Restoring Grassland Commons in Maharashtra

Ashoka Trust for Research in Ecology and the Environment (ATREE) and The Grasslands Trust (TGT) are working with the local panchayat and nomadic pastoralist communities in the Kendur Village in Pune district to restore commons

by Anuja Malhotra | Abi Tamim Vanak

An Indian Wolf pack in the grasslands in Pune, Maharashtra. Photograph: Mihir Godbole / The Grasslands Trust

Thursday, 20 July, 2023

THE RESTORATION NOTEBOOK by Ecological Restoration Alliance | Nature inFocus

This is the seventh story in a series of articles documenting ecosystem restoration projects in India.

Featuring Ashoka Trust for Research in Ecology and the Environment and The Grasslands Trust in the Deccan Thorn Scrub Forest Ecoregion.

International calls for land restoration, such as the UN Decade on Ecosystem Restoration, have created a push and an enabling environment for scaling up restoration in India. While there has been a valid focus on forested landscapes, the vast majority of the semi-arid and sub-humid regions of peninsular India are non-forested Open Natural Ecosystems (ONEs), which consist of savanna grasslands, shrublands, rocky outcrops, semi-deserts and deserts. The forest-centric bias has resulted in the mismanagement of these vulnerable biomes for decades, with serious consequences for

biodiversity, people, and natural assets. While the undervaluation of ONEs dates back to colonial India, even today, vegetation maps classify grasslands, shrublands and other desert, arid and semi-arid ecosystems, either as ‘forests’, ‘degraded lands’ or even ‘wastelands’.

The misclassification of ONEs has not only made their conservation difficult, it has also made governance challenging due to a number of factors. ONEs such as grasslands are managed by disparate stakeholders, often with contrasting aims—agricultural and industrial expansion on the one hand, increasing forest cover and protecting endemic biodiversity on the other. This results in overlapping and contrasting claims on the land. For instance, the wildlife wings of state forest departments are in charge of managing grasslands for biodiversity conservation, whereas the territorial and social forestry wings are charged with increasing tree cover through afforestation.

An Indian Wolf in the semi-arid grasslands in Maharashtra. Photograph: Mihir Godbole / The Grasslands Trust

Grasslands that are part of village commons are essential for maintaining rural livelihoods, but are often the first target for land reclamation and redistribution. The government views these “wastelands” as prime areas for expansion for industrial activities or setting up solar and other renewable energy projects. Unfortunately, key stakeholders such as nomadic pastoralists have remained out of the discourse of planning and management. The number of practising pastoralists in India is estimated to be close to 13 million, who belong to at least 46 different nomadic and settled pastoralist communities. These communities are interconnected with ONEs and play a longstanding, climate-resilient and adaptive role in the conservation of these ecosystems.

The endangerment and local extinction of several charismatic species have also led to grasslands and other open ecosystems garnering attention. For instance, endangerment of species such as the Great Indian Bustard (GIB), Indian Wolf, Blackbuck, etc. have reached social media feeds and are now part of the mainstream narrative. Similarly, the introduction of the South African Cheetah in Kuno, Madhya Pradesh, represents efforts towards highlighting grassland ecosystems. Strong advocacy by scientists, researchers, and other stakeholders has, in turn, contributed to the discourse on the need to conserve these ecosystems. However, neither the scale nor impact of conservation has been

sufficient, primarily due to a lack of understanding and misguided efforts. As a result, these ecosystems and the biodiversity and livelihoods they support are under serious threat.

We were introduced to our pilot landscape through our partner, The Grasslands Trust (TGT), and their engagement in tracking the wildlife there. In 2016, the TGT team received information from the nomadic Dhangar community about an active wolf den site near Pune city. Upon investigation, they found seven wolf pups and two adults. Over the years, they recorded the active presence of the Indian Striped Hyena, Bengal Fox, Golden Jackal and Indian Leopard, along with a great variety of birds. Being a human-dominated landscape, there were challenges, resulting in shifting of den sites, but the habitat was largely undisturbed.

Wildlife captured in and around the project site (Pune, Maharashtra). Photograph: The Grasslands Trust

In 2021, however, during a routine team visit, the TGT team observed that the habitat had been partially destroyed by the digging of trenches, a regular intervention made in such landscapes for soil and moisture conservation. Even though there is no certain benefit for water conservation, trenches are dug up by forest departments and locals alike in the hope that it will improve the water table in these dry landscapes. The area was also being prepped for plantation drives in the hope that "foresting" the landscape would boost ecosystem services.

Deep Continous Contour Trenches (CCTs) are prescribed for soil and water conservation in these landscapes, often exacerbating soil erosion and loss of soil carbon. Photograph: The Grasslands Trust

The land we were working on was a village *gairan* or common land, and the Gram Panchayat had full authority to carry out interventions. To this end, we initiated conversations with them for over a year to convince them to stop digging trenches in favour of more suitable interventions. The village,

Kendur, located 50 km from Pune city, with 1580 houses, had a population of over 18,000 people. The common land was used for grazing by the villagers as well as Dhangars (in exchange for money or labour). Over the years, the quality of soil and quantity of fodder had declined due to reduced rainfall and change in cattle composition, leading to increased grazing pressure. The community members were happy to work with us as long as we could address the issue of fodder unavailability caused by deteriorating soil and water tables.

Dhangar pastoralist in Kendur, Maharashtra. Photograph: The Grasslands Trust

Restoring grasslands does not mean planting improved varieties of grasses and disturbing the soil, even though it might seem alluring to do so. Often, the best approach to grassland restoration, especially where the soil is not heavily degraded, would be using the “benign neglect” approach. However, when working with communities, restoration, like justice, needs to be ‘seen’ and not just carried out.

We started by collecting baseline information on multiple parameters such as grass cover, species richness, presence of invasive species, number and richness of trees, shrubs, herbs, hydraulic conductivity, and soil organic carbon (SOC). This data collection exercise would then feed into a monitoring and evaluation protocol, as we carried out interventions in the landscape. We also planned to use the site as a long-term monitoring project to feed into the broader Land Degradation Surveillance Framework.

Baseline data collection in Kendur, Maharashtra. Photograph: The Grasslands Trust

While the engagements have increased trust with the community members, restoring grasslands is a complex challenge. Our next step is to co-design interventions that are ecologically and socially suitable. While there is a philosophical discourse on what constitutes restoration, we defined our problem statement as follows: Can we find a way to work with local communities, including village communities and nomadic pastoralists, to address the issues they face due to degradation?

We want to create a model of localised solutions for grassland restoration in India that is not just about mass planting of grasses. The interventions we plan to propose range from controlled grazing, protection for the first two years, building demi-lunes (a water harvesting intervention where small bunds are created) in bare soil areas to prevent run-off, and selectively planting grass. But we need to ensure that they are suitable to the ecological and social context. For example, our choice of grass species is an assortment of native species, which according to the villagers, have declined over the last two decades, as well as species that are useful from a grazing perspective. Since we couldn't find many of these grass species in most nurseries, we have started procuring seeds and slips and established our own nursery with the help of our partners.

Development of grass nurseries in Kendur, Maharashtra. Photograph: The Grasslands Trust

As we carry out these interventions, we plan to document, monitor and evaluate the results periodically. We are also working on addressing grassland degradation that has resulted from misplaced nomenclature and flawed interventions. In doing so, we are looking to strengthen the science and policy of grasslands restoration in India, in a way that is replicable, scalable and sustainable.

Thursday, 20 July, 2023

We love a good critique but are infinitely partial to compliments. Both, roars and birdsong are welcome at info@natureinfocus.in

Anuja Malhotra

Policy Analyst, Centre for Policy Design, ATREE

Anuja Malhotra is a Policy Analyst at the Centre for Policy Design at the Ashoka Trust for Research in Ecology and the Environment (ATREE), Bangalore. Her current focus is on coordinating the implementation of ATREE's grasslands restoration program in a village common-land in Maharashtra. Additionally, she has experience in community engagement and outreach focused on promoting

inclusivity and bringing stakeholders together. She liaisons with ministries, institutions, and other relevant stakeholders to implement policy. She has authored several popular science articles and policy briefs.

Abi Tamim Vanak

Director, Centre for Policy Design, ATREE

Dr. Abi T Vanak is the Director of the Centre for Policy Design at ATREE, Bangalore. He has worked in Maharashtra since 2005, on various species including Indian Fox, Jungle Cat, Golden Jackal, Striped Hyena, and Indian Wolf. He is or has served as editor in the top international journals in the field of conservation and has published over a 100 papers, book chapters and articles on a diverse range of topics, including carnivore ecology, human-wildlife coexistence, savanna ecosystems, disease ecology, OneHealth and conservation policy.