

**Sustainable Agricultural Livelihood Restoration,
Rehabilitation and Resilience in Kenya
Training Manual**

2-5 MODULE 5

RANGELANDS IMPROVEMENT AND REHABILITATION

Rangelands are lands on which the vegetation is predominantly grasses, grass-like plants, forbs or shrubs and is managed as a natural ecosystem. Rangelands can include annual and perennial grasslands, shrub and dry woodlands, savannah and tundra. These areas provide many goods and ecosystem services of vital importance to local communities hence sustenance of livelihoods.

Most of rangelands are becoming degraded as a result of human and climate induced factors. Over 33% of the global land is degraded. Land degradation and desertification is more severe in sub-Saharan Africa, whereby it is estimated that 75% of Africa's drylands are affected by moderate to high degree of land degradation. Land degradation is the reduction in the capacity of the land to provide ecosystem goods and services and guarantee or assure its functions over a period of time for its beneficiaries. In Kenya, it is estimated that over 30% of the country is affected by severe to very severe land degradation.

With respect to natural pastures, which are the basic feed resources for livestock in the ASALs, degradation is a process that involves various attributes. These include the net loss of vegetation because of heavy grazing without sufficient time to rest, reduction in palatable forage species, decrease in palatable perennial grasses, increase in annual plants and species rarity. Bush encroachment and weed invasion as well as increase in invasive species is another form of challenge in the ASALs thus bringing about rangelands degradation.

In the rangelands, land and pasture degradation is a major challenge to household food security due to its impacts on livestock feed availability. Community involvement is key in most cases while addressing land and natural pasture degradation, which ensures they access benefits from their efforts of restoring and protecting the environment. The overall aim in this module is to provide guidelines on the rehabilitation and restoration of denuded/degraded rangelands to its natural state through approaches that aim to increase vegetation cover, biodiversity and create resilient environments.

This module will be covered under the following sub-modules:

- Range reseeding and pasture seed production
- Grazing enclosures and grazing management
- Holistic planned grazing for range improvement
- Invasive species: management and control
- Rangeland infrastructure development