



Challenges in protecting Afghanistan's Grazing Lands

UC DAVIS
COLLEGE OF AGRICULTURAL
& ENVIRONMENTAL SCIENCES

Grazing Land in Afghanistan

The semi-arid and desert climates of Afghanistan mean that crop production is limited to less than 10% of the total land area – mostly in irrigated valleys. Of the remaining land, about 40% is suitable for grazing. Both Local and nomadic (*Kuchi*) herders, use such rangeland. The *Kuchis* migrate between the lower plains in winter and mountain pastures in summer.

Total and partial loss of grazing land is an increasing problem in the country.

Causes of Grazing Land Loss

Overgrazing and the collection of fuel and animal feed are the primary causes of plant loss in grazing lands. The resulting loss in plant cover leads to increased run-off and environmental damage (e.g., soil erosion).

1) Overgrazing. Early and/or persistent and heavy grazing removes plant cover and leads to treading damage of grasslands. Continually grazed plants use energy stored in the stalk and roots to produce new leaves. If these plants are not rested, then the plants cannot rebuild their energy reserves, become weak and may die.

Concentrated grazing on limited rangelands means less land is available for both *Kuchis* and non-migrating farmers. The result is increased and widespread overgrazing.

2) Collection of fuel and animal feed (winter). In collecting fuel for cooking and heating fires and feed for animals, many people remove the entire plant (tops and roots). The roots are often removed as some burn well. **Note:** Such fuel is in addition to the common use of animal manure and wheat straw for burning.

Prevention and rehabilitation of overgrazed land

The key to protecting rangelands is to keep plants alive and actively growing. Options include:

1. Fuel and feed collection

- Train people how to collect (keep plant roots in the ground) and so not destroy plants.
- Encourage the planting of locally adapted, multipurpose trees and shrubs to provide home fuel and possibly feed needs. (Possible species include *Acacia modesta*, *Ailanthus species*, *Amygdalus communis*, *Fraxinus floribunda*, *Robinia pseudoacacia*, *Pinus halepensis*. In warm climates with plenty of water, some Eucalyptus species may be a good option.)

2. Prevent overgrazing

- Help people (individually and at a community level) understand the importance of resting pastures and keeping plant cover.
- Rotate livestock and rest pastures (allow 3 to 6 weeks for plants to regrow and restore plant energy reserves).
- Reexamine upland herding practices and recommend more appropriate herd sizes. This may be difficult for farmers to accept.

Note: Fertilizing and reseeded pastures for restoration has had limited success.

Prepared by: John Groninger, Mark Bell, Hussain Sharifi, Chandrasekar Venkitasamy and Curran Hughes 2012.

Reference: Thieme, O. 2000. Country pasture or forage resource files. Afghanistan. FAO. Rome, Italy.



Sheep herding in Bamyan Province
Source: Rory Moylan



Yak Herd in Badakhshan Province
Source: Rory Moylan