

LIVESTOCK RESTOCKING AS A POSSIBILITY FOR SUSTAINED PRODUCTION WITH SPECIFIC REFERENCE TO THE NAMIBIAN SITUATION

ANNAMIÉ LOUWRENS

Ministry of Agriculture, Water and Rural Development, P O Box 103, Keetmanshoop, Namibia

ABSTRACT

Some of the people qualifying for resettlement have lost most or all of their livestock. Thus, many farmers are not self-sufficient and rely heavily on government support. Livestock restocking might be a way of reducing their dependence or even of returning them to a state of self-sufficiency. This paper looks at livestock restocking as such and tries to identify the benefits and constraints that can be expected with this approach.

THE HISTORY OF RESTOCKING

In many parts of sub-Saharan Africa, disasters such as wars and droughts have resulted in a rapid decline of livestock numbers (Hogg, 1985). People previously dependent on livestock production for their livelihood have become destitute and rely heavily on government support in the form of food aid. The concentration of both people and livestock close to towns and other permanent settlements has ended in wide scale degradation of the environment (Hogg, 1985). A new approach for aid programmes was adopted by OXFAM in which each recipient is supplied with a nucleus herd of livestock, sufficient for each family's continued livelihood (Moris, 1988). According to Heffernan (1998) approximately 100 million US\$ has been spent on programmes in the sub-Saharan in the last decade. A large proportion of the programmes involved pastoralists (Fre, 1984; Hogg, 1985; Moris, 1988; Unruh, 1993a; Heffernan, 1997; Heffernan, 1998). Some authors like Chavanduka (1980), Unruh (1993b) and Mupunga and Dube (1993) have also referred to livestock restocking projects as part of resettlement schemes.

A LIVESTOCK RESTOCKING PROJECT

Livestock restocking is a very complex topic. A multitude of factors contributes to the success or failure of the implementation of such a project. Many authors have previously described and discussed these factors (Mace, 1988; Moris, 1988; Mace, 1989; Oxby, 1994; Heffernan and Rushton, 1998; Heffernan, 1996). It is not the objective of this section to review this literature again, but rather to try to integrate it with the specific issues facing the newly resettled communities in arid and semi-arid environments.

The environment

The environment plays an important role in the decision to restock. The species and breed of livestock, the area needed to sustain them and the production systems involved must all be considered.

Namibia's environment is arid with annual rainfall ranging from less than 100mm in the south to around 600mm in the north-east (according to Brown (1993) only 8% of the country receives over 500mm). The rainfall is highly seasonal with almost all the rain falling during the summer months. Vegetation consists of grassland through to mopani woodland and wooded grassland with Acacia and associated bush and shrub species, while bare sand covers the Namib Desert.

Understandably, livestock farming is the single most important agricultural activity for both the commercial and communal sectors (Bunting, 1992). Large ranches and transhuman farming systems developed to cater for the arid conditions and to cope with the frequently re-occurring droughts. In general, small stock is reared in areas that receive less than 200mm rain annually and large stock in areas of above 300mm, with mixed livestock farming in-between (Brown, 1993). Brown (1993) also summarised the grazing potential for the country as follows (Figure 1):

- High potential (8-10 ha/large stock unit) = 40% of the country,
- Medium potential (12-15 ha/large stock unit) = 15% of the country,
- Low potential (18-24 ha/large stock unit) = 10% of the country,
- Very low potential (24+ ha/large stock unit) = 20% of the country,
- No potential = 15% of the country.

Ondinga (1993) argued that intensification (dividing existing large farms into smaller units) could be the answer to the land problem in Kenya. However, intensification will not be relevant for a country such as Namibia as there are significant differences between the Namibian and Kenyan environments. The annual rainfall of Kenya exceeds that of Namibia by almost a 1000mm in some areas. In an environment with such a high annual rainfall, intensification may prove to be a viable option. However, computer simulations carried out in Namibia by the Directorate of Planning, Ministry of Agriculture, Water and Rural Development, have shown that a farm smaller than 4000ha, even in the higher potential areas, is unlikely to be operated profitably without government support in the form of subsidies (Shivute, 1993). Smaller farms may not generate enough income to survive the frequent droughts in Namibia. Since the government agrees that existing fences cannot be removed and land use returned to free ranching (Adams and Devitt, 1992), there seems to be limited choices.

Adams and Devitt (1992) claimed that despite the geographical extent of large-scale farms, they are not expected to survive

without state subsidies. Most large commercial farms are found in the low to very low potential areas. This reinforces the idea that sustainability for livestock production rests heavily on the possibility of movement of animals during the dry seasons and droughts. It is a very important to take this into consideration when planning resettlement and restocking projects. Calculations show that approximately 2000 small stock units (or 400 large stock units) can be kept on 10000ha of a very low potential area. However, this figure may be reduced significantly during the dry periods of the year, during major droughts or when movement is restricted as a result of small farm sizes. Furthermore, calculations like these often do not account for different production systems. For example, if 2000 breeding females are kept on 10000ha, they may produce between 1000 and 2000 offspring a year. The offspring have to be sustained for 18-24 months in the same area. Hence, the actual number of breeding females that can be sustained on this land is a lot less. Two important points should be mentioned here: large areas of land are needed to sustain an economically viable production system in an arid environment and even when a large area is available, farming in such an environment remains very high risk.

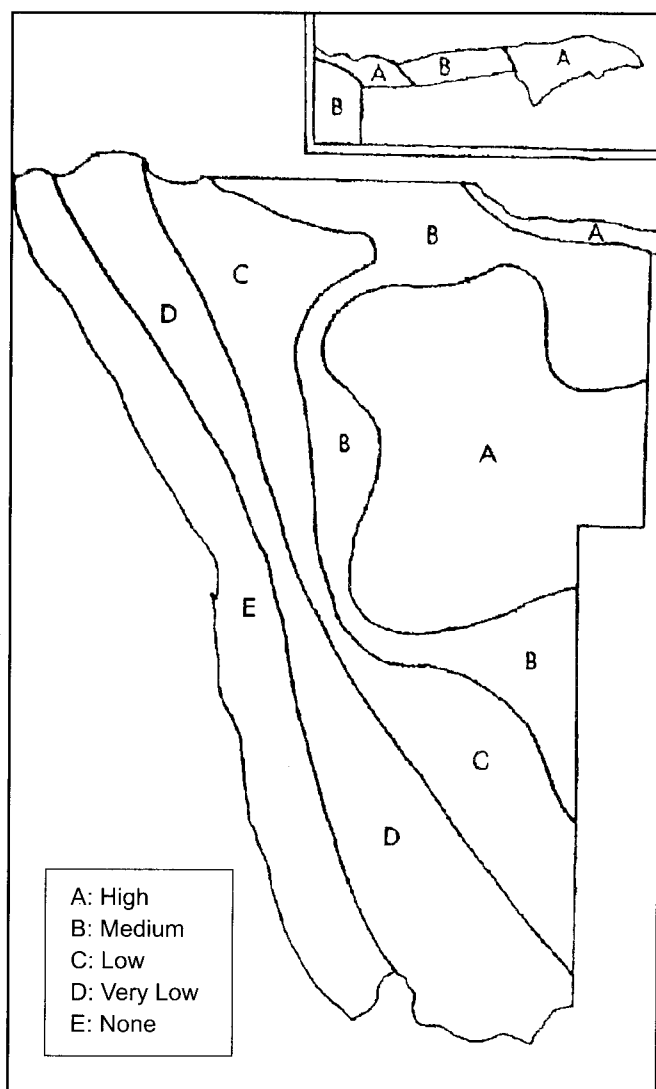


Figure 1. A generalised map of the grazing potential in different regions of Namibia.

Brown (1993) concluded that it is absolutely essential that the variability of arid climates, particularly rainfall, is fully understood and taken into account. To base management practices and decisions on mean rainfall for an area is to invite trouble. The variation in rainfall must be noted and accepted and planning must be done accordingly.

Restocking beneficiaries

The restocking beneficiaries will be those people who lost most or all of their livestock. In order for these people to begin a new life and become self-sufficient, government support through the provision of a baseline flock can prove vital. It can be argued that restocking the poorest people will jeopardise the success of the project (Oxby, 1994) as they may be tempted to sell the livestock to meet immediate food needs. Earlier restocking projects have attempted to address this problem and supplied food aid to beneficiaries during the first year (Heffernan, 1996). A targeting process whereby only people who really want to return to livestock farming is needed. However, such a targeting process can be expensive and time consuming and might only be successful when other alternatives in addition to livestock farming can be offered.

Experience from the Tribal Land Grazing Policy in Botswana has shown that if communal farmers are resettled on commercial farms without proper training, extension and support, they are unable to survive for long (Segosebe, 1991). It is imperative that proper training is provided to any prospective settlers from communal areas onto commercial farms. Training is particularly necessary in areas such as bookkeeping, accounting and farm management (Ondinga, 1993).

Providing viable herds to the target families might result in jealousy from the people who do not qualify for restocking (Oxby, 1994). This can cause wealthier farmers not to admit their true livestock numbers, which can put the objectives of the project at risk. It is very important to practise great sensitivity in the targeting of beneficiaries, especially where specific ethnic groups are given priority over others.

Terms and conditions

It is important to set clear terms and conditions on which the animals will be provided. Discussions with the beneficiaries should be undertaken to draw up a repayment agreements, and the schedules involved, that will suit their specific situations. Flexibility is essential. Repayments in the form of offspring or the provision of labour for community work, such as completing schools and other facilities in the settled area, can serve as alternatives. Because of the variation in weather and grazing conditions, repayments may have to be postponed in, and following, drought years.

The role of the government/aid organisation

The government or aid agency involved in the initiation and implementation of a restocking project will be faced with a long term commitment that will draw on most of their resources. Three phases of involvement can be distinguished:

The initial planning phase

The initial planning phase will include all those activities that need to be done before starting with the implementation, such as identifying the beneficiaries and assessing the environment and viable herd sizes. However, most important is the setting of the objectives of the project. If long-term sustainability and self-sufficiency are the objectives, planning and support systems must be adapted accordingly. Sufficient time should be allocated to this phase in order to ensure that time, money and efforts are not wasted on a project that will only survive for a short period.

The actual implementation

This phase will include the buying and distribution of livestock as well as the setting up of all the necessary supporting systems, such as infrastructure. It is the responsibility of the government/aid agency to make sure that all the farmers are aware of, and in agreement with, the terms on which livestock is provided.

The monitoring phase (which also includes the implementation and assessment of long term goals)

Close assessment of the project is required to identify problems that might arise in the long-term. Heffernan (1996) stated that 'the short term success of many projects has prevented a critical assessment of their long term outcome'. This pitfall should be realised and avoided. In Namibia monitoring of projects should be linked to existing services such as extension and research.

Although livestock restocking might seem like an inviting opportunity for aid agencies and the government, care must be taken to calculate the long-term costs involved before setting out on this path.

Species and breed

Reasons for preferring small stock above large stock (cattle) can be summarised as followings (Mace, 1988; Oxby, 1994; Heffernan and Rushton, 1998):

Small stock reproduce faster, even during droughts, hence off-take is achieved faster and the loss of one small stock unit on total herd size is less dramatic than in the case of large stock. In addition, the rearing of small stock is common in Namibia and buying the required number of small stock should be easier. Also, a large proportion of the resettled population is familiar with small stock rearing, which will enhance the success rate of a restocking project. Furthermore, goats and sheep are better adapted to survive and produce in arid environments (McDowell, 1972; Pagot, 1992).

Arguments against small stock include that they have the need to stay closer to water sources than large stock as the average walking distance of sheep and goats is only half that of cattle (Heffernan and Rushton, 1998). However, this factor will be less significant if sufficient water points are available. Many

indigenous breeds of small stock, such as fat tailed sheep, are also less dependent on water and may go for a day or two without drinking. Breeds adapted to the specific environment should always be the first choice for restocking projects. Environmental stress like diseases and droughts will have less influence on the overall productivity of such herds.

Herd size

The minimum viable herd size can be defined as the number of animals needed for a family to depend entirely on livestock products for a living (Heffernan, 1996). In general it can be expected that short-term projects will need fewer animals per household than projects that aim at long term sustainability. However, assessing the viable herd size will be specific to each project. Variables such as the environment, reproduction rate, off-take rate and management should be included in a model for calculation. The distribution of very large herds can cause jealousy among the people that will not benefit from the project (Oxby, 1994) and can be hampered by the availability of both livestock and capital.

Livestock production systems

The introduction of new and unfamiliar systems to subsistence populations can be very expensive and time consuming and unfortunately has a record of failure. Investigations into the previously practised production systems and social structures of the community should thus be included in the planning of the project. However, introducing new systems to settled communities should be easier to support than in the case of pastoral communities as extension officers can reach settled communities relatively easily. Potential new markets should be studied and production systems adapted accordingly.

Alternative uses of land, labour and other inputs include cut and carry systems (where applicable), game ranching and chicken and rabbit productions. Because of the variation in climatic conditions in Namibia, specialisation is less desirable. Great emphasis should be placed on precaution against risk as well as diversification as a means of raising overall income and quality of life.

Markets

Investigation into market opportunities can be valuable in terms of deciding which production system will be the most likely to be sustainable. New opportunities can possibly be exploited, although the introduction of such a system will put a lot of strain on extension services. Even for existing practices, a market survey can avoid failure and wasteful efforts. Areas north of the veterinary cordon fence in Namibia do not have access to markets outside the country. Local markets are often far away from production sites and prices are not always favourable (Shivute, 1993). Therefore, economic assessment should form an intricate part of the planning and implementation of any project.

IS LIVESTOCK RESTOCKING SUSTAINABLE?

Whether livestock restocking will be a sustainable approach remains difficult to determine, even after the consideration of all these different factors. It is accepted though, that all the land and natural resource use must be based on the concept of sustainability. If this is neglected, increased poverty in the

years ahead will be the long-term result. The effect of development programmes must be evaluated on the entire resource base. Unfortunately this is seldom done, particularly when only one resource is being developed (Brown, 1993).

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