



BIODIVERSITY
ECOLOGY

AFFORESTATION

GREEN ENERGY

CONSERVATION

RECYCLE

FOREST

SAVANNA

CLIMATE

ECOSYSTEMS



When the solution becomes the problem

Ideas for mitigating climate change have been many and varied. Among the most popular has been afforestation. However, simply planting trees without thought to species variation and biodiversity can result in its own kind of environmental disasters. And not fully understanding the kind of lands on which the afforestation is happening could lead to an even bigger disaster and destruction of vital biodiversity.

One such type of ecosystem where indiscriminate tree planting efforts can be problematic is the tropical savanna, of the sort found in large parts of Africa and Australia, parts of Brazil, and India. Typically, savannas can be thought of as grasslands with scattered trees. In colonial times, it was assumed that savannas are a type of degraded forest, where a forest has been diminished by various factors. However, recent research paints a different picture.

Prof. Mahesh Sankaran, an ecologist who specializes in the study of tropical savannas, has shown that tropical savannas, including many of those found in peninsular India, are in fact a unique and ancient biome with rich and diverse ecologies, which are formed and maintained by complex interactions of climate, soils, fire and herbivores.

Protecting these savannas and grasslands from the effects of human action and well-meaning but poorly thought-out climate change mitigation measures such as afforestation is crucial to protect the delicate balance and rich biodiversity inherent in these systems. Sankaran's research shows that grasses in tropical savanna systems are important for absorbing carbon from the atmosphere and storing them in soils belowground.

Restoring these savannas and grasslands would be much more beneficial in the long run than planting trees in them. Moreover, conservation efforts to preserve the grasslands are important for the human communities that depend on them, and the rich wildlife they support.