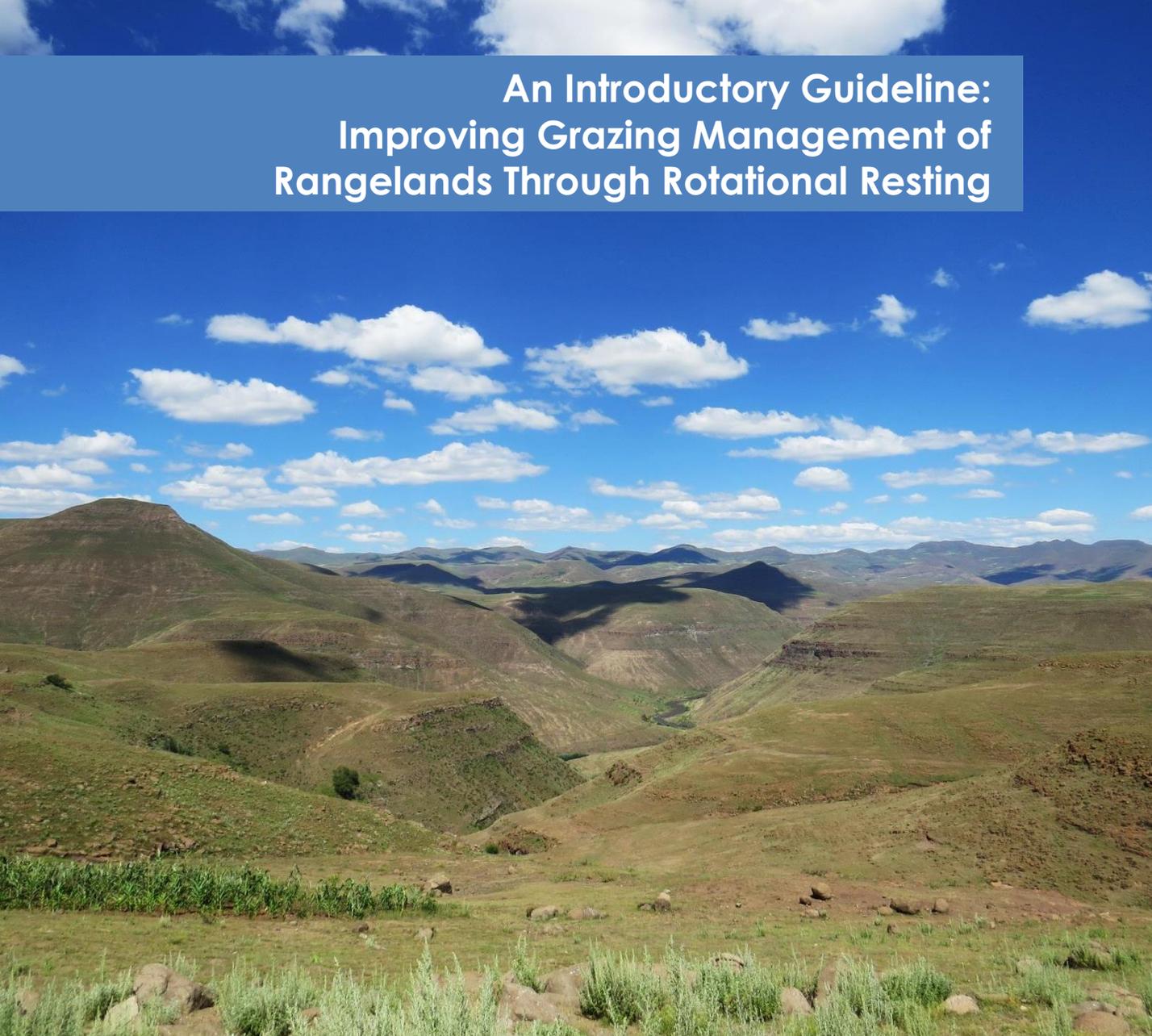


An Introductory Guideline: Improving Grazing Management of Rangelands Through Rotational Resting



USAID/IUCN Programme on Applying Ecosystem Approach in the Orange-Senqu Basin



THE CHALLENGE

Rangeland degradation in the Lesotho highlands is being driven by poor grazing management control, with one of the biggest issues being continuous grazing and the lack of resting of grazed areas to allow for recovery particularly of palatable grass species. Continuous grazing, without regular periods where livestock are excluded from areas, results in the depletion of palatable species which are replaced by less favoured unpalatable species. This may eventually result in the local extinction of certain species, which will subsequently lead to a decline in species diversity and richness. Rangeland degradation is a major concern, not only for the Government of Lesotho but also for all the communities that are reliant on this vital resource.

Optimum management of grazing on the rangelands is therefore critical from the perspective of livestock production, as well as ecosystem health. Poor management will lead to a decline in ecosystem health and livestock production, while improved management will lead to increases in both. Overgrazing and lack of resting of rangelands not only reduces the availability of palatable grass species, it also results in encroachment of shrub species and reduced vegetation cover and erosion, all of which reduce the available grazing area. If livestock numbers continue to be maintained at the same level despite the reduced grazing quality and quantity, then the amount of forage available per animal decreases, leading to a further increase in grazing pressure and accelerated degradation. This process eventually results in a rapid downward spiral of degradation. This has significant effects on ecosystem health, as well as on community livelihoods due to poor livestock performance and increased livestock mortality rates.

THE SOLUTION

A grazing management programme that incorporates sound principles and objectives, and that has the wide support of livestock owners, herders and authorities needs to be applied through a process of consensus and collaboration. The **principles** underpinning the development and implementation of a grazing management programme include:

- Continual grazing during the summer growing season (October to April), year after year, results in a gradual decline in vigour of the palatable and productive grass species. This can be alleviated by rotational resting of some of the rangeland areas during the summer growing season
 - This helps to increase the growth and strength of the palatable species, increase the overall productivity of the rangeland, and reduce the potential for shrub encroachment.
- Rotational resting a proportion of the rangeland during summer (October to April) through the manipulation of the movement, number, and type of livestock, will serve two purposes:
 - Restore vigour of palatable grasses, resulting in a more vigorous productive grass sward able to better compete against shrub encroachment and provide greater soil protection; and
 - Provide a defined, rationed source of forage for livestock during winter (May to September), that has been rested for the entire summer period.

- The process of rotational resting the rangeland during summer (i.e. excluding animals from certain areas) does not decrease the overall amount of grazing available throughout the year:
 - Livestock are moved to non-rested areas where grazing intensity is temporarily increased (resulting in bulk grazing of rather than selective grazing only of palatable species).
- The resting period from October to April is based on scientific principles, and is designed to coincide with the normal summer growing season.
- The stocking rate of the non-rested areas must be agreed to by all the relevant stakeholders (e.g. Grazing Associations, etc.) based on forage availability in summer and winter. This requires inspection and assessment of the amount of forage available in the summer and the winter grazing areas at the critical change-over times i.e. October and April, as well as an assessment of livestock health and condition.
 - As a starting point, the stocking rate recommended by the Department of Range Resources Management of approximately 10 ha per animal unit should be adopted, while adhering to the guidelines on ratios between small stock and large stock.
- Under normal conditions, given the intense grazing pressures, burning of the rangelands should be avoided as this will negatively affect grass productivity and thus grazing capacity.

The key objectives of the grazing management programme should include:

- Address rangeland degradation (loss of vigour, species composition change, shrub encroachment and erosion) through improved grazing management.
- Address the forage requirements of livestock throughout the year (provide for adequate livestock nutrition for 12 months).
- Obtain buy-in from community members and other stakeholders for a plan based on the manipulation of livestock movement, type and numbers.





The strategies and actions incorporated in the management programme should address:

- Demarcate grazing management zones across the target rangeland area to allow for specific planning and management, including for example:
 - Rotational summer resting
 - Rehabilitation of degraded areas (where livestock need to be excluded)
 - Designation of high intensity use areas (e.g. for harvesting important natural resources)
 - Conservation of priority management areas (e.g. wetlands)
- Formalise stakeholder involvement (e.g. grazing associations, livestock owners, herders, and relevant Government Departments) in monitoring and decision making to empower stakeholders to make decisions that will benefit both livestock performance and rangeland condition.
- Secure buy-in from stakeholders and empower grazing associations to allow for effective implementation and enforcement of grazing programmes and management plans (for example compliance with rotational resting plan).

Acknowledgements

This guideline draws from:

- Lets'eng-la-Letsie Integrated Catchment Management Plan (WS-F-043-11) developed for the Millennium Challenge Account (MCA) and the Lesotho Ministry of Water (2013)
- Hardy, M. B., and Tainton, N. M. (1995). The effects of mixed species grazing on the performance of cattle and sheep in Highland Sourveld. *African Journal of Range and Forage Science* 12: 97–103.

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