

## Restoring Banni grasslands, Gujarat battles invasive tree species

06 July 2022

The Gujarat forest department will restore 10,000 hectares of the Banni grasslands in the coming year, and every year in the coming decade.

The state plans on restoring at least 76,000 hectares of this 2,497 sq km grassland which is a high-biodiversity area — it has already restored 10,000 hectares over the past couple of years.

The Banni grassland was also flagged by Prime Minister [Narendra Modi](#), in his keynote speech at the United Nations High Level Dialogue on Desertification, Land Degradation and Drought last year, as part of India's endeavour to reach the target of restoring 26 million hectares of degraded land by 2030.

Forest officials say that while the project was begun in 2015-16, work took off in a major way only last year.

The grasslands of Gujarat constitute about 4.33 per cent (8,490 sq km) of the total geographical area, distributed in eight districts and three different climatic regions — Kutch, Saurashtra and central Gujarat. A majority of grasslands in Gujarat (41 per cent) are found in the Kutch district. Banni grassland was declared a Protected Forest in 1955, under the Indian Forest Act, 1927.

Besides having 40 species of grass and 99 species of flowering plants, Banni is also home to the Indian wolf, jackal, Indian fox, desert fox, desert cat, caracal, hyena, chinkara, Nilgai, wild boar, Indian hare, common monitor lizard — and the cheetah before it became extinct. Banni also has 273 bird species and in years of good rainfall, is home to thousands of migratory birds.

Forest department officials have said that over the years, the landscape of Banni has shown drastic changes with the deterioration of the grassland taking place due to “heavy uncontrolled grazing”, widespread ingress of *Prosopis Juliflora* (a harmful exotic tree species), dams constructed on rivers flowing towards Banni, periodic occurrence of droughts and continuous increase in soil salinity.

“On analysis of the data over last four decades, it was found that in the year 1989, the area was dominated with grasslands covering 54.57 per cent of the area followed by saline areas devoid of vegetation or sparsely distributed vegetation covering 27.30 per cent and *Prosopis Juliflora*, an alien invasive species, covering only 15.72 per cent of the area. The Land Use Land Cover (LULC) assessment of the grassland over a 10 years interval revealed that grassland areas over the period gradually reduced while in the same period *Prosopis Juliflora* dominant area increased... encroached to more than 30 per cent. Therefore, within a gap of 20 years, the *Prosopis Juliflora* dominant areas doubled in Banni,” stated the project proposal of the Gujarat forest department.

The mainstay of the restoration project is, therefore, the removal of this alien species, which incidentally was introduced to the area by the forest department in the 1960s to stop the ingress of the salt flats. Ecologists, however, say the tree increases salinity.

With a huge 20-lakh livestock population that depends on the grassland, the second part of the project envisions the production and storing of fodder for local farming and pastoral communities that live here. There are 48 villages that live inside the Banni grasslands. This part of fodder production by the forest department has become a cause of grave concern for environmentalists and ecologists in the area.

“There exists a huge gap in demand and supply of fodder, making the livelihood of locals very difficult especially in droughts, which are a frequent occurrence in the area. Gujarat imports fodder from outside to make up this gap. It is important then to harvest grasses and keep them in storage as a mitigation measure. The state government has been collecting 67 lakh kg of grass annually. We have already made interventions in the Saurashtra grasslands, as a result of which 3 crore kg of grasses were collected last year. The 30 year average of grass collection was 247 kg per ha and is now 600 kg per ha,” Gujarat Conservator of Forests Dr Sandeep Kumar said.

Dr Kumar says multiple species are planted in one patch and only indigenous species of grasses are used.

Bharat Patel, deputy conservator of forests (DCF) of Banni Grassland said that his forest division has been given a target to bring additional 2400 ha under controlled grass cultivation in 2022-23 by the state government. “We have achieved this target by creating 27 grass plots of varying size and cumulatively covering 2400 ha. Gando baval (prosopis juliflora) and other unwanted vegetation has been removed from these plots and protective trench has been dug around them. We will start spraying grass seeds once the monsoon rains arrive,” Patel told [The Indian Express](#).

Ecologist Dr Ankila Hiremath, who has worked in Banni since 2012, says the forest department action is unnecessary and can even prove to be harmful. “In our experience in restoring parts of Banni, we have found that simply removing Prosopis Juliflora is sufficient, and the indigenous grasses grow back naturally. Moreover, many wildlife species started returning once this tree was removed. The planting of grasses, by furrowing the land, can actually be harmful as the roots of the indigenous grasses remain despite the invasive species – but if you furrow the land, you are removing the grass roots as well,” she said.

Sandeep Virmani of Hunnarshala, who works with pastoralists living in Banni, says the milk produced because of this diversity of grasses eaten by the Banni buffalo is unique and, therefore, in demand.