Source : www.thehindu.com Date : 2022-10-23

GRAZING ANIMALS IMPORTANT IN MITIGATING CLIMATE CHANGE

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

Image for representational purposes only. | Photo Credit: G. Ramakrishna

Grazing animals can have a significant impact on the stability of soil carbon in grazing ecosystems, finds a study. Researchers from Indian Institute of Science, Bengaluru (IISc), observed that experimentally removing grazing animals from the ecosystem resulted in higher fluctuations in soil carbon from one year to the next. The research has been published in *PNAS.*

The researchers, with the support of the Himachal Pradesh State government, local authorities and the people of the Kibber village in Spiti, established some fenced plots where grazing animals were excluded and adjacent plots where animals like yak and ibex grazed. Sumanta Bagchi from the Centre for Ecological Sciences and Divecha Centre for Climate Change, IISc, and his students examined soil samples, year after year, over the decade following 2005 when the study began.

They found that soil carbon in the fenced plots fluctuated 30%-40% more than that in the plots where animals were allowed to graze.

Grazing ecosystems, such as grasslands, shrublands, and steppes savannahs cover about 10% of India and about 40% of the world, says Dr. Bagchi, in an email to *The Hindu*. Historically, these ecosystem support nearly all megafauna around the world and are home to reptiles, birds, amphibians.

Such “drylands” have been threatened by alternate land use. “Drylands seem to lack a legitimate standing in our policy due to the unfortunate ‘wasteland’ tag which originated during our colonial past that was enamoured by forests. Many Indian ecologists, including my colleagues, are trying to change this mindset,” he says.

“Grazing ecosystems store carbon in the soil and therefore decarbonise the atmosphere. Large mammals are crucial for all this. Unfortunately, wild mammals are confined to a few parks and reserves. Elsewhere wildlife has long been replaced by domestic livestock,” he explains.

The questions that come up are: While this replacement is inevitable for livelihoods and food security, are livestock ecological substitutes of the wild mammals they have displaced? Can livestock provide equivalent carbon services, and how can they be managed? These aspects are missing in current policy on livestock, and we do not have all the answers yet. “We need to protect land which has wildlife and restore degraded lands. We need to better manage livestock,” he says.

END