Grazing Management Study
funded by NOLIDEP for three of their pilot communities

by Ingrid Christian

January 1998

prepared for NOLIDEP
the Northern Regions Livestock Development Project
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1. **Preface**

The need for planning and implementing livestock development projects together with, rather than for, local farmers has become increasingly apparent. Relevant information on livestock farming and on the main constraints and needs of the systems is crucial in order to target on appropriate extension messages. Where local-level decision making and great flexibility are vital for the survival of the people in adverse environments, local-level planning includes the professional advice of local farmers and needs to keep information on the continuously changing process within a community up to date.

This study undertakes the effort to describe the production systems of three NOLIDEP pilot communities in detail without claiming to give a full picture. There will be no quantitative data included. The assessment of fodder species as presented in tables 1 - 3 reflects the farmers' experience and know-how and differs from scientific classification.

The report will first give an overview on the terms of reference in order to clarify the objectives of the study. Then the applied methodology for the study is explained. The executive summary - to which is given precedence - deals with a general approach valid for all three pilot communities of NOLIDEP in order to give an overview on the main findings. Further on in the report the study areas are described in detail. The detailed description of every pilot community will cover all terms of reference individually.

The report will close with recommendations on practical steps to take for NOLIDEP to enhance the project's progress and crucial issues subject to further research.

2. **Objectives of the study**

The TOR required a description of all activities a community may undertake in terms of the
- Management of
  - grazing and water resources
  - cattle movement
  - fodder supplies (cultivated and natural fodder supplies)
- the traditional and legal framework conditions:
  - handling and acceptance of boundaries
  - usage of customary rights and institutional linkages
  - land tenure rights and usage
- the social implications:
  - livestock gifting and loaning
  - problems of resource poor and/or female headed households

leading to the TOR Objective: **practical steps to take for NOLIDEP** to strengthen
- community based resource management
- economic and social welfare
- livestock production and marketing
3. Field methods

The study team consisted of the researcher and one interpreter. Four weeks (in November/December 1997 = end of the dry season) were spent in the field, whereby one week was outlined for preparation, introductory community meetings and training of accompanying research staff. For each community there were 5 working days time for the research. An introductory group meeting was held with each community, where PRA - participatory rural appraisal methods - according to WESTPHAL ET AL. (1994) were applied to obtain an overview on the situation of each community (SCHÖNHUTH AND KIEVELITZ 1993, WATERS-BAYER AND BAYER, 1994).

Within the group meeting an uncompleted map of the community area was presented to be completed and corrected by the participants. It was then elaborated on the information obtained from the initial meetings through informal open-ended interviews as the principal method of investigation.

A list of key informants of each community was obtained through extension staff and/or by the chairmen of the NOLIDEP committees. In addition to this list, interviews with people en route in the rural areas were held: villagers, headmen, herders at the cattle posts and the water points as well as along the tracks travelled.

In addition to individual and group interviews at the research sites a number of key informants related to NOLIDEP in any kind were interviewed. The list of all key informants is given in appendix I. A selection of quotations taken at random throughout the three pilot communities is given in appendix II.
4. Executive Summary

4.1 Characterisation of the three pilot communities

Oshambelo
Oshambelo is a relatively new settlement and part of the Kingdom of Uukwaliudhi with direct access to a cattle post area, used by all Uukwaliudhi communities as well as external communities.
Since the area had been settled only over the last few years, large omahangu fields with enlarged ‘ekoves’ (= extended homestead area used as a grazing reserve) have developed. There are only few permanent brick or tin houses, the homesteads can still be moved according to traditional practise. Fences in the settlement area are built in the traditional way with bushes and/or Mopane poles, only few modern wire fences occur.
Water provision for home consumption and animals is labour intensive (on average 7 km walking-distance to the main well with drinking water quality), since Oshambelo is not connected to a pipeline or water canal.
The cattle post area is equipped with boreholes (embola), most of them with diesel pumps. (see sketch map in appendix III).
Traditional leaders have lately withdrawn from NOLIDEP activities.

Onaanda
Onaanda is a grown community with a well structured society pattern.
Large omahangu fields and large ‘ekoves’, sometimes split into camps determine the picture. Most of the homesteads have at least one or two permanent brick buildings and mainly wire is used as a kind of modern fencing in contrary to the traditional bush fencing. Some people sell their surplus of ‘omahangu’ (= the staple food: pearl millet).
Water for home consumption is provided by a pipeline.
The community has direct access to a cattle post area. This area is partly covered by the pipeline, there are no boreholes and cattle further on in the cattle post area is watered by means of hand dug wells.
The cattle post area is vast and still has grazing reserves, where access is restricted due to the lack of water (see sketch map in appendix III).
Traditional leaders and leading personalities of the community work in close collaboration and support and enhance NOLIDEP.

Omatunda
Omatunda is a small community and densely populated. Oshanas, considered as the last grazing reserves, run through the area. The community has no direct access to a related cattle post area.
The homesteads are close to each other. There are very few permanent brick houses and few wire fences. Sometimes there is no fence at all around the omahangu fields and as a special feature - some omahangu fields are even shared and cultivated in collaboration with neighbours. There is no surplus of omahangu and the staple food is consequently not sold. Omatunda community has a large variety of exploitable trees at their disposal. (see sketch map appendix III)
The community is considered as hard working and diligent by extension personnel. The community is strictly organised through a strong link to the headman and his son, who is the Chairman of the NOLIDEP committee.
4.2 Main findings

**Management of grazing and water resources**

Grazing resources are utilised communally but not managed in a communal way, i.e. in a sense that a control body elected or empowered traditionally would regulate access to defined areas. Virtually anybody can bring cattle and establish a cattle post in communities where a communal grazing area is at disposal, like in Onaanda and Oshambelo. The same applies for Omahunda settlement area. However, there are different preconditions according to the minimum factors of the prevailing production system:

- in Oshambelo you must ask the controller of the borehole whether you can water your animals there, if no permit is given you may still survive for some time on a hand dug well
- in Onaanda you must have your own hand dug well
- in Omahunda you must have a house there

Certainly the preconditions mentioned can be replaced by family relations, a good friend or by the gifting and loaning system (which will be explained further down). However, it is not the headman who is approached for access to grazing, it this usually the neighbours and/or fellow herders.

People in general are aware of different qualities of grass species, their changing nutrition value in the course of a vegetation period and of the plant composition of different pasture patches. The level of know-how differs between the three pilot communities. The utilisation of grazing resources, however, is not related to this knowledge and rather subject to framework conditions like water availability, wealth situation - whether herders can be employed - and whether distant grazing areas can be reached. The management of water resources is in general more ownership featured, specially in the case of boreholes (embola) with a diesel pump and drilled by the government as it is the case in Oshambelo cattle post area.

Drilled boreholes with a diesel pump are maintained by the government. Each borehole (in most cases) is controlled by one nearby cattle post holder. He is registered in Ondangwa at the Department of Water Affairs and is responsible for ordering service and repairs through the government. He is also in charge for the collection of the yearly fee from all users of the borehole (N$ 2.00 per cattle/year) and organises the diesel for the pump, which can be obtained free of charge from the government as long as he can present a receipt for the yearly fee. Trespassers are not charged for water because of lack of control. The controller of the borehole has usually assumed rights over the borehole beyond his original duties. He will only admit a restricted number of herds to this borehole and therefore also controls the surrounding grazing area. To some extent the number of herds admitted to the borehole can vary due to emergency situations like drought and has also been increased lately because of higher animal pressure. Controllers of those boreholes report that it had become increasingly difficult to control access.

For other water resources like hand dug wells (i.e. grazing area Onaanda) or the pipeline (where no contribution for water is asked for) access is not restricted. In these cases a water committee is responsible to address service and maintenance
requirements to the Department of Water Affairs and is also responsible for the settling of conflicts. The headman will also refer to the water committee for conflicts.

Whether the people can control access to the dams initiated by NOLIDEP and excavated by contractors, as it is planned, is doubtful. Water points for instance in the Omatunda settlement area, where a limited group of people paid earlier for the installation, are today used by anybody who is in need of water free of charge, whether he has paid at the beginning or not.

**Cattle movement**

Whether cattle is moved or not is dependant on the individual production factors of the cattle owner:

- size of the herd
- labour capacity
- condition of the pasture
- access to water points
- family and friendship links (as such that a herd can go on trek together with a herd of a relative)

as to mention a few.

Usually the movement is related to a specific season.
A general pattern is given by the following seasons:

Okwenye (dry season, August to December), throughout these months cattle is moved to the cattle posts
Othinge (Jan. to March, rainy season) - cattle is moved back to the settlement area
Okufu (April to May) - transmission period, cattle feed on harvest stover
Oshikufuthinge (June to August) transition period

Valid for this general pattern is also that the movement is either towards the cattle posts or back home. Once arrived at the cattle post no further movement was stated within a specific season and the vegetation is obviously not utilised according to the know-how of the differing pasture quality and vegetation stages. However, in areas where the pressure on pasture is not extremely high, like in the Onaanda cattle post areas, herdsmen may assume a certain right for the exclusive utilisation of the pasture circle in walking distance around their own hand-dug water point. The procedure - as mentioned earlier - on how to obtain access to such a water point (through approaching the neighbours) gives evidence that the herder can utilise the surrounding grazing area almost undisturbed. This herder may then apply certain management tools according to his know-how, i.e. to graze first the fresh pasture close to his water point in order to avoid loss of trampling or to reserve the most unpalatable species for later utilisation etc.

**Fodder supplies - closely managed, cultivated and natural fodder supplies**

In general only little knowledge could be found on the cultivation of fodder. Lucerne production was mentioned by some farmers, out of the experience gathered during earlier work on commercial farms. Other farmers required more acacias in order to feed the pods, which they considered as highly nutritious. Supplementary feed is only considered for the time of ploughing, when draught animals are fed with Sorghum or omahangu straw as well as for drought times as means of survival. Emergency feed in
drought times can consist of palm leaves, branches of the Marula tree, and grass originally reserved for roof thatching. In Omatunda for instance the grass used for thatching is restricted from grazing (which is enforced by the headman), since it is a valuable building material, but can, if need occurs, be used for emergency feed.

The understanding of closely managed fodder supplies is in general related to the most equal distribution of livestock. This is emphasised by the request for more water points in order to get a better distribution of cattle over the grassland area. Fodder is, however, reserved in the ‘ekoves’, and will only be utilised there once the communal pasture is depleted.

The motivation to cultivate fodder - either community based or in the individual ‘ekoves’ - is high and participation is required by the farmers in the NOLIDEP fodder trials (which are currently conducted in enclosures). However, fodder cultivation is not yet perceived as means to increase livestock production but is rather a strategy to survive.

Whether take-off of animals can be used as regulative factor to improve pasture depends on the commercialisation level of each community, which differs enormously between the three study areas. For instance in Omatunda, because of the scarce pasture, people cannot imagine a more productive scenario and even big herd owners are far from selling their animals for cash. At the same time in Onaanda, with a prevailing semi-commercial production scheme, take-off is currently under vivid discussion, also in terms of the avoidance of monetary loss during anticipated drought periods. The improvement of appropriate facilities to realise take-off is already tackled, i.e. the repair of the crush-pan and intensified negotiations with MEATCO.

Handling and acceptance of boundaries
People are usually aware and can precisely indicate boundaries between settlement and cattle post areas and boundaries to neighbouring communities. From the side of the headmen and the villagers it is assured, that any further settlement behind the given boundary will be restricted. In reality the boundaries are usually boundary zones where cattle posts change with settlements. An exception is given in Oshambelo where a newly set up regulation (originally for environmental reason) fixes the boundary. Here, traditional authorities, who claim to be the initiators of this regulation, have assumed the law-enforcement.

Land tenure rights and usage
When asked about enclosures people insist on the statement “there is no private grazing”. This is rather contradictory, considering eye-catching largely fenced plots in settlement and grazing areas. However, enclosures - no matter how large they are - are not considered as private grazing reserves as long as a house is built or in the process of being erected. Whether in the settlement area or in the grazing area, it depends on the tolerance level of the neighbours to what extent a fenced area can be enlarged. The fenced area next to the omahangu field is called ‘ekove’. It is in the nature of it that an ‘ekove’ can be extended in low populated areas, where the neighbour is far. In densely populated Omatunda for instance, the largest ‘ekoves’ are held by those who came to settle first.

The biased performance of the headmen (as the one who allocates land and at the same time is supposed to restrict settlement in a cattle post area) in this context, must be
seen in connection with his income situation and the current loss of authority. An increasing number of new tasks (projects, community development etc.) do certainly not provide additional income but are time consuming. Land allocation is one of the last profitable privileges he has. Under favourable circumstances he resides in the transition zone of a settlement/cattle post area and still has land to allocate at his disposal.

Only one case was reported, where an enclosure was considered as a private grazing reserve and consequently also termed differently - “eekamba”. This case was brought to the High Court in Windhoek through initiative of the community. The trial is pending.

**Usage of customary rights and institutional linkages**

Usually the headman is still the first institution to address problems and to accept judgements from. However, the level of acceptance and respect up to obedience towards the headman institution differs between the three pilot communities. In Omataunda the headman (here, his son is chairman of the NOLIDEP committee) dominates the community and appears to obtain major achievements for the project through a strict control over community members. In Onaanda the headman (in this case the Senior Headman) seem to be a true representative of his community and vivid advocate for the needs of his community. In Oshambelo the traditional authorities have withdrawn from project activities and do not participate in meetings any more, which is reflected by bad organisation of NOLIDEP committee members, what again is hampering the progress of the project.

**Livestock gifting and loaning**

Since cattle contributes to the status of the family who owns them, also non cattle owners are keen at least to pretend that they own some heads of cattle. In this regard a loaning system has developed comparable to the system of depositing money at the bank. A rich cattle owner gives some heads of cattle to somebody who has less or no cattle at all. The lender remains the owner and can take off his cattle whenever he requires. To his benefit somebody takes care of his cattle. The off-spring, i.e. increase of value (like interests in a bank account), still belongs to the lender. The borrower has in return the benefit of increased status and reputation in his community and all the products of the cattle like milk and manure. The splitting of herds in this regard can also be seen as a risk reduction for the lender. In times of drought he may loose less heads of cattle. Moreover, the cattle is seen by the community as the belonging of the borrower. Such, that the possession relations of the rich cattle owner are not obvious or exposed to his living environment. The gifting and loaning system is important for social implications but of minor relevance for cattle movement and off-take.

**Problems of resource poor and/or female headed households**

In a commercialisation process - to whatever extent under consideration in the three study communities - the non-favoured always run the risk of being left out. If there is, however, a functioning traditional social network through family and friendship linkages, the non-favoured may also profit of innovations and intensified production, as long as their social status and reputation within the community is not disturbed. The donation of the goats by NOLIDEP must be seen in this context and has reportedly led to competition and envy. The impact of these donations at the present stage is still weak but should be kept in mind for future measures of such kind.
5. The communities in detail

5.1 Oshambelo

Background of Oshambelo community and its cattle post area

Oshambelo must be seen in the context of whole Uukwaluudhi. The chief of Uukwaluudhi is King Taipopi, with about 20 headmen reporting to him. Three headmen are responsible for Oshambelo. In other communities of Uukwaluudhi the area and the name Oshambelo is still known as the name of a borehole only and the area is consequently considered as a part of the whole cattle post area and not as a settlement. The cattle post area is located west from the settlement. As indicated by the Oshambelo community, it serves as cattle post area for the whole Uukwaluudhi Kingdom. It further hosts cattle from Ombalantu, Ondonga, Ongandjera, Unkurambi and Okalongo. The numbers of cattle from these communities are not seen as a competition, although, their presence, together with the local herders, cause problems as described further below. Oshambelo community members use this area for dry-season grazing and share this grazing resource with all other communities of Uukwaluudhi and increasingly with communities from outside Uukwaluudhi. As indicated by Oshambelo community members, within the boundaries no settlement is allowed by the King any more. There is no alternative grazing area and no transport of cattle over long distances, for instance to Angola. In years of severe drought, like the year 1992, there was no other option and just not any chance for ‘opportunistic grazing’. “Then the cattle must die there [at the cattle post area of Oshambelo]”, as one attendant of the introductory meeting faces the cruel reality.

Seasonal livestock movement

Four seasons of the year were identified. These are general expressions and rather relate to climatic conditions than to cattle movements. By consequence, the cattle movements - if any - are dependent on climatic conditions.

1. Othinge (January to March - rainy season)
2. Okufu (April to May)
3. Oshikufuthinge (June to August)
4. Okwenye (August to December - dry season)

Cattle is moved to the cattle posts throughout the months of August to January (Okwenye). In this dry season cattle mainly feed on dry grasses like Omambali (Schmidtia pappophoroides, p), the reported prevalence of which is decreasing, Okaanza (Stipagrostis uniplumis, p) and Oshinamume (Schmidtia kalahariensis, a) named as the more valuable species and on other grass like plants (sedges) like Eshalatia or Eembeembequwa (has a little "onion" which is also consumed by children and which is dug out by donkeys) as less valuable grass species. A grass species growing in the Oshanas - Enyangayanga (Scilla rautanenii) was also pointed out as a medium palatable one. They further browse Acacias and other trees, for instance Ofuf (Baphia massaiensis), Omlaan, Omhaama, Emsati (Mopane leaves), Omukanga and shrubs like Catophrauctus alexandrii. In Othinge from January to August cattle is moved back to the settlements. The seasons Okufu and Oshikufuthinge are transition seasons. Rainfalls are expected in Othinge and the most valuable annual grass species on which cattle can feed at that time of the year is Oshinamume (Schmidtia kalahariensis, a). The most palatable perennial was quoted with Okaanza (Stipagrostis uniplumis).
### Table 1: Seasonal feed sources

<table>
<thead>
<tr>
<th>season</th>
<th>cattle movement</th>
<th>primary feed source</th>
<th>Scientific names</th>
<th>annual/a perennial:p</th>
<th>palatability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Okwenye</td>
<td>towards the cattle post</td>
<td>Oshikwaludhi names</td>
<td>Schmidtea papophoroides</td>
<td>p</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Omambali</td>
<td>Stipaagrostis uniplumis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Okaanza</td>
<td>Schmidtea kalahariensis</td>
<td>p</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oshinamume</td>
<td>Scilla rautani</td>
<td>a</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enyangayanga</td>
<td>?</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Embcambeshwa</td>
<td>?</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Othinge</td>
<td>back to the settlements</td>
<td>Okaanza</td>
<td>Stipaagrostis uniplumis</td>
<td>p</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oshinamume</td>
<td>Schmidtea kalahariensis</td>
<td>a</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>omahangu and sorghum straw as supplement for ploughing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Okufu</td>
<td>stay at the settlements</td>
<td>harvest residues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oshikufuthinge</td>
<td>stay at settlements and/or cattle posts</td>
<td></td>
<td>browsing: Acacia ssp, Mopane, Baphia massaiensis</td>
<td></td>
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<td></td>
<td></td>
<td>Emsati</td>
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<td></td>
<td></td>
<td>Ofufe</td>
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<tr>
<td></td>
<td></td>
<td>Omlana</td>
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<td></td>
<td></td>
<td>Omaana</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Omukanga</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

(+ ) most palatable, (+ -) medium palatable, (- ) less palatable

The movement of the cattle depends on the individual decision of the cattle owner. Not all cattle is moved to the cattle posts at the same time. The movement is a gradual and ongoing process. In severe drought years cattle is left at the cattle posts all year round. At the cattle posts 2 - 20 farmers combine their cattle in one herd. Small herd owners tend to keep their cattle all year round in the vicinity of the homestead.

Mainly owners of smaller herds, who are located close to the boundary of the cattle post area have the logistical advantage to find suitable grazing at an early stage of vegetation growth. Therefore, they do not have the pressure of moving their herds to distant cattle posts. Especially at the time of the survey (late dry season) there was still plenty of pasture left close to these settlements. Moreover, the management of those small herds kept in the vicinity of the homestead is less labour-intensive. Since Oshambelo is a relatively new community with the big advantage of having direct access to the cattle post area, there was hardly any herd owner who complaint about grazing shortages.

**Management of grazing resources and livestock**

Othinge is stated as the most labour intensive season in terms of livestock production. Cattle is kept around the homestead and use to feed on fresh grasses, whereby Okaanza (*Stipaagrostis uniplumis*) is again quoted as the most palatable and valuable
species. The animals gain weight quickly, it is the time of their lactation period, milk has to be processed to sour milk and butter, in cases where no donkey is available oxen are used to plough the omahangu field and will be fed supplementary in some cases with a mixture of omahangu and/or sorghum with oil (depending on the wealth of the household) or after ploughing with omahangu and sorghum straw. The fresh grass has reportedly led to diseases - oshiwengo - amongst the herd. (Probably Anaplasmoses caused by the intake of protein rich fresh grasses).

In Okufu cattle would feed on omahangu and sorghum stover in the fenced field and need not even be herded. Again in Oshikuwethinge only little labour input is attributed to livestock production. Okwenye is the time of mating. Towards the end of the dry season most of the female cattle is pregnant, vaccination campaigns are conducted in this season and labour inputs increase. The selection for breeding focuses on drought resistance as major selection criteria and on strong and large-framed cattle.

The cattle post area as a whole is not managed in a sense that defined grazing grounds are allocated to different herds and that those herds are moved according to a prescribed pattern. In former times, the King of Uukwalambe used to open and close certain grazing areas. A kind of a rotational grazing was obtained. This regulation of the King in earlier times is comparable to a current practise concerning crop production. Nowadays the King still announces and fixes the date for the harvest of ‘omahangu’, certainly a precaution for community members not to harvest and consume their basic staple food in an immature condition. The same practise for the regulation of grazing resources got lost over the last decade. However, as indicated by the Extension staff, to reintroduce the regulation of grazing resources through the King and headmen is currently under discussion in this circle.

Nowadays the decision to move cattle within the cattle post area is determined by the depletion of the pasture ground around one’s cattle post and the individual decision of the cattle post holder. The intention to move is not dependant on the condition of certain indicator species, usually all grass is first grazed around the cattle post. The decision to move earlier could only be influenced by a higher quality of pasture found elsewhere in the cattle post area. The assessment and checking for these higher quality areas is undertaken at times when cattle gets lost and in the course of the search for it. Once the decision to move is made (for whatever reason), the herder has to approach the person in charge for the borehole he is going to use. In most cases the request is granted, which is also an indication that the pressure on grazing is still not very high. In case the request is rejected the herder can still use the area, however, he has to use hand-dug wells to water his animals as long as they are available, “where you can survive for some time”. Still quite a number of alternative grazing areas away from the “home” cattle post were mentioned, mainly names of boreholes, where permission to graze can be obtained through the above mentioned procedure:

- Omanyanganyanga (GPS S 17°.57.25; E 14°.39.95)
- Amaupa (GPS S 18°.00.32; W 14°.33.12)
- Oshiwanda
- Okangwiya
- Onandjika
- Akalunge
- Oshalata
- Omane
- Ondiitolela (this borehole belongs to an area controlled by the King and can be used in times of drought)

The management of grazing resources according to the described procedure so far does not give reason for complaints. However, intruders from other communities, who do not have their own community cattle post area at disposal, would not follow this procedure and interfere in the system. Due to their tradition and hospitality it is difficult for the “hosting” community to reject access to their grazing grounds, because it would also affect herds in transit. If a herder from another community established a permanent cattle-post (ehambo), he would often state to have permission from the King himself. Whether true or not - other users of the area have to accept this and can not even involve a responsible headmen, who is overruled by the King in such cases. Again - in the solution process of such cases, as well as cattle theft and other disturbing incidents in the cattle post area - people refer to the headman. It is not the headman of the community, it can be a headman of a community close to the cattle post area, or a headman based permanently in the cattle post area. After all - apart from the control of boreholes and the surrounding grazing by individuals - this statement gives evidence that a superior traditional authority closely connected to the King has the overall supervision and is approached in conflict situations.

**Management of water resources**

Hand dug wells are maintained by the people who dug them out or by temporary users. At the location of the introductory meeting (place named Lipina: GPS S 17°.55.20; E 14°.34.22) there are three hand dug wells. Water is obtained by rope and bucket. The wells are deep. The water table is reached in about 15 m depths, it is not poured through a sieve and the people stated a good drinking quality - not salty - however, the water did not look clear. Most of the hand dug wells dry out in the dry season.

Drilled boreholes (embola) with a diesel pump are maintained by the government. Each borehole (in most cases) is controlled by one nearby cattle post holder. He is registered in Ondangwa at the Department of Water Affairs and is responsible for ordering service and repairs through the government. He is also in charge for the collection of the yearly fee from all users of the borehole (NS 2 per cattle/year) and organises the diesel for the pump, which can be obtained free of charge from the government as long as he can present a receipt for the yearly fee. Herders in transit are not charged for water because of lack of control. The controller of the borehole has usually assumed rights over the borehole beyond his original duties. He will only admit a restricted number of herds to this borehole and therefore also controls the surrounding grazing area. To some extent the number of herds admitted to the borehole can vary due to emergency situations like drought and has also been increased lately because of higher animal pressure.

In the case of Uulugaluba borehole earlier only 8 herds had access to the borehole. Currently the borehole is used by 18 herds. The controller of the borehole feels that these are too many animals, however, restriction becomes increasingly difficult. And to seek solution for conflicts and to address those to the traditional authorities was reported as increasingly complicated and difficult and a solution is not expected from that side.

A different situation prevails at Amaupa borehole. The borehole is highly frequented, reportedly by 20 cattle post holders and approx. 20 herds per cattle post. The reason
for the high pressure was, that there is nobody who takes control of the borehole, however, at the time of the survey it was serviced by the government. The herders stated that the pump had been broken for three weeks and that they had no access to nearby boreholes where they were "chased away". They had to use the following distant boreholes:

- Omanyangayanga (GPS S 17°.57.25; E 14°.39.95)
- Okatyali
- Omutumba (GPS S 17°.55.21; E 14°.34.20)
- Okanguanya
- Oshiwanda
- Ululgaluga (GPS S 17°.56.34; E 14°.34.74; the one where the present controller is afraid to loose his control)

It was confirmed by herders from other boreholes that Amaupa borehole is mainly used by herders from outside Uukwalambe and gave evidence that local cattle post holders still have an "home advantage" in the fight for water resources.

In Oshambelo settlement area special attention has to be drawn to the provision of water for home consumption for men and livestock. The main water points are three hand-dug wells in one place (Ipinga = name of the location) where the water is less salty and has drinking quality. The collection of this water is very time consuming and on average two hours per day are spent to carry water to the homesteads and another two hours to drive the animals to the wells and to water them there.

**Fodder production and closely managed natural fodder supplies**

The level of know-how on ‘closely managed natural fodder supplies’ became aware when an attendant of the introductory meeting put it the following way: "if the animals are evenly distributed [constant grazing] they cause less damage". This statement may result from the experience of lower stocking rates in the past, when the time factor did not play a major role and when there was still enough space to move the animals in an "opportunistic way". This statement was repeatedly made throughout the study area and must nowadays bee seen as an inappropriate management practise despite a considerable know-how of the ecological environment. There is not a clear perception of closely managed fodder supplies nor of seed banks. It is believed that pasture get sufficient rest by withdrawing cattle from the cattle posts. However, since the withdrawal of cattle from the cattle posts is a gradual process, this so called management tool is of low impact. Herds are hardly split, once back to the village. Farmers do in general not consider the time factor for the management of natural fodder supplies, i.e. farmers indeed move cattle to better grazing areas but never move cattle for the sake of preservation in order to give the pasture a rest so that it can recover. The movement of animals is never related to the notion of fodder preservation (reasons for the movement of cattle are given above). This wrong perception reflects a lack of information on research findings and on grazing systems practised elsewhere for instance in the commercial sector of Namibia.

The community appreciates the fodder production tests conducted in the area and consider them as very useful. They state that the fodder is growing very well. However, for to grow their own fodder they indicate a lack of labour capacity. If there were enough labour, they would rather cultivate the fodder within their homestead area in the omahangu field than in the communal grazing areas. Some community
members specifically asked for fodder trials with Lucerne. They experienced this fodder production at commercial farms, where they used to work earlier.

**Boundaries and settlement restrictions**

The boundaries of the cattle post area are clearly marked by a kind of path (chopped vegetation) as eastern boundary and the road to Kamanjab as western boundary. The area to the South is flanked by Ongandjela community and to the North by Uukolonkadhi community. Although, no visible boundaries could be made out there, users of the area seem to be clearly aware of them, due to the fact that in earlier times it was strictly forbidden to cross these boundaries. Nowadays the crossing of these boundaries is handled in a more flexible way, as we will reveal further on.

Oshambelo is a rather young community and settlements had been established over the last 10 years. New settlers first erected a cattle post facility in the area. The very first and most powerful one of these early settlers changed his cattle post into a homestead with omahangu field and usually with a large ‘ekove’ (= the extended field used for grazing) through the authorisation of the local headman. This headman was usually responsible for a neighbouring community and had an extended responsibility (either assumed or officially backed up by the King) for the adjacent grazing area. One of the first settlers who had the advantage of early settlement in the area, would later claim to be the headmen (in the case of Oshambelo it was accepted by the King) of the newly developed village. In the process of this settlement encroachment the boundary to the cattle post-area was subsequently shifted to the west until it reached its current location.

The current boundary is accepted by the community and by the King and it is clearly pointed out by both that no permission for settlement can be given beyond this border. This clear statement has its origin in a regulation drawn up by the ‘Ministry of Environment and Nature Conservation’ for the purpose of environmental protection of resources but is not yet passed. However, the traditional authorities claim to be the initiators of this regulation - considered by them at this stage as a new act in place and passed through cabinet - and see themselves in charge for the law-enforcement. The regulation is used for the purpose of settlement restriction within the current borders. This practise might not be too far away from the initial objectives of this new regulation.

Although, there are very few settlements beyond the western boundary of Oshambelo, as for instance Okatseidhi and Onambanje, further settlements will be strongly restricted, since the new regulation is fully supported by related communities and the traditional authorities. Those villages beyond the boundary have a longer history than Oshambelo and they are apparently not in the process of expanding. Okatseidhi Primary school for instance was launched in 1984 and started with 104 students, closed during wartime - the school reopened in 1992 and is attended currently by 57 students and 3 teachers.

**Private grazing reserves and current land tenure rights**

There are no private grazing reserves in Oshambelo according to all people questioned on this issue and consequently no complaints. It is, however, obvious that some people are extending the surrounding of their homesteads for grazing within fences, termed ‘ekove’. An ‘ekove’ can be divided into several camps without further permission. It could not be confirmed whether permission from the headman is needed for an
ongoing extension. It appears that the majority of the people try to extend their fenced farm area around the homestead as far as possible and only limited by their means for fencing material and labour. Specially in Oshambelo some fences close up with neighbouring fences. There may be in contrary to other communities less argument with the neighbours for the extension of ‘ekoves’. In cases of wire fencing (specifically expensive net wire) usually the cash comes from relatives in urban areas or from the absentee owner himself. In these cases the absentee owner is still the decision maker and leaves orders when he is around.

It was also not mentioned that the King has allegedly fenced a large area in the western part of the cattle post area. It was rather appreciated and confirmed that herders have access to the "King's borehole" and therefore also to the surrounding grazing at the area controlled by the King in times of drought.

From the government’s side it was confirmed that traditional authorities can allocate land up to 10 ha by law, for larger areas the Regional Councillor has to be approached. Members of the SARDEP committee, however, described in detail all steps involved to realise a decision made by their committee to fence a large area in the cattle post area as follows: “the area to fence was selected through consultation of the elder with experience, then the headman at the cattle post area was approached and is currently on the way to pass this request on to the King; the request was submitted some 4 weeks ago and it takes some time to receive a reply because the headman has to travel long distances”. These activities of the SARDEP committee were, however, not confirmed by their local facilitator nor by the councillor. It could, further, not have been confirmed by other community members that headmen are in charge to allocate land in the cattle post area.

Nevertheless, another customary legal practise in cases of cattle theft indicates that there is a strong communication channel from the cattle post area directly to the King. Cases of cattle theft are reported to a headman who resides next to Tsandi and who is in charge of bringing those cases to the Tribal Court in Tsandi. A border conflict with Himba people who would bring in cattle from Kaokofield was handled by the King himself. Further, at the time of the study a workshop was held at the King’s place with the objective to fence a wildlife reserve in an area called Onamandongo. It was confirmed that cattle posts had already been moved away from the respective area outlined for the reserve.

**Conflicts about grazing/water resources**

Basically herds from external communities (outside of Uukwaliudhi) are welcome. At the present stage their prevalence is indicated in low numbers only and there may also exist family and friendship linkages to an extent that it is in a traditional way not acceptable to exclude them. However, there are complaints that those intruders use to overgraze the cattle post area and that they would dominate the local herds. They do not pay for water. Further there are cases that cattle get lost or even stolen. These conflicts are handled at the Tribal Court in Tsandi. A headman residing next to Tsandi is involved in solving these conflicts, not only for Oshambelo, because the conflicts are a concern of the whole Uukwaliudhi.

The community foresees conflicts, once they will have successfully completed the excavation of the dam. They are afraid that other communities may bring cattle to the
dam, however, they do not know how to prevent these anticipated incidents and consider the erection of a fence around the dam.

**Institutional linkages and customary rights and usage**

The research team was repeatedly approached during the stay in Oshambelo from the side of the headman circle and advised to pass on the message that "the King is the first institution to approach for all activities to be launched in the area". The King/Headmen institution in Uukwaluudhi is apparently in the process of defining a new role for their traditional leadership. An indication for this is the assumption of law-enforcement to fix the boundary to the cattle-post area, which has been tolerated so far by all involved parties and thus confirms the performance of the King. In other community matters, where an approach to the councillor was given priority - as done at the beginning of the NOLIDEP project - the King/Headmen circle feels ignored. Consequently, the headmen have withdrawn from project meetings and obviously try to hamper the progress of the project unless special attention will be paid by project responsibilities to their expectations and requirements. The overlapping of customary duties and tasks with official administration procedures and lack of definition in this regard may also contribute to a tense and competitive situation in Uukwaluudhi.

One example for an untouched practise of customary law gives the Tribal Court in Tsandi. One headman, who resides next to Tsandi, is in charge to bring conflict issues of all kind to the Tribal Court. Since people complained that it would take a long time to get matters settled, the expectation for support from this side is not very high. In cases of cattle theft, however, clear legal procedures are followed. The difference is made between intended theft or unintentioned theft, i.e. when a herd is driven through the area and other cattle would join. The owner of the cattle can fix a price - which can be considerably higher than the traditional price, in cases where cattle cannot be returned. The traditional price for one head of cattle is N$ 400,-- , no matter whether it is a calf, male or female cattle. This price scale is applied for instance for death cases, a difference between death by accident or by murder was not made - in both cases the price is 11 cattle or the equivalent of N$ 4400,--. Cattle can also be claimed by relatives, when a woman gets pregnant.

5.1.1 Implications of the likely impact of NOLIDEP

The history of NOLIDEP in Oshambelo showed a weak point right from the beginning. The community first refused to accept the project and one member of the extension staff with close relations to the King convinced the people to give the project a chance with the option that they could stop it whenever they liked to. Thereupon, the current situation occurred that the headmen have withdrawn from the project. This may also contribute to further discouragement and stagnation of the project.

In addition, the dam, which has been excavated by the people through a ‘food for work’ programme, is not much progressed, due to conflicts with the water committee about the equipment and arguments within the NOLIDEP committee. The biggest constraint is obviously the time consuming water provision for home consumption, as described earlier. Against this background the following statement is understandable: "people feel very much discouraged by NOLIDEP of being lazy and of not making any progress with their dam. This is wrong - we must be encouraged ..."
The donation of goats to selected households, must be seen as a manipulation at the micro-economical level and does also not contribute to harmonisation. The dam, once completed, will definitely not influence grazing patterns. It will be a further source of water for animals kept at the homesteads or throughpassing. The process of watering the animals will be facilitated, since animals can help themselves with the surface water. However, the walking distance and time needed to reach this watersource will remain the same, since the dam is located close to the currently used main drinking water source (= Lipinga).

5.1.2 Recommendations for Oshambelo

In general all steps to be taken for NOLIDEP as worked out later in this study are to be applied for Oshambelo. A first precondition, however, to work through the conflicts as described above would be to strengthen communication with the traditional authorities and to make sure to have their support for any measure to be taken. "Every project must start at the palace [King's place]" was the message which was brought to us repeatedly throughout the study, which is certainly a mere formality which has to be adhered to. Second, the biggest constraint is obviously water provision at the household level - which is very time consuming - and makes it almost impossible for the people to take over additional work like the excavation of the dam for instance. NOLIDEP should look into this matter, perhaps a possibility could be found to assist the repair of water points, close to the homesteads. Another possibility could be to organise the transport of water from the main water point "Lipinga". A considerable number of cars frequent the main road daily. If containers are filled at the Lipinga and dropped further on at the main road, this will already be an advantage. At the time of the field study we practised this sort of water transport and the people were delighted. There is no way to enhance the project, when people feel "discouraged", it may be a small change of organisation or the improvement of a basic facility which enable the people to handle bigger tasks successfully. Moreover, the project will be perceived and accepted in a way that expectations of material donations are not too high.
5.2 Onaanda

Background of Onaanda community and its cattle post area

Onaanda is a grown community with a structured society pattern. While traditional authorities are still adhered to and play an important role, a young educated elite, active in the business and farming sector, often besides formal positions like teaching, has developed and holds key positions in communal institutions like church, schools or as chairpersons of various projects and committees. No matter how much modern style as well as the introduction of new ideas such positions may require, decisive steps are usually made in close collaboration with the headmen. At the same time this group of people has a strong progressive vote within the community. However, due to the fact that both sides keep traditional communication channels and deal with each other in a respectful manner, conflicts are avoided and the society as a whole seems to be stable, constructive and well organised. The senior headman resides in Onaanda village as the main village in the centre of the community with one headmen in each village reporting to him.

The omahangu fields are large with enlarged ‘ekoves’. Some people sell their surplus of ‘omahangu’. In general the impression of a shift from transhumant subsistence agriculture to a more sedentary and commercialised production system appears.

This year for the first time the ploughing service which was formerly organised by extension staff is under the responsibility of the Councillor. 500 farmers have so far applied for the service and one tractor is available. The Councillor stays far away towards Okahao and has little direct contact with the community (also due to the fact that he is elected representative of other councillors to attend sessions at the National Council in Windhoek), nevertheless, it is positively recognised that he was present when NOLIDEP donated goats to seven identified poorer households in Onaanda. Another important event, under vivid discussion within the community, is the privatisation of the sale for omahangu seeds which can now only be acquired in distant Okahao and gives raise to complaints.

Onaanda community with its cattle post area covers a vast area, no boreholes are available since the ground water is saline. The majority of the villagers share taps provided by a pipeline for their home water supply. About 5 water supply stations of the pipeline lead into the cattle post area and cover water provision for a zone of about 30 km into the cattle post area, further supported by Uuvudhiya dam next to the settlement area that was set up by the government.

In general the Onaanda community does not declare any privileged rights to their cattle post area, other communities are welcome to graze, the cattle post area is pointed out to be communal and therefore cannot only serve Onaanda. There are only few complaints of theft and loss of cattle attributed to the presence of external communities. It is likely that the cattle post area is utilised more by external communities than by Onaanda itself. Attendants of the introductory meeting quite frankly admitted that their herds would graze elsewhere, although, not everybody could afford to do so. The reason of being extremely open to related communities may be found in the common practise that members of the Onaanda community are also dependant on their acceptance in the grazing areas of other communities. It is a different picture as for instance in the more isolated and younger community of Oshambelo, as one attendant put it “everybody must graze somewhere”. However, the
community is aware by which external communities their cattle post area is used, namely Ongandjela, Ondonga, Uukwambi, Oshakati.

**Seasonal livestock movement**

Three seasons of the year were identified.

1. Oshikufukwenye (June to December, dry season)
2. Othinge (January to March, rainy season)
3. Okufu (April to May)

Table 2: Seasonal feed sources

<table>
<thead>
<tr>
<th>season</th>
<th>cattle movement</th>
<th>Oshikwambi names</th>
<th>Scientific names</th>
<th>annuals/a perennial: p</th>
<th>palatability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oshikufukwenye</td>
<td>to the cattle post/stay at the cattle post</td>
<td>Oshinamume</td>
<td>Schmidta kalahariensis</td>
<td>(a)</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oshinkumbwe</td>
<td>?</td>
<td>(a)</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Omhinda ngolo</td>
<td>?</td>
<td>(p)</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Olutsheelo</td>
<td>?</td>
<td>(p)</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nabenu</td>
<td>?</td>
<td>(a)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongwena</td>
<td>?</td>
<td>(a)</td>
<td>-</td>
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<td></td>
<td></td>
<td>Olozi</td>
<td>?</td>
<td>(p)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>lwompugulu</td>
<td>?</td>
<td>(p)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Okashahiniidi</td>
<td>?</td>
<td>(p)</td>
<td>-</td>
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<tr>
<td></td>
<td></td>
<td>Onziku</td>
<td>?</td>
<td>(p)</td>
<td>+</td>
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<td></td>
<td></td>
<td>brushes:</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td>Echama</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Omusati litulu</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Terminalia prunoides</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mopane ssp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Othinge</td>
<td>towards the settlements</td>
<td>Omunamwiidhi</td>
<td>?</td>
<td>p</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oshinamume</td>
<td>Schmidta kalahariensis</td>
<td>a</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oshinkumbwe</td>
<td>?</td>
<td>a</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>omahangu and sorghum straw as supplement for ploughing</td>
<td>-harvest stover</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(+) most palatable,  (+-) medium palatable,  (-) less palatable

Again these seasons are rather related to climatic conditions and the thereupon dependant agricultural and household activities than to cattle movements only. Oshikufukwenye is the long dry season from June to December - the study time was at the end of this dry season - and most of the cattle had been moved to the cattle posts and stayed there until the first rainfalls would start in Othinge, the rainy season. Depending on the grazing conditions in the settlement area most of the cattle (depending on the herd size) is taken back and would stay in the villages until Okufu,
the time of harvest in order to feed on the stover. If the grazing conditions do not allow all cattle to stay there, they are driven earlier to the cattle post area and only lactating cows and young cattle in need of special care would return for the harvest time. The drive to the cattle posts is usually done in shifts, the grazing areas next to the settlements are utilised first because of the better watering conditions there. Those areas may therefore be under the highest grazing pressure. The pipeline was mentioned as main water resource, but also hand-dug wells in areas distant from the pipeline and still close to the settlements. The depletion of these water points and/or an increasing saline condition of the water determines the shift to distant cattle posts. Once arrived at the cattle post no more movement was stated within a specific season. Only large herd owners who hold several cattle posts (3 and more) move their cattle within these posts, while one post never stays with no cattle at all. However, after several years a new cattle post can be erected in other parts of the area. The decision for a change is determined by individual management skills and better grazing or water conditions. In one case the herder felt his cattle was in need for more shade to rest and moved from the plain into the forest. He accepted worse water conditions - he had no more access to the pipeline and digged out his own well - while avoiding stress for his herd.

There are reportedly deviations of all kinds from this general pattern of seasonal herd movement dependant on the individual decision of the herd owner and his/her social and wealth circumstances. For instance, if the herd is small and grazing conditions are favourable cattle may stay all year round in the vicinity of the homestead. In another case the herd would not return to the owners field at harvest time and would stay at the place of relatives located closer to the cattle post area. Herd owners with cattle posts outside Onaanda for instance in Ongandjela may leave older cattle which they consider too weak to walk long distances all year round at their cattle post and only lactating cows and younger cattle return. The same applies to big herd owners with cattle posts in the Onaanda grazing area, they will only take back some cattle for the provision of milk and manure. Small-stock is treated in a similar way. If the herd becomes too big, only few goats will stay at home all year round.

**Management of grazing resources and livestock**

Grazing resources are utilised communally but not managed in a communal way, i.e. in a sense that a control body elected or empowered by tradition would regulate access to defined areas. It is rather the management skill of the individual, his social status, family and friendship relations which determine decisions of all kinds in animal husbandry. It was emphasised that virtually anybody can establish a cattle post and bring his cattle. A precondition to do so, is however, to assure your own water resource, since water is the most limiting factor. ("you have to have your own hand-dug well") However, for an interim period a friend can help with his water resource. This surprisingly open attitude towards newcomers may have its origin in the good working and friendship relations which develop between herdsmen, which was obvious especially in Onaanda. Good contact with fellow herdowners brings all the benefit people depend on in an isolated remote area away from their families, namely transfer of messages and know-how, transport, neighbouring help in cases of animal diseases. In the herder’s situation, help is at hand for the search of lost animals (the message just has to be spread and everybody looks out, - "when it is possible for him you can even expect that your friend drives your cattle back home" - in a case where a smaller herd walked away all the way from home to their usual water point in the cattle post area), as well as lasting reliable friendship relations.
People are aware of different qualities of grass species, their changing nutrition value in the course of the vegetation and of the inhomogeneous grass patches of different species compositions. Main fodder grasses for Uukwambi grazing area are:
- Oshinamumue (a) = Schmidtea kalahariensis
- Oshinkumbwe (a)
- Ombinda ngolo (p) = Eragrostis ssp.
- Olutsheelo (p) = Aristida meridionalis
- Nahenu (a)
- Ongwena (p) = Cynodon dactylon

The first two are the most palatable ones, intake can be fresh or dry. The statement "annual species have to be utilised first in order to avoid loss by windbreak" indicates an applied management tool to increase productivity as an objective.

Bushes and trees cattle feed on:
- Eehama = Terminalia prunoides
- Omusati (Mopane)
- fitulu

From another area main fodder grasses are:
- Omunamwiidi (p)
- Oloooi lwompugulu (p)
- Okashaniiidhi (p)
- Onziku (p)

The first two species are considered the most palatable while Omunamwiidi is fresh with the first rain and apparently the first fodder source. Commercial inputs like mineral licks are provided by some farmers. Despite all this know-how there are reportedly no movements within the cattle post area for a specific season. Cattle movement is always related to a season and then the movement is towards the cattle post or back home. Apparently with the installation of his own water resource after consulting the neighbours or through introduction by a friend, the cattle post holder achieves a certain utilisation right for the circle (or half circle) in walking distance around his water point according to his herd size and respected by other herders, similar to the ideological right of resource use in the vicinity of one's homestead (which will be dealt with later on). He will then use and manage this land according to his know-how, experience and information influx. Only in times of drought herders state they would try to move to more favourable places. In the 1992 drought, cattle was moved up to Angola and to other distant places, however, weak cattle had to be left behind and not everybody could afford additional herders.

People state the grazing conditions at the time of the study (late dry season) still as favourable and obviously the cattle is in a good condition and grass is plentiful. Although, they state that in the 1992 drought the cattle post area was bare ground only, it could not be confirmed by the elder that the vegetation had significantly changed over the last 20 years “it [grass] comes and goes with the rainfalls”. This experience may also contribute to the common practise to get as many animals as possible through a drought, since even after severe drought the grass may recover.

All decision making power in the field of animal husbandry is traditionally on the mens’ side, and usually - it was emphasised - a women cannot hold a cattle post. However, at least two women in Onaanda claim to be cattle post holders. One took over the cattle post from a relative for the reason to be independent from family support together with her son, however, the decision maker today is her son. In this specific case the herd is
small and held in the traditional way together with the cattle of other relatives as a ‘saving deposit’. No take-off of cattle over the last years was reported, nor could a possible take-off have been used as a management tool. However, this woman farmer would be prepared to take off cattle, if the herd was bigger in order to have some cash income.

On the contrary young cattle owners and businessmen are ready to take-off cattle at the peak of maturity (understood at the stage where the best price can be achieved) and further to use take-off as a management tool to regulate grazing “the old system does not make sense any more [for a commercial approach]”. They are aware that they highly depend on the pipeline and look for alternatives in order to prevent a disaster in case the pipeline stops. They are even ready to adjust their breeding goals to the requirements of MEATCO, being aware at the same time that their local breed ‘Sanga nguni’ is highly adapted to local conditions and would not easily give that up. They further plead for enhanced negotiations and contact to MEATCO.

Still for the majority of herdsmen improved pasture management can only be achieved by fencing. However, a few commercially oriented farmers foresee the control of grazing together with better management through the introduction of a community specific brand mark attached to each cattle (which would make use of the already existing control between neighbours) and an elected control body for the enforcement of this regulation. Those farmers also attribute the prevailing attitude - that cattle must be equally distributed all over the utilised area and that enough rest to the pasture is given through seasonal movements - to the absence of information and lack of external influence.

**Management of water resources**

As mentioned earlier there are no boreholes in Onaanda cattle post area because of the salinity of the water and grazing concentrates along the pipeline. A water committee is in place to survey the maintenance of the pipeline. For each water point of the pipeline an individual is appointed to address requests for maintenance to the respective department of the Ministry. The water from the pipeline is free of charge. The pipeline is regarded as common property and there is no restriction of access from the side of the responsible people. Even the headman will not interfere in any conflict concerning the water points at the pipeline, if approached, he will delegate those issues to the ‘Water Committee’. The Water Committee is responsible for the pipeline only but has apparently also influence on the situation of Uuvadhiya dam. This dam was earlier excavated by the government free of charge - subsequently fencing material disappeared and the water was polluted. Today, although the dam is highly frequented it is in a good working condition.

In the area along the pipeline and the Uuvudhiya dam the hand-dug wells are neglected or completely given up. While further on in the cattle post area herdsmen depend on hand-dug wells only, and the digging out of one’s “private” well is also a precondition to erect a cattle post. The following different kinds of wells are used:

- **Ondungu** well can be very deep and covered at the top, a rope or a bucket is used to collect the water, and/or a winch to lift the container
- **Omuthima** a shallow well with some steps leading downwards, sometimes fenced
- **Oshiheke** shallow well in the very sandy areas
Relatives or friends can share the well in the same way as herds are put together from one family or friend circle at one cattle post. Hand dug wells at the cattle post area are maintained by the temporary user or by the one who dug them out. Ropes are not always available and usually water is collected by means of a container and climbing up and down the steps in the wall - a very tiresome method to water larger herds for instance. If enough labour is available, for instance whole families, they will form a chain for the exploitation of water. Bigger herd owners bring their private pumps along. The unfavourable circumstances of water exploitation and quality may drive Onanda herders to distant grazing areas all over the region.

A dam is excavated by NOLIDEP in Omudali about 90 km away from the village Onanda. Although, people are quite open to grant access to their grazing area, they anticipate that the dam will attract lots of animals with all the negative effects like overgrazing and fast depletion of water and pasture. In order to mitigate the attraction of this new resource they ask for more dams. There is a clear conception within the NOLIDEP committee on how to control and restrict access to this new resource. Only those who have paid for the dam will be allowed access. The control will be enforced by the NOLIDEP committee. External users of the water are supposed to apply for access to the dam at the committee in Onanda, it will then be decided whether the applicant will be permitted to have access and a fee will be discussed. At the present time local businessmen have raised in advance the community share for the dam to be paid to NOLIDEP. However, the transfer of the money to NOLIDEP is postponed until a crucial issue will have been negotiated. After 6 times visiting the potential sites (community delegation and NOLIDEP) the dam was de facto excavated in the wrong place. The people state, that although, they were in charge of surveying the construction site they were not in the position to stop the excavation process since they had not submitted the order. The order was placed by NOLIDEP. Excavation of a new dam is therefore under negotiation.

**Fodder production and closely managed fodder supplies**

The community is informed on the fodder production test conducted in the area. At the present stage they have little comments, since the trials had been set up only recently and they had not been informed about any results. Fodder trees in the homesteads are doing well and are promising for further fodder production. For the individual it should be possible to cultivate fodder within their field or ‘ekove’. However, they can also imagine to launch communal fodder production by establishing further ‘ekoves’ (fenced) in the cattle post area. Apart from the common practise to feed animals on the harvest stover and to store some omahangu straw on top of the roof as supplementary feed for oxen, at the time of ploughing the field, there is little knowledge of fodder production. Few farmers, who had worked earlier in the commercial farming sector mention Lucerne production as they had experienced at the “white farms”. They require further information.

A shortage of labour for such fodder production could not be confirmed, probably due to the fact that the settlement area is provided with water by the pipeline and tap system and not much labour has to be attributed to carrying water. The term ‘closely managed fodder supplies’ is at the present stage perceived as management of pasture grounds by means of fences, i.e. “like to have camps and to open and close them”. Again it is pointed out that pasture is not the problem, since especially this year there is plenty of grass. The problem is water. The people recall vast untouched areas with plenty of grass in good quality which cannot be utilised because of lack of water.
Boundaries and settlement restrictions
According to the people there is a strict boundary between the settlement area and the cattle post area, although, it was confirmed that no visible boundary would exist. The boundary was indicated along Omapopo Village, Uuvudhiya village and Onkani area (a name for a specific area within the community - as often quoted for grazing areas - can cover again several villages). In reality the boundary, where beyond no further settlement would be permitted by the headmen, is a boundary zone - a belt of about 20 km width - between the settlement and the grazing area, where homesteads change with cattle posts. Boundaries to neighbouring communities and their grazing grounds are known and accepted, the neighbouring community to the east is Ndonga, to the west Ongandjera, the boundary of the south is given by the Etosha fence.

Headmen, residing in neighbouring villages or in the transition zone of settlement and cattle post area and consulted on the issue of settling in the cattle post area state that strictly no further permission would be given behind the current zone and thereby admit already a shifting of the original boundary. One headman even claimed that he would control access to the cattle post area for external communities by asking for a certificate from their local headmen and by counting the cattle. His statement turned out to be wishful thinking and an overestimation of his status and influence. On the contrary community members of Onaanda describe the common practise of settling as follows: the fee to be paid to the respective headman amounts from 350.-N$ to 500.-N$ according to the arable value of the land and is valid for the settlement and grazing area. Hardly any limitation is given to the extension of your plot. The extent of enlargement depends on the tolerance level of your neighbour, which is also the reason for largely fenced plots in low populated areas like the transition zone of Onaanda/cattle post area and the broad acceptance of those. Since no fee has to paid for the erection of a cattle post it may happen that cattle posts close to or within the settlements are turned into homesteads the following year when the cattle herd returns. Evidence for this procedure was given by a few poles erected in the course of the pipeline as supposed marks for such planned settlements. Reasons for the biased attitude of the headmen in this context will be taken up further on.

Private grazing reserves and current land tenure rights
People deny any fencing of pasture ground in their cattle-post area and insist on the statement: "there is no private grazing". This statement must be contributed to the fact that the few remarkable largely fenced areas in the transmission zone of the cattle post area are not considered as private grazing reserves as long as a house is within the fence or in the process of being erected. Since the area is still very low populated there is also little social control from the neighbours and hardly anybody feels disturbed by the extension of those fenced enlargements, which are still termed 'ekove'. Another reason for the alleged non-existence of private grazing reserves is that they are termed differently, namely 'eekamba'.

Traditionally it had never been difficult to establish a further 'omahangu field' for instance in the grazing area - fresh soil was considered favourable for cultivation and from the side of the traditional authorities the removal of bush in the field and the traditional fencing with thorn bushes was appreciated and considered as improvement for the area. Limiting factor at that times was the labour availability and lack of transport to those remote areas. Today similar rules for the permission to fence are applied. However, there is a difference between the traditional thorn bush fence and the modern wire fence. People who want to fence with wire are expected to occupy
larger areas and must announce this intention. The headman in charge will then indicate the size of the area again, but even though, there is still a further tolerance level for extension.

Most of the homesteads in Onaanda villages and in the transition zone of the cattle post area have at least one or two brick-built houses which prevent the shifting of the homestead within the omahangu field according to the tradition and because of their monetary value may also interfere with the traditional inheritance pattern that a widow has to leave the place of her late husband unless she pays the fee anew. Owners of such permanent buildings state that they were backed up by a new law passed recently according to which they could pass their “property” to their wives and children. Although, they can pass the immovable assets, they cannot pass the ground. However, with the moveables, they also pass the right to occupy the given piece of land, which is treated almost like a “title” to the land by the traditional authorities, in a way that the fee the widow still has to pay is for the land only (the amount of which has even decreased lately) and must not include the value of the buildings.

Conflicts about grazing/water resources
Little conflicts were reported from the cattle post area due to the common practise of achieving access to a respective grazing area by digging out a well after prior consultation of the neighbours. If there was a conflict, a headman related to the area would be consulted. If the conflict dealt with water, the issue would be transferred to the local committee. The impression appears that minor conflicts are settled amongst the herders themselves and that no different regulation is applied to herders from Onaanda or to external communities. Some of the herders from other communities have established roots in the area, i.e. they have been there for 20 years or took the family there and built a house.

One example, however, shows the limits of tolerance. A major conflict arose over a private grazing enclosure established in a distant grazing area towards the salt pan. The enclosure covered reportedly thousands of ha and could not be regarded any more as settlement with enlarged ‘ekove’. The case is currently dealt with at the High Court in Windhoek through the initiative of the community, although, people are not confident to win the case and refer to the lacking legal framework. Apparently the incident and a strategy to solve the matter was only discussed within the headmen circle and leading personalities of the community. Other community members have “heard of it” or not and were not involved, but support the approach of their leaders, when questioned in this matter.

Institutional linkages and customary rights and usage
Customary rights and their usage in the context of grazing, water, settling, inheritance, land tenure and conflict situations were referred to in the specific chapters. Further it is tried to confirm through several examples that the headman is still the first institution to address problems and to accept judgements. Especially in Onaanda there seem to be no conflicts of the objectives between the traditional authorities and government authorities (the councillor). On the contrary it was pointed out that traditional authorities could represent the councillor in various administrative tasks and see themselves as a complementary institution with strong links and personal relations on the village level. The villagers on the other hand do not foresee any other institution capable “to fill the gap” and to replace the headman. At the same time no activity or decision of community concern could be reported from Onaanda where the headman
was not involved. In the set-up of NOLIDEP the following examples may enlighten the above mentioned situation:

- the Senior Headman was approached and consulted before the launch of the project and participated from the beginning
- some NOLIDEP committee members as representatives of each village were selected and appointed by the Village Headman, some by the community
- the beneficiaries of the goats donation by NOLIDEP were partly selected by the village headman, at least, the headmen had a strong vote in the selection
- the Senior Headman addressed the community's disagreement with the wrong location of the dam

All these points speak for themselves, however the donation of goats needs special attention. Beneficiaries of the goats point out that only few neighbours would congratulate and encourage them, others were “jealous and would turn away”. In one case the beneficiary was a widow with four children of her own and nine adopted children. She is apparently considered poor despite the fact that she owns some cattle but her social commitment by raising nine adopted children beside her own children is respected and appreciated to such an extent that her good reputation helps her to achieve special attention within the society; expressed by services like the ploughing of her field, herding of her cattle and other contributions to her livelihood. The donation of 10 goats was however such an event (in another case the son of a beneficiary came home from the urban areas, where he is employed, to celebrate) that her image may have changed. Her further acceptance in her environment must be contributed to the fact that she was chosen by the Village Headman, which made it easier for non-beneficiaries to "digest" the decision.

A headman can be elected or is appointed. In the case of appointment the position is passed to the son of a brother or a sister (never to the own son). If the appointed headman is still considered to young for the position and/or follows a professional carrier (i.e. is engaged with other commitments and cannot dedicate all his time to this position) his father will be acting headman until the time of the election. The election is then a kind of an inauguration process, since the headman is at that time already introduced, respected and should have created confidence.

Since a headman is supposed to be fully committed to the requirements of his village or community, there is not much time to make provision for his or his family needs. The only source of monetary income is the allocation of land. To some extent this may explain the biased attitude in the land allocation process and furthermore in a reluctant participation in new projects to be set up, where his support is often taken for granted while his personal benefit is denied. The institution of the headman must at the present stage be seen in the context of an increasing loss of authority and respect. At the same time he is confronted with a higher working pressure and a lack of capacity where his support is demanded.

A further strong institutional linkage is given by extension staff, since they work at the grass root level, where they are approached with all technical issues of agricultural production and confronted with high expectations towards services by the government and the demand for explanations of superior decisions like the privatisation of the sale of omahangu seed. In the same way as for the headman the participation of extension staff in projects must be seen as additional workload and should not be taken for granted.
5.2.1 Implications of the likely impact of NOLIDEP

The impact of the dam, excavated by NOLIDEP will follow the pattern experienced with dams already in place; people will neglect their hand dug wells in the area. There will be a higher attraction of animals to the dam’s site, despite the fact that the people in Onaanda plan a strict control of access. The planned control of access to the dam may have a chance, because the people had to raise the money for the dam partially by themselves. In the case of Uuvudhiya dam - installed and paid for by the government - no control of access could have been achieved so far. Nevertheless, dam and water are in a good condition due to an active water committee. The new dam may not cause significant difference in grazing management nor in the change of seasonal movements, due to the vast area which is at disposal for Onaanda. To check, whether the new dam creates access to an underutilised grazing area, was beyond the scope of this study and should be checked by the project.

Donations and interference at the micro-economical level will disturb the social network. Nevertheless, those donations have so far little impact in Onaanda due to the advanced performance of farmers, traditional authorities and businessmen. Their attitude contributes to the fact that NOLIDEP is well accepted and that the expectations in receiving material support from the project are not too high. The statement "NOLIDEP wants to improve the region, the goal is not yet achieved"; shows that the project is rather perceived as facilitating service than as a donor. The level at which the discussion and negotiation on the subject of the dam is conducted, indicates already strengthened capacity.

5.2.2 Recommendations

NOLIDEP should make use of the high potential in this community, in terms of commercialisation and a sedentary productions system through the utilisation of 'ekoves' for fodder production. Consequently fodder trials must be participatory and hosted by the farmers.

The theory of controlled access to the grazing area through community own brandmarks evolved in Onaanda, and NOLIDEP should assist the people in strengthening their approach for solution. People require to lead negotiations with MEATCO by themselves and should be encouraged to do so. Since they are prepared to adjust breeding goals to the requirements of MEATCO, access to external information on this issue should be provided.

Since the request for proper basic veterinary service is crucial in Onaanda, and farmers are even ready to pay for such service NOLIDEP should give this matter priority. It could be a possibility to raise income for poorer people of the community, if they were trained and integrated in the service.
5.3 Omatunda

Background of Omatunda
Omatunda is a small Kwanjama community and densely populated. Oshanas run through the area, which are considered as the last grazing reserves. The community has no direct access to a related cattle post area. Through a strong headman relation, the community seems to be well organised and efficient in their joint activities, i.e. excavating the dam and cultivation of a mutual omahangu and maize field. The Headman himself seems to act rather souvereignly, however, he has to report to a Senior Headman. Meetings organised through the Headman and his son (who is the Chairman of the NOLIDEP committee) are usually well attended by 100 to 150 people. People seem to know how to address their problems to the Extension Service of the government and to various NGO’s active in the area, nevertheless, they emphasise that the channel through the headman has to be applied, also the other way round: in case a project is launched, the first to be approached is the headman.

Due to the dense population the settlement picture is different from the other NOLIDEP pilot communities. Homesteads are closer to each other, some 'omahangu' fields are even shared and cultivated in collaboration with neighbours, which may not necessarily be relatives. Some cultivated areas around the homesteads are not fenced, neither with the traditional bush fence nor with modern wire fencing, while few other largely fenced 'ekoves' are occupied by one family only and fenced with wire and purchased poles and droppers. Apart from the fact that an increasing number of the round houses are built with clay bricks, very few homesteads have brick built permanent buildings or tin houses. In case of the better equipped and larger homesteads, the owner is usually employed with the government, clinic or school or has at least one absentee family member employed in the urban areas for support.

It was confirmed by extension staff that the community is highly motivated and in general hard working and diligent, they may raise extra income through making baskets and other home-made products like Oombe schnapps, oil of Marula kernels (= Oongongo), oil of pumpkin kernels (= Omagadhi gootanga) etc. In fact the community disposes over a large variety of exploitable trees. Reportedly a considerable part of the farming population never produces enough 'omahangu' to satisfy their domestic requirements. In good harvest years their main objective is consequently domestic food security rather than to sell the surpluses. Under very poor circumstances maize meal will be bought additionally for home consumption and is then paid from the pension of the elder.

This year the ploughing service is supposed to be organised by the councillor, however, in the Omatunda case still mainly organised by headman and extension staff, which also emphasises the common attitude that only little support is expected from the side of the councillor. The list of applicants for the service is not very long (12 to 15) for Omatunda village and the service is therefore sufficient. The reason for the small number of applications is the price of N$ 40,-- per hour, which is generally considered as too high and not affordable.

A further event of major concern for the community if the privatisation of the distribution of omahangu seeds, now only obtainable in distant Ohangwena at Punyu for N$ 7,95 per two kg. The purchase is not organised and everybody has to make arrangements for himself.
Seasonal livestock movement
A seasonal calendar could not be drawn because any seasonal movement of livestock was denied. Seasons relating to climatic conditions and the subsequent household and agricultural activities were stated as follows:

1. Okwenye - August to October, dry season
2. Oshitemamuula - November to January, start of the rainy season
3. Okulombo - February to April, rainy season
4. Okufu - May to July, cold season

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<tr>
<th>season</th>
<th>cattle location</th>
<th>Oshikwanyama names</th>
<th>Scientific names</th>
<th>annual: a perennial: p</th>
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<tr>
<td>Okwenye</td>
<td>at the settlements</td>
<td>Omukashulva</td>
<td><em>Panicum trichonode</em> emergency feed: Marula tree branches, <em>Hyphaene ventricosa</em> (Fanpalm)</td>
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<td>- very few bigger herds stay at distant grazing areas far away from Omatunda</td>
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<td>Oshitema-muula</td>
<td>at the settlements</td>
<td>Ombindangolo supplemented with omahangu and sorghum straw</td>
<td><em>Eragrostis lehmanniana</em></td>
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<tr>
<td>Okulombo</td>
<td>at the settlements</td>
<td>Ombindangolo</td>
<td><em>Eragrostis lehmanniana</em> Aristida <em>meridionalis</em> Schmiditia <em>kalahariensis</em></td>
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<td>Okufu</td>
<td>at the settlements</td>
<td>Bush &amp; shrubs: Omufyati</td>
<td>- harvest residues Colophospermum mopane Berchemia discolor Loncho corpus Terminalia sericea Tapinanthus olaefolius Sclerocarya birrea Baphia massaensis</td>
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(+): most palatable, (+ -): medium palatable, (-): less palatable

Very few people move their animals to better grazing areas out of Omatunda. These people usually have a bigger herd and relatives to take care of the animals there. It was not specified where they could bring their cattle. Only one farmer from Omatunda
(he is no member of the NOLIDEP committee) admitted that his herd would be moved to Angola. The animals are moved to Angola for the dry season (Okwenye). According to this farmer, in Angola the pasture is plentiful - different species - because of very few settlements and water is available. He may, however, face problems with local herders there. They would not show the same hospitality as rendered on the Namibian side of the border. Another farmer from a neighbouring community stated that his herd would stay all year round at a cattle post in Mangetti area because of lack of pasture at home. Again another farmer stated he would split his herd and send some cattle away in Okwenye - he mentioned a distant area east of Uukuuenyumo deep in the forest - depending on the grazing situation in Omatunda. If cattle is moved seasonally, then the decision will be made when the pasture in Omatunda is depleted or in anticipation thereof.

The majority of farmers in Omantunda keep their cattle all year round in the vicinity of their homesteads. Thus, constant grazing was indicated all over the area which also complies with the NOLIDEP resource map. However, herd sizes were quoted as small (5 to 15 cattle) since a lot of cattle had died of diseases (lung sickness, black quarter). Animal numbers are obviously decreasing. A last grazing reserve are Oshanas (see sketch map appendix III) and some forest patches. It is generally accepted that people from other communities bring their animals, as long as they have a house in the community of Omantunda. ‘House’ in this context can also be substituted by family links or by the procedure of ‘gifting and loaning’ (see respective chapter). Under these circumstances the community will not be aware that cattle being grazed in the area do not belong to the respective community member. Throughpassing herds are also accepted and enjoy hospitality. During a severe draught, for example in 1992, it is admitted that strong cattle could be moved to Angola, as far as Eenhana or to Mangetti. For those who have relatives in these areas the throughpassing or the stay in other communities is no problem. It is pointed out, that this is the practise of only few farmers in the community, probably the ones who can afford to employ herders. In Angola the risk to loose cattle through theft and unforeseen events is higher and additional labour for herding is necessary. In addition, the tribal law of the home area is not applicable. There is no transport and the journey to distant areas is undertaken by walking. It seems that people are reluctant to send their cattle on a long distant trail in drought situations because of the risk of loosing weak animals, which could be easier fed with supplementary feed at home (see chapter fodder production and supplementary feed). According to extension staff it is unlikely that all cattle of Omantunda is grazed within the community, people might expect support from NOLIDEP and therefore would not state their distant grazing reserves. This is definitely true for the few exceptional farmers who still own bigger herds and strongly depends on their family and friendship links in other areas and last not least on their cash income situation.

**Management of grazing resources and livestock**

Resources are not managed in the sense that reserves are kept. However, the grazing of Omukashulwa (= grass needed for thatching) can be restricted and is reserved for the season of repairing the roofs (Oshitemamuula), since it is an important building material. The headman will enforce the restriction, supported by his fellow citizens. The resources in the vicinity of ones homestead are exclusively utilised by the residents, but not managed in a preserving way.
The following main grass species were stated:
- Eughumbure (p)
- Wanenuna (a)
- Olushelo (a)
- Ombindangolo (p) = Eragrostis lehmanniania (good for donkeys)
- Eshoke (a) = Aristida meridionalis
- Eyangwa (p/a) = Scilla hoefpneri
- Omukashulwa (p) = Panicum trichonode
- Ongwena (p) = Cynodon dactylon
- Oshinanume (a) = Schmidtia kalahariensis

Bushes and shrubs for browsing or to utilise pods:
Omufyati = Colophospermum mopane
Omuve = Berchemia 0
Omupanda = Loncho carpus
Omulunga = Hyphaene ventricosa (Fanpalm)
Omwolo = Terminalia sericea
Oshilunda = Tapinanthus olatefolius
Omwoongo = Sclerocarya birrea
Offue = Baphia massaensis

It could not be clarified up to what extent grasses and bushes are utilised, or which species are preferably grazed or browsed in an early stage. Except Ombindangolo was mentioned to come up with the first rain and is therefore utilised at an early stage. Due to the prevailing high grazing pressure in Omatunda it must be assumed that all forage is grazed in a rather unselective way without control up to the depletion of the resource in a given vegetation period.

In emergency situations like droughts, branches of the Marula trees are fed, as well as leaves of the palm tree (Iyale) and the thatching grass - Omukashulwa. Animals used for draught power are supplemented at that time with omahangu and sorghum straw stored in the shade of trees or on roof tops. Some farmers use mineral licks provided free of charge by Extension Staff. Animals are herded for the time of the growing season (Okulombo) to keep them away from crops, however, “there is nobody who tells the people where to go for grazing, people have to look after themselves”. The general complaint is that it has become increasingly difficult to go somewhere for grazing (within Omatunda), settlements are everywhere even the Oshananas are occupied with ‘ekoves’ “if you do not have your own ‘ekove’, you are poor because you cannot reserve fodder for your animals”.

Livestock and crop production interferes. The people state that the forest is also diminishing. In the last grazing reserves - the oshananas - trials of rice cultivation are conducted. The people are afraid that the success of these trials may lead to further grazing limitations.

The process of commercialisation is at a very low level. The majority of farmers claim to own far too small numbers of stock as to be in a position of taking off animals, let alone as to assume take-off as a tool to regulate grazing. Even farmers who appear to have bigger herds, and who use grazing areas outside Omatunda are not ready to take off animals for cash income. Since the potential of commercialisation is perceived as very limited because of the scarce pasture ground, there is little motivation or intention
to adapt a commercial approach. Management of pasture ground including forage production can consequently only be considered as means to survive or to keep the current status but not as means to expand as will be highlighted further on in the respective chapter. Apart from drought people attribute a great loss of livestock above all goats - to diseases and therefore require improved veterinary service.

Management of water resources
The community state that they have no boreholes at their disposal. Most of the wells - located as indicated in the NOLIDEP resource map - were dug by the people themselves in cooperation with FINNIDA or CCN. When those wells (Ondungu) were drilled the community had to contribute about N$ 20,- per household and on average 20 households participated. Other water resources are termed ‘Omuthima’, a shallow well, which dries out and has usually one step to go down to reach the water surface, and is not equipped with a pump, and ‘endombe’, shallow water basins which have only water during the rainy season. In general the people do not pay for water, since they contributed already at the building time of the resource. Also people who did not contribute at the beginning but use the water now, have free access to the well, a control is not feasible since it is common sense that “everybody needs water”. Although, there is no restriction for the utilisation there is usually one person responsible for each well to address service and maintenance requirements (which is little since in most cases hand pumps are used or a bucket and a rope). At least one exception confirms this common practise. One farmer claimed to be the owner of a well (it was not clear whether it was a well or a borehole and therefore perhaps more expensive) set up by FINNIDA and stated that he charged people for the water. He did not specify how much (it probably differs according to friendship and relation links). He justified his charges for water with the statement that he still had to transfer money to FINNIDA for the drilling and maintenance (which is not true, but the people seemed to believe and accept this). In fact, for the maintenance and repair of the borehole the farmer addresses directly to FINNIDA. Some people who do not have a well in their neighbourhood have to walk up to about 7 km to obtain water for their home consumption and to water their animals.

In general the community admits overgrazing around water points. It is common opinion that with an increasing number of water points the overgrazing will decrease. Therefore they still ask for more water points. The people believe that more water points nearby their homesteads will prevent the animals to get lost in the search of water and pasture.

The same opinion applies to the dams currently under construction and initiated by NOLIDEP. The people expect the animals to be attracted by the dams. In order to control access and drowning of animals a fence around the dam is proposed. They require further dams in order to obtain a more equal distribution of the animals. It is also expected that the animals will be stronger and not weakened any more by walking long distances to the water points. It is planned that only those community members who have contributed money (in the case of the dam excavated by contractors) should be allowed free access to the water, however, it is doubtful, considering the handling of other water resources, that this intention can be realised.

One of the dams currently under construction is excavated by the people through a ‘food for work’ programme. The community has been busy with the work since
August this year. Considerable progress has been achieved. The owner of a nearby homestead takes responsibility for the equipment. He indicates that he may use the excavated soil for his field as fertiliser and to improve soil structure. Further benefit from this dam is also the provision of water to a nearby school (= Omukuve Primary School).

**Fodder production and closely managed natural fodder supplies**

The community appreciates the fodder production tests conducted in the area and consider them as very useful. Fodder trees (*Leucaena ssp.*, *Prosoppi ssp.*) provided by NOLIDEP and already established in the homesteads are doing well. Farmers from Omukuve (= neighbour community) also show their interest for the trees and require an approach by the project to their headman. The cow-pea trials conducted through on-farm research in three farmers' fields were unsuccessful. In general they would appreciate an ongoing research and development of fodder production but require more information and participation, and mention in this context the trials in the NOLIDEP enclosures, where they feel left out. The farmers would like to host those trials in their fields and ask NOLIDEP to provide seeds, further training and demonstrations. They further mention that they might have a problem of labour capacity, once they are as far as to cultivate their own fodder, but are willing to do their best. In general it is pointed out that the fodder production should be under the responsibility of the individual farmer in his field and not organised on community basis. However, from the headmen circle and community members close to the headman communal production of fodder is given a good chance. In this context those people refer to the successful cultivation of 'omahangu' and maize under communal organisation, the constraints there were only of technical nature (lacking fence) but the motivation and engagement of the people was high.

High interest in fodder cultivation and respective trials are also shown by neighbouring communities. NOLIDEP is required to expand and to approach the respective headmen.

Fodder production is seen as helpful means to get animals through drought situations - to help them survive, i.e. as a kind of crisis management and prevention, however, it is not considered as appropriate for instance to increase livestock production on the basis of fodder production. This is at the present stage not the major concern and not intended.

Except for the supplementary feed in drought situations as described earlier there is not much experience and know-how of fodder production. Some people mentioned that more Acacia trees would be useful in order to feed the pods. The understanding of closely managed fodder supplies is in general the most equal distribution of all livestock in the area and emphasised by the request for more water points in order to realise this measure.

Rotational grazing is not practised at all but considered as a good idea, with the assumption that resting pasture must be fenced, in order to keep the animals away. A further perception of resting pasture is the season wise exclusion of pasture, i.e. to reserve pasture for dry season grazing. In general people, however, feel that this is not practicable in Omatunda because of lacking space and settlements spread all over.
**Boundaries and settlement restrictions**

Within Omatunda area there are no boundaries to preserve grazing areas and to restrict settlement. The community has no cattle post area at their disposal. The vicinity around an individual homestead is considered as the owners privileged grazing area, for his exclusive utilisation only. Although, these areas are not fenced, an ideological boundary is accepted and other members of the community will not bring their animals to browse. These ideological boundaries may differ with the proprietors reputation and importance in the community and the number of cattle he/she owns, which is again a criteria for his status. Since settlement is not restricted, a considerable number of refugees from Angola have established homesteads over the last 15 years. Today they are accepted members of the community. Consequently the increased demand for settlements competes with the demands of livestock.

**Private grazing reserves and current land tenure rights**

Largely fenced areas around the homestead, even if they are fenced by wire and purchased poles, are not seen by the community as private grazing reserves, although the occupants use these ‘ekoves’ as fodder reserves for their animals. The same rule applies as to the other NOLIDEP pilot communities, as long as a house is built, the ‘ekove’ is part of the traditional farm and can even be split into camps. With increasing settlement pressure in Omatunda, however, lately allocated plots for settlement have only small ‘ekoves’ or no ‘ekove’ at all and further - as a special feature for Omatunda - even share their omahangu fields. As the headman puts it “the ones who came first have the largest ‘ekoves’”.

It could not be clarified whether for one recently fenced area, which is exceptionally large but includes a house, an extra payment had to be made. Fellow villagers do not mention this enclosure nor do they have any complaints in this specific case. The complaints are more of a general nature and solution proposals focus on the firm role of the headman, who is supposed to control and restrict the remaining land for pasture.

**Institutional linkages and customary rights and usage**

The extraordinary well attended meetings in Omatunda and the progress of the dam excavated by the people must be attributed to a strong performance of the headman, or to his son, the Chairman of the NOLIDEP committee and appointed future headman. In Omatunda the son of the headman is the successor. The practise of appointing one’s own son deviates from the traditional procedure, where only the son of the brother or sister can be appointed, and may be different for the Kwanyama speaking people. In the case of Omatunda the son is now exercising his future leadership role and considers achievements of the community, i.e. progress of the dam, well attended meetings, communal omahangu and maize production - where benefits will strictly go to the hardest workers - as personal and as a confirmation of his leadership qualities. The so called achievements of the community have been obtained by a leadership of a strongly disciplined nature, ranging from social pressure to intimidation and authoritarian organisation. The NOLIDEP committee, for instance, according to the Chairman consist of people who are active in the community and who have already achieved something for the community (in other words achieved something to strengthen his position and are then rewarded with responsible tasks like the organisation of the works at the dam). “people come to the meetings, because I tell them if you do not come you will loose a lot, your neighbour cannot tell you ....”
The leadership of the chairman may not lack social justice. All beneficiaries for goats and poultry lived in a modest environment in the traditional sense. However, apart from the physical involvement of the community in promoting mutual activities and projects there may not be much space for the individual to develop self-confidence and to develop survival strategies for the improvement of his own situation.

Unfortunately the scope of the survey and the limited time did not allow to assess how the performance of the chairman is perceived by the villagers. The chairman was present at every interview and the time of the study was too short to make other arrangements. However, in general and at the present stage, it seems that people require a strong leader in order to control and to allocate the remaining resources in a fair way.

5.3.1 Implications for the likely impact of NOLIDEP

At the present stage NOLIDEP is expected to provide all sorts of services and gifts - if the people in return deliver a good working performance and obey the chairman of the committee. The chairman nourishes this attitude towards the project through his authoritarian leadership style. An incident at the year end party for the close-down of the works at the dam may enlighten the situation: the chairman was embarrassed because he was not able to provide a cow for the celebration as a reward for the hard work, instead he read a price list of the tools the people "were allowed" to use for the excavation. About 150 people attended the celebration. Little food and some cool drinks - far less for everybody to get one - were distributed and then the people were advised to sing songs to praise the project, which they reluctantly did.

The dams excavated through initiative of NOLIDEP may not change grazing patterns significantly. The people themselves feel that the new waterpoints will contribute to the notion of an even distribution of animals. Whether the dams will cause overgrazing depends on their location: either too close to the next waterpoint or too far away. To check on the right location of the dams was beyond the scope of this study. Apart from the planned restriction of access to these dams, the new waterpoints will not trigger discussion to regulate grazing community wide as long as the "most even distribution of all animals" is perceived as an effective management tool.

The NOLIDEP fodder trials - especially the fodder trees grown in the homesteads - have already caused vivid interest and motivation for the cultivation of fodder as well as the request for more information and demonstration. However, since the cultivation of fodder is so far only seen as means of survival for emergency situations, it may not lead to an increase of stock numbers and consequently cannot enhance a commercialisation process.

5.3.2 Recommendations for Omatunda

Since pasture is scarce in Omatunda and the number of animals seem to adjust to this situation NOLIDEP should focus on fodder cultivation, which was already introduced and is well accepted by the farmers. However, the fodder trials currently conducted in enclosures by NOLIDEP must become participatory. I should be considered that the leading community members prefer fodder trials to be conducted on communal land
(under their control - which may strengthen their power), while the individual farmer
prefers to host the trials in his 'ekove'. Since the production system is apparently
shifting to a sedentary subsistence level, the management of those 'ekoves' and their
potential should be subject to further research.

The leadership performance of the traditional authorities in Omatunda needs special
attention. On the one hand the strict organisation of the community appears to
contribute considerably to the progress of the project, on the other hand it should not
be overlooked that there is not much scope for the development of the individual and
of poorer members of the community which may not have any influence. Moreover,
the impact of NOLIDEP could be more effective if the people were in a position to
speak out frankly their needs and requirements which would lead to a better
understanding and acceptance of the project and eventually to greater sustainability of
project activities. The offer of leadership courses and capacity building at the low level
should be considered to grant poor community members a say.

Awareness on the use of community internal resources is a further point for NOLIDEP
to look at. The community is for instance not aware of any benefit of the rice trials
conducted in the oshanas in terms of fodder availability, they rather see them as a
further constraint to their limited pasture. Fresh rice straw is of course a valuable
fodder resource (MATANYAIRE 1998).

Information and the demonstration of pasture management practised elsewhere, for
instance in the commercial sector of Namibia, should provoke a critical assessment on
the effects of 'constant grazing' within the community and whether this practise is still
appropriate at the present time.
6. Practical steps to take for NOLIDEP

Since the three NOLIDEP pilot communities differ a great deal from one to another in terms of productivity, application of know-how, potential of commercialisation and in their dealing with traditional leadership - the first measure to be taken is:

- to adjust the approach of NOLIDEP to the production potential and commercialisation level of each community

The steps following below are to be taken to enhance the achievement of the overall objectives of the project, as are:

strengthening of
- community based resource management
- economic and social welfare
- livestock production and marketing

All proposed measures are to be taken in accordance with the specific findings of the study for each community to a larger or slighter extent as outlined before, namely to:

- strengthen communication with the community and consider the needs pointed out by themselves and their approach for solution
- allow solutions to be evolved by the people themselves rather than to impose them from outside
- work on a legal framework for land allocation
- strengthen the community requirements for the control of access to the cattle post area; provoke a discussion on the proposal of community specific brand marks
- capacity building; let people themselves lead negotiations with MEATCO
- increase self-help capacity of poorer people in the community, through training and involvement in basic services, i.e. basic veterinary service, organisation of ‘omahangu’ seed purchase etc.
- fodder trials must be participatory and hosted by community members
- training in grazing management through external influence and demonstrations (as a negotiation driven approach!)
- awareness on the effects of overlapping circles around water points as well as of constant gazing and equal distribution of the animals
- create attraction for the participation of headmen and extension through the offer of additional training and excursions etc.
- check whether the objectives of the traditional leaders comply with the objectives of the project and work on a harmonisation; assist traditional leaders in defining their new role
- do not interfere at the micro-economical level and rather focus on the improvement of framework conditions like: less time consuming provision of water, improved basic veterinary service as well as on the facilitation and improvement of services in place like the ploughing service and/or help the communities to organise themselves for instance for the acquisition of ‘omahangu’ seed
- work on the potential and the future development of ‘ekoves’ and their management
- research on the utilisation of ‘ekoves’ for fodder production

The scope of the study does not allow to work in detail on the implementation of every single point emphasised above, nevertheless, the orientation to the prime fields of
operation for the project should be clear. With improved framework conditions for their daily life, provided the traditional social network remains undisturbed, the communities should be able to evolve sustainable solutions for the future management of their land. Still several points mentioned above should be subject to further research, in order to make the distinction between the communities (as dealt with earlier in this study) and to achieve a tailor made approach. Priority should be given to the study of 'ekoves', because the extended meaning of the management of 'ekoves' seem to undermine communal range management and appears to have major impact on the future development of the range.
7. References


Rondin, R.J. 1985. The Ethnobotany of the Kwanyama Ovambos, Missouri Botanical Garden. (Source for translation of Oshivambo plant names)


Appendix I

Key informants
Discussion were held with the following key informants, in addition to individual and group interviews at the research sites.

King Taapopi, (Kwaluudhi tribal leader), Tsandi
Queen Taapopi (wife of the King)
Taapopi Taapopi (son of the King)
Leevi Katoma (Councillor), Tandi constituency
Monica Moses (AET), Tsandi
Lydia Sakeus (AET), Tsandi
Paulus Elanu (SARDEP local facilitator) Tsandi
Julia fitembu (SARDEP committee member), Tsandi
Simon Salomo (SARDEP committee member), Tsandi
Emma Amuti (SARDEP committee member), Tsandi
Ester Muleka (AET), Omafo
Martin Tyapa (AET), Omafo
Ephraim Weyulu (CAET), Omafo
M. Embudile (CAEO), Omafo
Cassy lipinge (AET), Onaanda
Titus Nashima (School principal), Etameko - Onaanda
Gabriel Amunyela (School teacher, appointed future headman),
Omuthitugwalwani - Onaanda
Dr. François Blanc, NOLIDEP Regional Co-ordinator, Ongwediva
Dr. Roy Behnke, NOLIDEP Rural Sociologist, Tsumeb
Jean Pierre Pétorin, NOLIDEP Deputy Project Co-ordinator

Key informants interviewed at the research sites according to the lists given by extension staff and in addition to other individual and group interviews:

Oshambelo
Fillemmon Kapweya (Headman), Tsandi
Stefanus Show (acting headman for Abed Ndundu, Asivio Sheya and Simon lindongo)
Evelina Nampola, farmer
Frienda Sakaria, NOLIDEP committee member
Eliakim Demunongwa, farmer
Ndundu Sem, farmer, cattle post holder
Leevi Shikale, NOLIDEP committee member
Meme Leevi Shikale, NOLIDEP beneficiary for goats
Abnel Iyambo, Chairperson of NOLIDEP
Willehard Ndeshikeya, farmer
Christofina Nakambwela, farmer
Onaanda
Hilma Nakaande, NOLIDEP beneficiary of goats, Omukwa
Sesilia Shiindi, NOLIDEP committee member, Omukwa
Thomas Nakadhiya, Headman, NOLIDEP committee member, Omukwa
Maria Engombe, NOLIDEP beneficiary of goats, Omaambo
Fransiskus Shikongo, Treasurer of the NOLIDEP committee, Uutsima
Erastus Shilongo, Headman, Uutsima
Mariane Ekandjo, NOLIDEP Chairperson, Oshimpangwa
Leonhold Kalola Utoni, Senior Headman, Onaanda
Unono Unona, business man, Onaanda
Loini Jafet, farmer, Onaanda
Meme Iitengeni Kagadhinwa, wife of headman, Ongongo
Kuku Gwamunene, farmer and female cattle post holder, Ongongo
Mestilde Amakutsi, NOLIDEP committee member, Omuthitugwalwani
Helmut Ndjendja, Water committee member, farmer, Omapopo
Erastus Shahonga, Headman, residing in the transition zone of settlement and
farm post area of Onaanda

Omatunda
Abraham Nekundi, Headman, beneficiary of fodder trees
Abnel Nekundi, NOLIDEP Chairperson, appointed future headman
Elia Nekundi, Teacher, beneficiary of trees
Johannes Simion, farmer, beneficiary of trees
Gabriel Ndjukuma, farmer, cattle post holder in Angola
David Hailumbila, Secretary of NOLIDEP committee
Sceil Ndume, NOLIDEP committee member, farmer
Hendrina Paulus, farmer, NOLIDEP beneficiary of poultry
Kaupawa Hamulenyia, farmer, NOLIDEP beneficiary of poultry
Natalia Mhulu, farmer, NOLIDEP beneficiary of poultry
Jason Shitana, farmer, nurse, NOLIDEP beneficiary of tree
Paulus Shaama, farmer, NOLIDEP committee member
Appendix II

Selection of quotations (at random)
'to open and close grazing areas would help the grass to recover, like it was done in earlier time, but today everybody does what he wants to do'

'can animals feed on the omahangu stover after the plants are sprayed against the omalindilindi pest?'

'to go to the cattle-post area you have to have your own hand-dug well. You can either help a friend to dig out his own one, he will give you water for some time, then the first year you dig out your own and you can come back the following year'

'if they [NOLIDEPE] make decisions together with the traditional authorities, they have to take these decisions seriously, because those are the ones who represent the community, otherwise the community will turn away from NOLIDEPE'

'good, that the project gives something to the poor, so the community has not to do so, but then it is even worse when the donation stops like the food aid last year'

'we were lucky that a consultant from Zimbabwe told them [NOLIDEPE] that people cannot travel 100 km to dig out a dam by themselves'

'the project must fulfil the promises and give more goats to the women'

'most of the cattle owners are young, they will not follow the old tradition, they will make the decision between quantity and quality'

'you do not pay for the place of your cattle post - so the following year you may run the risk that there is a house at your cattle post'

'the ones who came first have the largest ekoves''

'the grass is very much different in different areas at the cattle-posts'

"if the animals are evenly distributed [constant grazing] they cause less damage"

"the King is the first institution to approach for all activities to be launched in the area"

"people feel very much disencouraged by NOLIDEPE of being lazy and make no progress with their dam, it is wrong - we must be encouraged..."

"you have to have your own hand-dug well, to bring your cattle"

"if you do not have your own 'ekove', you are poor because you cannot reserve fodder for your animals"
Appendix III

Sketch map - Oshambelo
Sketch map-Onaanda
### Appendix IV

**List of Abbreviations and Acronyms**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACD</td>
<td>Agricultural Development Center</td>
</tr>
<tr>
<td>AET</td>
<td>Agricultural Extension Technician</td>
</tr>
<tr>
<td>CAEO</td>
<td>Chief Agricultural Extension Officer</td>
</tr>
<tr>
<td>CAET</td>
<td>Chief Agricultural Extension Technician</td>
</tr>
<tr>
<td>CCN</td>
<td>Church Council Namibia</td>
</tr>
<tr>
<td>FINNIDA</td>
<td>Finish Development Agency</td>
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<tr>
<td>GPS</td>
<td>Global Positioning System</td>
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<tr>
<td>MEATCO</td>
<td>Nationally-based company, began operation in 1992 in NCAs and buys cattle at periodic auctions</td>
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<tr>
<td>NCA</td>
<td>Northern communal areas</td>
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<tr>
<td>NOLIDEP</td>
<td>Northern Regions Livestock Development Project</td>
</tr>
<tr>
<td>PRA</td>
<td>Participatory Rural Appraisal</td>
</tr>
<tr>
<td>SARDEP</td>
<td>Sustainable Animal and Range Development Program</td>
</tr>
<tr>
<td>TOR</td>
<td>Terms of Reference</td>
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Appendix V

Impressions of the pilot communities

Photo 1: Offspring of the NOLIDEP donation

Photo 2: Water provision for household consumption

Photo 3: Time consuming fire wood collection
Photo 5 / 6: Ondungu in Omatunda

Photo 7: Ipinga in Oshambelo
Photo 8 / 9: Omuthima in Onaanda
Photo 10: Dam excavated in Omatunda

Photo 11: Dam excavated in Oshambelo

Photo 12: Uuvudhia dam, Onaanda
Photo 13: Fodder tree in the homestead

Photo 14: Omahangu straw on the roof

Photo 15: Grazing in the 'Ekouve'