

Exclosure practices help to restore overgrazed pastoral rangeland

Algeria The wilaya in the high steppe plains of Naama

Exclosure practices were adopted with the aim of rehabilitating and recovering the biodiversity of overgrazed pastoral rangeland.

Exclosure is a practice that, through the periodic rotation of different parts of a grazing area, is known to promote landscape restoration and biodiversity recovery. In Naama province, the pastoral rangelands are subject to intense desertification through the exposure of the soil surface by land clearing and overexploitation of vegetation. An increase in sheep flocks and grazing has further exacerbated the issue. Therefore, 32 sites of exclosure covering 18% of the grazing courses of the province were fenced in to eliminate human and animal disturbances and have reportedly succeeded in significantly restoring natural biodiversity of the steppe ecosystem. The continued use of this practice is expected to aid in adapting to both human and climate change induced pressures on the rangeland.

Case effectiveness on

Climate change

Mitigation: Not reported

Although not reported, the extent of the documented rehabilitation and recovery of vegetation in the rangelands, in addition to reported improved soil quality, will likely contribute to climate change mitigation on a small scale.

Adaptation: Positive

As a result of the intervention, researchers found that drought had little effect on the environment that had been subject to the exclosure practice. These results suggest that exclosures might strengthen the rangeland's ability to withstand eventual climate change induced desertification.

Ecosystem health

Ecological effect: Positive

Recovery of vegetation was measured as twice as high in areas that practiced exclosure as compared to in free range areas. The rate of recovery of vegetation was reported to be between 25% and 40% in areas practicing exclosure as compared to less than 20% in free range areas. Biological recovery was found to generate an increase in perennial biomass, the proportion of organic matter in soil, permeability and water balance, and other biological activity. An increase in species diversity and return of endangered flora was also observed in the areas under exclosure. The exclosure practice was found to have enriched flora diversity by more than 50%.

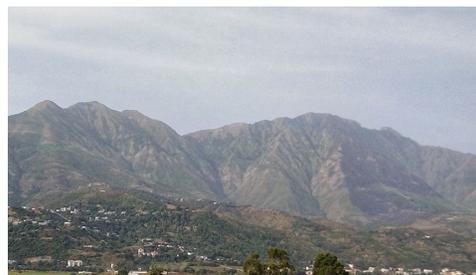


Photo © Halima Bouchouicha

Conducted at landscape scale

Intervention type

Protection
Restoration

Ecosystem type

Montane/Alpine

Climate change impacts addressed

Loss of food production
Drought
Desertification

Instigators

National government/agency

Societal challenges

Biodiversity conservation
Climate change adaptation
Disaster risk reduction
Food security

Literature info

Peer reviewed
Case methodology reported

External case resources

Read resource 1
Read resource 2

Socioeconomics

We are currently working on adding the case effectiveness on socioeconomics.