
Only four projects had components based on the Western ranching model – the projects in Botswana, Zaire and Nigeria. Two of them, were in humid areas where the new ecological paradigm probably does not apply. In Zaire, ranching was included in the Project over the objections of some World Bank consultants.
In Somalia, private ranches were not created but the notion of a ranch as an ideal production type underlay discussions about the settlement of pastoralists and the creation of grazing reserves. Botswana is the only case where ranching was unequivocally supported in an area where the new pastoral ecology would be the most appropriate ecological model. There is little evidence that the World Bank is currently committed to a ranching model of rangeland development even though it is clear that conventional models of rangeland ecology prevail. In all cases, projects with a ranching component were either conceived more than a decade ago or, in the case of Nigeria, represent the continuation of an earlier project. The ranching components of projects appear to be a ‘hold-over’ from the 1970s and do not seem to be reflections of current Bank policies.

Applicability
The new approaches to African range ecology were potentially applicable to all but three of the projects examined. These projects were an animal health project in Somalia which had no range component and livestock projects in humid Zaire and Guinea.

Project priorities
While the project appraisal papers were written in the language of conventional range management, only the Botswana Project and two North African projects gave management of pastures and control of stocking rates the highest priority. The remainder of the projects emphasised the creation of pastoral associations, animal health and/or water development. Control of stocking rates was seen as possible only when viable pastoral organisations existed and their members saw a clear need for resource management activities.

Local participation
All of the projects, except the Botswana Project, emphasised the importance of involving local groups – particularly the target groups in the design and implementation of projects. There was some local involvement in these cases as well, but the technical aspects of the programme were emphasised. All project appraisals indicated the need for local social and economic data. All project appraisals, except the Botswana Project, emphasised the crucial importance of such data.

Pastoral associations
Except in the case of Botswana, pastoral associations received priority in Sub-Saharan Africa. The associations were charged with the implementation of the projects at the grassroots level and were organised around the felt needs of
pastoralists (usually animal health, water supplies and/or security of tenure) and not around resource management *per se*.

In some cases (i.e. Chad, Mauritania) it was expressly stated that range management could occur only *after* viable pastoral associations were established to provide health care and/or water management. While such statements may represent a strong attachment to conventional approaches to range management, the creation of strong, viable, pastoral associations are the priority. The other projects not having a pastoral association component were located in Morocco and Egypt where management of pastures was assigned to traditional local government institutions.

**Drought**

Few of the projects planned for the contingency of a drought. The Mali and Chad Projects included an estimate of the impacts of droughts on the financial returns to the project. The Niger Project discussed drought for a moment and then declared that it was not an important consideration! Drought planning is clearly a blind spot in World Bank thinking.

**Flexibility**

Only one Project (Chad) expressly mentioned the need for pastoralists to maintain access to multiple ecological zones and recommended policies to achieve that end. No other project appraisal mentioned the need for flexibility, but we know that several were implemented in ways to enhance flexibility (e.g. Niger and Senegal). The Nigeria Project emphasised the importance of the settlement of nomads and the Botswana Project emphasised ranching.

**DISCUSSION**

The evidence suggests that some of the most frequent criticisms of the World Bank’s pastoral development projects are no longer valid. While it is clear that World Bank projects to date are still based on ‘traditional’, ‘Clementsian’ approaches to ecology, few World Bank projects include the prescriptions that logically flow from this approach. In other words, the Bank has learned not to repeat its mistakes even though it may still have designed projects based on erroneous assumptions. This has been accomplished by a shift in emphasis from the creation of range management units to the creation of viable, self-managed pastoral associations that are responsible for livestock development efforts. Pastoralists will only support these associations if they meet their needs and enhance *existing* production systems. Thus, the conceptual limitations of World Bank consultants have been effectively counterbalanced by the empowerment of the pastoralists themselves.
One of the key lessons that I learned from examining World Bank livestock appraisal papers was that: ‘You don’t have to always have the right theory to do the right thing’. We, as academics, tend to give too much credence to ideas and not enough to experience.

World Bank livestock experts may have retained conventional views of range management, but they also experienced the failure of pastoral development programmes in the 1960s and 1970s which were based upon conventional range management ideas. They were determined to learn from their mistakes and avoid the pitfalls of the past. The first lesson learned from their experience was that ranches were not economically, politically or socially viable in traditional pastoral areas. While some, perhaps most, World Bank experts may have viewed ranching as the ideal form of livestock production, they also viewed ranching schemes as unviable by the late 1970s.

The second lesson was even more important. The fact that recent World Bank projects clearly give priority to the creation of viable pastoral associations, is probably the most important finding of this exercise. If viable pastoral associations are created to represent client needs and to set project priorities, it is unlikely that inappropriate ideas held by World Bank consultants will have adverse impacts on project design and implementation.

Local involvement in the planning, management and implementation of livestock projects now appears to be an integral part of all World Bank-funded livestock projects. World Bank planners recognised that pastoralists would not form and maintain organisations which had the management of grazing and stocking rates as the principal function. Thus it was concluded that pastoralists would be involved in livestock projects only if pastoral associations could be organised that met the felt needs of herders – animal and human health, input provision, water, etc. Once viable pastoral associations were created that were capable of managing pasture resources, range management activities could be undertaken where needed. Priority was given to the formation of self-managing pastoral associations. To the degree that Bank programmes empowered pastoralists, the inadequacies of the approaches of technical experts became irrelevant. Pastoralists simply would not invest their time and energies into activities that did not fit into their environment.

I came away impressed by my review of World Bank livestock projects. The World Bank is doing a better job at promoting pastoral development than I had thought and a far better job than suggested by some of its critics. However, the situation is not totally rosy. The World Bank has been designing better livestock programmes because of the experiences of its advisors, not because it has fundamentally altered the way that it thinks about rangelands.
This is a fragile situation. The appropriate design of livestock projects depends on the initiative of the Bank’s livestock experts. As long as their experience is not institutionalised, the probability that some projects will be inappropriately designed is high – particularly when local governments rather than pastoral groups are charged with project implementation. Was the sometimes controversial Bank Livestock Programme in Botswana an example of such a lapse? Would some of the problems of that project have been avoided if a more appropriate ecological paradigm had been used? I cannot help but think that the answer to both of these questions is ‘yes’.

While the World Bank designs projects better today, its commitment to traditional approaches to rangeland ecology has made it difficult to deal with drought in a systematic manner. Droughts continue to be regarded as ‘acts of God’ which are not part of the normal operation of semi-arid ecosystems. Traditional understandings of resource management prevent the development of a means for systematically addressing drought and drought management. If its staff did not operate from a Clementsian view of ecology, would this be a problem?

In my opinion, the biggest impact of the ‘new range ecology’ on the World Bank’s pastoral development projects will not be in the area of range management. The current emphasis on pastoral associations has already changed the Bank’s approach to this topic. The strategy of empowering pastoral associations will by itself prevent most of the mistakes emanating from traditional approaches to rangeland management. I think that new approaches to arid land ecology will have a significant impact on the way that livestock and crop projects are planned in arid and semi-arid environments.
New thinking.... but old ideas remained
These comments are based on an assessment of four of the World Bank-supported pastoral development projects reviewed by Gilles and de Haan (Mali(a), Senegal, Niger and Mauritania). Our assessment confirms the two authors’ main view, but in other respects disagrees with them (see Shanmugaratnan et al. 1992, Vedeld 1992). Failures of the 1960s and 1970s did provoke some new thinking in the World Bank, and the evolution of new approaches to pastoral development. New policies and projects were based on broader premises such as integrated natural resources management, building of pastoral organisations, policy and institutional reforms. In practice, the ‘ranching model’ was to a large degree abandoned, even if one may argue that the new models for pastoral associations maintained, in important ways, the logic behind the ‘group ranch’ models: to control overstocking and resource utilisation. In practice, however, the pastoralists showed little interest for the grazing management schemes, which were important elements of the new approaches. Pastoralists were often not convinced that these projects provided secure property rights to the pastures, required if the pastoralists were to firmly strengthen their control of access to these resources.

The ‘desertification controversy’
A major aim of the four Sahelian projects, as stated in the appraisal documents, was to address ‘overgrazing’ and ‘desertification’ and improve rangeland productivity. The pastoral associations were seen as the main governance structures for the introduction of rotational grazing schemes, water management and the keeping of stocking rates in ‘balance’ with pasture production.

But looking beyond these stated aims, we found relatively low budget allocations for the pastoral organisations. Therefore the budget allocations did not quite reflect the apparent aims of the project. In Mali and Niger less than 5% of total project costs was allocated to ‘pastoral organisation and training’, while only about 10% went into this exercise in the projects of Senegal and Mauritania. Animal health and water development were the two main components in all four projects. Only in the first phase of the Senegal Project did the appraisal envisage a relatively large allocation for the range management component (34% of total project costs). In the second phase this share dropped to 6%. A striking feature of three of these ‘livestock’ development projects (Mali, Niger and Senegal) was that the main component was actually agricultural and crop development, involving 32%, 35% and 71% respectively of total project costs. Crop-livestock integration was from the early 1980s seen as an
important measure to assist pastoralists who were settling in increasing numbers, to improve land productivity and to take pressure away from the rangelands considered to be exposed to ‘desertification’. The funds set aside for contingencies were also high, ranging from 20-30% of total cost. This meant that there was scope for addressing unforeseen events, like the effects of drought. But there was no drought planning and little was actually done by the governments and project administrations when droughts did occur.

**Why?**
The review by Gilles and de Haan is interesting in several ways. But ways should have been found to present the actual priorities of the projects better, for example by summation of figures on the budget allocations, as they appear in the appraisal documents. Even better would have been an assessment of how the funds were finally spent, taking account of the priorities of the governments and project administrations. But that would involve a much more elaborate exercise.

But even within the data provided, there are many questions that remain unanswered. Somehow, the authors’ preoccupation is to ‘prove’ that the ‘most frequent criticism of the World Bank’s pastoral development projects are no longer valid’, rather than to present a more complete analysis of their findings. Why for example did the World Bank staff and consultants, as evident in the appraisals, stick so firmly to traditional ‘Clementsian’ theories on range ecology? Why was there no recognition, say institutionalisation, of new theories? Why was there finally allocated so little to the building of pastoral associations, when these were seen as the main vehicles of the projects? Why were the grazing schemes never implemented as envisaged? How do the authors explain the lack of enthusiasm by the pastoralists? How are the contradictions between theory and practice, between aims and achievements explained? Was the focus on ‘anti-desertification’ measures in the appraisals just a convenient way of promoting (or selling) the livestock projects within, as well as outside, the World Bank taking the past failures into account? What limitations do a review of the text of appraisal documents have regarding lessons for future programmes? What are the lessons for the future?

**Grazing management schemes: shadow participation**
As with the ‘group ranch models’ the approach to formation of the pastoral associations involved a spatial delineation of rangeland territories and the allocation of land rights to legally-recognised pastoral associations. But in contrast to the group ranches, the pastoral associations were more inspired by the customary governance structures and institutions. The boundaries for the associations were identified according to a combination of residence and kinship criteria and encompassed ‘coherent’ groups who traditionally used the same pastoral areas.
The use of grazing schemes as a rallying point for the pastoral associations did not meet with any great success. It was not a high priority for the individual pastoralists. The pastoral associations were often not ‘coherent’ social units. The newly elected association ‘committee’ often lacked legitimate authority to promote, coordinate or enforce new rules for rangeland management. The formation of smaller groups for water management was more successfully done. The Senegal Project, however, did have some success in rotational grazing and improved mechanisms for negotiations between various pastoral groups to pasture resources. In Senegal the pastoralists were mainly settled agro-pastoralists (Wolof, Mandinge and Fulani), and ecological conditions were basically ‘equilibrium’ (700-1400 mm/year). But the efficiency of these grazing schemes fell during the second phase of the project, when the project focus shifted to crop cultivation and less attention was accorded to the grazing schemes. Regarding grazing schemes of this sort, ‘shadow participation’ becomes a real problem. The pastoralists may volunteer to participate, not because they expect direct benefits from improved grazing management, but because they hope to achieve other benefits from the project.

More success has been achieved with revolving funds for veterinary drug stores as rallying points for the pastoral associations. But the main success of these projects has probably been to set pastoral institution building on the political agenda at local and national levels. New fora have been created for internal discussions about collective concerns, such as how to come to terms with the governments, to negotiate for more secure property rights, and to bargain for improved allocation of resources to pastoral development. The pastoral associations have also raised awareness and knowledge of rangeland management problems. There are individual success stories among the pastoral associations, but their economic performances and involvement in grazing management are mixed. In all projects there is evidence of government and project failures which need to be addressed if pastoral institution building is to move forward.

**Participatory?**

Despite good intentions, these four projects were not based on ‘participatory’ approaches, neither in preparation nor in implementation. Here I disagree with the two authors. Planning periods were too short. The initial identification of ‘coherent’ pastoral associations was brief and the formation process involved little genuine dialogue. The Government’s and the Project administration, embedded in authoritarian institutional cultures, were not able to turn the top-down initiative for pastoral association building into a bottom-up process of mobilisation. This situation was a product of several unresolved issues concerning historical factors, lack of accountability and of genuine commitment among government authorities, lack of decentralisation and of support for
property rights to range and water, increased crop encroachment on the rangelands, herd dispossession and increased access for absentee herd owners to local pastures, as well as failures in project design.

**New agenda: Controlling access rather than numbers**

How to address pastoral association building under ‘new ecological paradigms’? If accepted that rangelands are generally robust and resilient, future rangeland management policies should be more concerned about resolution of resource use conflicts/equity/civil security/drought preparedness and economic efficiency, rather than ‘overstocking’, rangeland degradation and ‘desertification’. Strict regulatory measures will be unrealistic and unnecessary under the drier rangelands with ecological conditions of great variability (non-equilibrium conditions: less than 300-400 mm/year). Law and governance structures for these rangelands should be more focused on regulation of access rights to key resources, as suggested by Behnke (1994), rather than on controlling resource utilisation and stocking rates on a wide scale. Under the wetter rangelands (equilibrium conditions: above 400-500 mm/year) the regulation of stocking rates according to available pasture would be more of a concern. In both cases, pastoral development should involve a broad and long-term approach to pastoral institution building, to some degree recognised in World Bank policy documents, but not firmly adhered to in project design and implementation.

**Benefits from rangelands are divisible**

As a solution to the pastoral tenure issue, the delineation of geographical boundaries for each pastoral association is faced with several weaknesses. The tenure rights provided to the associations have, for example, no firm recognition in national law. Although the tenure contracts might give some leverage for protection against neighbours ‘poaching’ pasture, they provide little protection against crop encroachment, internal resource use conflicts or expropriation by the state.

A main problem with these boundaries is the failure to distinguish between indivisibility of the ecological production system(s) and divisibility of the benefits. Even if these rangelands are, in important ways, indivisible resource systems, there are ways of dividing the benefits from these resources. Divisibility of benefits is recognised in most customary institutions through a range of ownership systems to local resources, such as usufruct rights, temporary occupancy rights, rights of transit, split-rights as well as freehold titles. The owner of the land (most often the state), is generally not the one who benefits from the utilisation. Most pastoral production systems use the whole spectre of property regimes: state, common, private.
A programme that really wants to address property rights issues needs to relate to the diversity and complexity of customary institutions and tenure rules. This has not been the case with the pastoral association projects. Admittedly, the solutions to property rights access issues are beyond the agenda that individual livestock projects can be expected to address. It is central, however, to the broader institutional agenda of secure property rights regimes for the rangelands.

**Procedural law: Land tenure reforms as a long-term political process**

So far national law in most African countries has disregarded the complexity of customary institutions. They evolve from conditions of erratic rainfall and pasture availability, integrated production strategies, multiple species (animals, crops, trees, wild-land resources) and multiple-ownership regimes to land, resources and animals. Herd movements are irregular and the needs for access to particular key resources are unpredictable. At least in the drier rangelands, rainfall fluctuation is the key factor influencing pasture productivity. The regulation of stocking rates may have very little effect on vegetation growth. Due to drought, diseases or fire, stocking rates seldom reach levels that lead to rangeland degradation. This is recognised in customary tenure systems, which mostly do not involve institutions for regulation of stocking numbers within a group. But there are other mechanisms for ‘getting rid of the losers’ (e.g. control over water, key pastures, salt licks). In times of resource scarcity, pastoral communities often aspire to expand their territories and resource entitlements, or expel their neighbours/kins, rather than to destock and adjust numbers to available grazing within their territory.

This complexity cannot easily be captured and homogenised in national statutory law (or in pastoral association projects). Codification would be relatively quickly outdated, even if initial agreement could be reached between the different parties involved. Identification of customary rules is complicated by the fact that historical rights and duties of owners are ambiguous and politically controversial. Today, there exist multiple and contradictory procedures and channels for settling tenure disputes. Hence, tenure reforms should involve all concerned regime structures: the state, local organisations and private individuals.

Detailed and immediate adjudication, codification and legislation of tenure to the benefit of a wide variety of user groups for specific key resources would probably be premature at the present stage of development in most settings. Countrywide tenure reforms, like the one now being planned in Niger, would not only be conflictive, complicated and costly, but would also easily strain flexibility and resource sharing. Such tenure reforms, particularly if they involve changes in statutory law, should be based upon sound jurisprudence developed locally. There are, however, urgent needs for new institutional structures that can
arbitrate continuously over prevailing tenure and resource use conflicts, particularly between farmers and pastoralists – but also between different pastoral groups. Except in Senegal, such institutional needs were not addressed systematically in the four projects.

A possible solution to some of these dilemmas is for governments to elaborate and enforce procedural law (rules of procedure) rather than substantive law (rules of right which courts are called on to apply). Instead of legislatively dictating detailed property rights for pastoral or agricultural resources, the procedural law could specify an enabling framework within which the concerned parties could legitimately put forward their claims to a certain resource. This would include the identification and building of administrative or legal institutions which would handle such claims, the principles for judging between opposing claims, as well as procedures for enforcement. Over time, a jurisprudence would develop and competence in the processing institutions be built.

Land tenure reforms should be seen as a long-term political process, embedded in the local culture. New property regimes, in order to acquire legitimacy, should then be allowed to evolve through local competition and power struggles within the broader political economy. Tenure issues will probably become central in the emerging political processes of decentralisation and democratisation, where multi-parties provide new channels for voicing views at village level. But recognising that pastoralists are often minority groups with weak representation also in political parties, pastoral property rights might require particular protection. The building of independent ‘land tenure commissions’ at district levels with majority representation from the local (pastoral) communities and/or specialised ‘land tenure courts’, assisted by staff trained both in customary and modern law, could facilitate the process. The more precise modalities for such structures would need to be worked on further. A key problem is what role the national governments and their local representatives should play in new property rights regimes. Some argue that the history of authoritarian and oppressive interventions by the state prescribe a ‘minimum’ interference.

REFERENCES


COMMENTS ON
RECENT TRENDS IN WORLD BANK PASTORAL DEVELOPMENT PROJECTS by Jere L. Gilles and Cornelis de Haan

Poul Sihm

Having been intimately involved with many of the projects selected for review by Dr Gilles and Mr de Haan, I read both their paper and Mr de Haan’s overview with considerable interest. My comments are based on experience as appraiser (two of the reviewed projects), as well as having defended and elaborated the pastoral association approach which I ‘inherited’ from Eugen Sinodinos, World Bank Project Officer for many years in the Abidjan Office and my predecessor at the World Bank in the Sahel Region.

METHODOLOGY

A better foundation for choosing criteria for assessing project performance might have been provided by a more thorough description of the history and evolution of thinking within the Bank, including:

• A description of the movement away from ‘faith in the application of Western technology’, through a New Zealand inspired ‘ranching phase’ and on to the experience gained in the project disasters of Kenya Livestock II or the two Somali Rangelands Projects (which I fathered!);

• Mention of the period of reflection within the Bank following a consultancy report by Stephen Sandford in the early 1980s on Bank livestock project performance, a report which was made confidential and suppressed by the Bank; it was during this period that the ILCA hosted the seminar at which Eugen Sinodinos (I believe for the first time) advocated pastoral associations;

• The conditions of work for the Bank livestock specialists after Hans Adler’s famous ‘I do not know why we are in livestock development’ speech after which everybody who could, changed his or her title out of anything to do with livestock and our most senior livestock specialist, by then a division chief, stopped doing livestock projects;

• The total absence of anthropologists in project work;

• The ‘Benor extension phase’ (still ongoing) which for a number of years excluded livestock from the agricultural extension message because ‘livestock is too complicated’.
All this might have led to a more ‘productive’ set of criteria on which to judge the projects.

On the selection of projects to be judged I am concerned by the absence of:

- Kenya Livestock I and II which could have shown what happens when quality is followed by quantity in the simple ‘enlargement’ of good project components, or Somalia Northern and Central Rangelands (the disasters mentioned above);

- The Ethiopia Rangelands, showing the political odds against which projects were implemented;

- Botswana Livestock I and II which would have explained ‘the lapse’ in Botswana Land Management and Livestock;

- The Central Africa Republic National Livestock Project which could have shown the dangers of centralisation of the producers.

**The importance of the political environment**
Most of all I miss a proper treatment of the political environment in which these projects were dealt with, mainly in their respective countries, but also in the Bank and its regional offices. The role of central government, the real motivations of ministers and government officials and the local politics surrounding any project should have been included in the analysis.

**Experience**
The conclusion that ‘the World Bank has been designing better livestock programmes because of the experience of its advisors’ is only partly true. Livestock specialists for a number of years were actively encouraged to visit universities, attend seminars or hold seminars in the countries where projects were being implemented. Although we generally had very little time to read anything but short papers our information network was quite large and we did follow what was going on in academia and agricultural research and drew inspiration from that, as well as from our own very good project audit system.

**The new range ecology**
The new range ecology should not have been the prime focus and criteria for evaluation, since it is only now being considered. It essentially confirms the group approach, namely: give the producer enough elbow room and the rights to his traditional space and he will (hopefully) act responsibly. Whatever was said about range management, overstocking, etc. in appraisal reports was mostly window-dressing to answer the concerns of those who had to approve the projects.
Local involvement
Local involvement was very sensitive to the political environment. Only very rarely have project-preparation or appraisal teams been able to have ‘unfiltered’ interviews with user groups since they were always at the mercy of the translator. Where good anthropological reports, of what was going on in the camp or village existed, or where one could find a ‘reformed’ official, it was like striking gold. Many projects called for local participation and the principle was agreed by governments only to be ignored or corrupted at the implementation stage.

FINDINGS

Pastoral ecology
How could it be otherwise?

Ranches
Regarding the TGLP (Tribal Grazing Lands Policy) of Botswana the jury is probably still out. The vision of the first president of Botswana, Seretse Khama was correct, but the present rulers and the big cattle owners plus normal greed have nearly destroyed it. The idea was different from the other ‘ranches’ in Bank projects. Nigeria ranches are yet a third sub-model.

The Bank is now committed to natural resource management by the producers and, provided the political environment is OK, this may be seen as the ultimate development of a model based on experience: keep the government out. Will that hold better than Integrated Rural Development, Area Development and all the other models which have been invented and dropped over the years?

Applicability
Agree, but what does that mean for project design? What is happening to the Bank’s interest in holistic resource management?

Mr Gilles is right that the experience needs to be institutionalised within the Bank, but wrong about formalising Bank policy. With the quality of the Bank’s livestock specialists and their own individual networks, Bank policy on livestock will keep flexible and up-to-date, and that is appropriate.

My conclusion is that given a serious and committed political and administrative environment in the country of implementation perhaps any one of the above models could have worked.

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I think, therefore, it would have been more important to tackle the study from this angle: Why did things not work? This would in the course of the investigation have fulfilled Mr de Haan’s objective of defending the Bank’s reputation in a convincing way – by presenting more of the evidence.
Gilles and de Haan acknowledge a number of important limitations to their study. The most serious deficiency to my mind is that it was a purely desk-bound exercise, based almost entirely on information from project appraisal reports, which ‘did not always indicate how projects were actually implemented’. They also point out that project completion reports were available for only five out of the thirteen projects examined, and that these ‘underscored the fact that projects are often not implemented in quite the same way as they are designed’. While their admission certainly does not surprise me, it surely underscores the need to assess what projects actually achieved on the ground, rather than the virtual reality of appraising appraisal reports.

As far as the Second Livestock Development Project in Nigeria is concerned, I question the justification and validity of its inclusion as a pastoral development project. SLDP was a national project with a very wide range of activities covering almost all aspects of the livestock sub-sector. Pastoral development was only one of the many components and certainly was not the largest, amounting to less than 10% of overall funding.

Other significant components included: provision of credit for cattle, sheep and pig fattening, small-scale poultry production, purchase and training of work oxen, work bull breeding, and dairy development; establishment of grazing reserves; infrastructural development (boreholes, dams, roads, etc.); importation and multiplication of trypanotolerant cattle; extension, training and research funding for fodder banks and alley cropping; and the procurement of equipment. A number of special studies were also commissioned including: an assessment of monitoring and evaluation requirements; evaluation of animal health services and proposals for their improvement; and a national survey of livestock resources.

Given the variety of livestock production systems represented in Nigeria and the wide range of activities, envisaged for SLDP, the simplified content analysis approach of assessment hardly does justice to the project as a whole. The study’s ‘Yes?’ categorisation of the ranching criterion almost certainly relates to support for a few existing Government ranches associated with the importation and multiplication of trypanotolerant stock, and the maintenance of former livestock improvement centres. Ranching was definitely not generally advocated by the project. Drought contingency planning is clearly important for pastoral development projects in arid and semi-arid areas. Its significance for a more general purpose, national livestock development project such as SLDP in Nigeria, where two-thirds of the country lies within the sub-humid and humid zones, is less obvious. The project documents may well have emphasised the
‘importance of settlement of nomads’ as this is stated Government policy, but the reality is that spontaneous pastoral settlement has taken place for a great many years, and that transhumant mixed farming is now widespread and has become the norm. The flexibility criterion is thus a fairly meaningless concept in the Nigerian context – if anything ‘N/A’ would be more applicable than ‘No?’

Despite these reservations, I am nevertheless in general agreement with the overall conclusions of the study. I believe that individual perceptions of pastoral and more general livestock development are changing, both within the Bank and in some Government Livestock Departments. However, policy change and institutional reform is a painfully slow process, which will require continued reinforcement and monitoring for years to come.
COMMENTS ON RECENT TRENDS IN WORLD BANK PASTORAL DEVELOPMENT PROJECTS by Jere L. Gilles and Cornelis de Haan

Dennis Herlocker

Of the projects reviewed, I was only associated with one and then only peripherally. This was the Somalia Livestock Health Project. I remember little about the Project except that it provided for the monitoring of trends in range condition as an indirect indicator of the effectiveness of the livestock health treatments. This would have been a difficult task given the probable interference of other factors such as fluctuating livestock sales, breakdowns in security and improved supplies of water for stock. In any case, the Project came to an end within a year of its inception when war broke out in Northern Somalia between rebel and Government forces.

The project with which I am familiar was the Central Rangelands Development Project which ran from 1979-1989. This was a multi-donor project including the World Bank, USAID, GTZ and the World Food Programme. If the characteristics of this project were to be included in Gilles and de Haan’s Table 1: Summary of projects, they would go as follows:

<table>
<thead>
<tr>
<th>Pastoral project:</th>
<th>Somalia;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year:</td>
<td>1979;</td>
</tr>
<tr>
<td>Ecological approach:</td>
<td>Traditional;</td>
</tr>
<tr>
<td>Ranching:</td>
<td>No;</td>
</tr>
<tr>
<td>Applicability:</td>
<td>Yes;</td>
</tr>
<tr>
<td>Project priorities:</td>
<td>Range, groups, health, production, reserves;</td>
</tr>
<tr>
<td>Local planning:</td>
<td>No;</td>
</tr>
<tr>
<td>Pastoral associations:</td>
<td>Partly, i.e. local associations were to manage their rangeland areas under the direction of the local government;</td>
</tr>
<tr>
<td>Drought:</td>
<td>Yes, i.e. the impact of drought was acknowledged and famine/drought grazing reserves were to be established but no economic analysis of drought impact was made;</td>
</tr>
</tbody>
</table>
Flexibility: Partly, i.e. the importance of flexibility was acknowledged but the long-term goal – probably at the instigation of the central government – was the gradual concentration of pastoralists;

The non-formal training component, which was to, among other things, develop grazing associations, was funded by the World Bank.

Although the general philosophy/approach of the Project remained much the same throughout its duration, its initial aims and activities – at least within the range survey and development component with which I am most familiar – were modified significantly. Projected accomplishments were scaled down to fit reality; water development shifted from boreholes to low yielding and seasonal sources; an extension effort that evolved was the development of a successful package for farmer/pastoralists and it was finally concluded toward the end of the Project that grazing associations should plan, construct, administer and maintain range development interventions to the greatest extent possible. A first step in this direction was the cooperation between the Project and local groups in the rehabilitation of shallow wells.