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## What is Rangeland Management?

According to “*The Society for Range Management*”, rangelands are a type of land on which the natural vegetation is dominated by grasses, forbs and shrubs and **the land is managed as a natural ecosystem**.

*“Rangeland can also encompass pastures of introduced grasses, such as crested wheatgrass, endemic or alien perennial grass and any other artificial grass”* (Rinehart, 2008).

### Adaptive rangeland management

The management of the rangeland may also be directly linked to adaptive management. Adaptive rangeland management **is a systematic approach for improving resource management** by learning from management outcomes, for instance; determining the number of animals on the rangeland and reacting to extreme events such as fires and droughts. **“It is means of countering** not only man-made occurrences such as **overgrazing**, but **the permanent occupation of the rangeland** and provision of drinking water throughout the year and problems arising from natural events, such as the requirement for fire control”

 (Rothauge, 2000).

**In simpler sense, rangeland management is the use and stewardship of rangeland resources to meet goals and desires of humans, such as forage, wildlife habitat, livestock production, water, recreation, open space and native plants.**

## Effects of poor rangeland management

**Economically, most developing countries heavily dependent on agricultural produce.** Namibia for instance specifically rely on that obtained from extensive livestock ranching on natural rangelands, which require adaptive management.

**“Most land use practices are unsustainable,** practices such as overstocking which results to degradation via overgrazing, landscape-level bush encroachment amongst others” (Rothauge, 2007).

“Traditionally, areas were only occupied by large migratory herbivores seasonally or by a limited number of sedentary herbivores. But currently, due the human changes such as development, **rangelands are no longer available for free ranging animals** as was the natural rhythm”. (Owen-Smith & Danckwerts, 1997).

*“Natural fire is an ecological factor on open land, as it assists in grass-to-bush balance. However, when fire is unprescribed it causes loss of ecosystem function through loss of biodiversity”* (Bond, 1997).

“If some of these management events apply long enough and coincide with each other or worse with drought, the rangeland becomes degraded” (Scholes, 1997).

**“Lands in degraded conditions are characterized by less-productive and less-nutritious grasses,** reduced biodiversity and declining ecological services, such as reduced rainwater infiltration and increased run-off and erosion” (Skarpe, 1991).

**“Degradation conditions become more and more difficult to**

**reverse, taking more effort, more money and more time** than is available in the productive life of a rancher to repair the ecological damage and to rehabilitate the rangeland” (Smit et al.,1999).

“At some lower level, **degradation becomes practically irreversible**” (Rothauge, 2007).

### **Good rangeland management**

This emphasizes the need for adaptive, flexible and opportunistic rangeland management of ecosystems so that livestock production (ranching) systems, (which is important to most developing country’s economy) retain their sustainability. Common adaptive, flexible and opportunistic rangeland management are such as: **knowing livestock forage preference, conducting a carrying capacity, allowing grasses an adequate recovery period after grazing, creating drought reserves**, rangeland improvement through bush control and controlling invasion of invasive plants.

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