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## INTRODUCTION

Rajasthan is India's largest state by area and houses the biggest desert- Thar. A state with aridity, sparse vegetation, and a near absence of groundwater.

Recognizing the need to work with rural communities to slow down ongoing desertification and provide a sustainable means of livelihood, we started our plantations in the region in 2015.

Agroforestry has been hailed as one of the critical solutions to tackle climate change in drylands like Rajasthan. Working closely with the farmers enables one to expand tree plantations alongside crops and boost rural income while protecting the environment.

SankalpTaru Foundation took up the responsibility and the opportunity.

Residents' traditional ecological and local knowledge of the trees and the native species in desert land and forage helps greatly.

Agriculture has emerged to be affected by erratic rainfall, desertification, and decreasing arability of existing soil.

The current study\* presents how sustainable management of agricultural land can aid in improving the livelihood of farmers in the arid regions of India: adding cover, promoting bio-diversity green conservation, promoting water conservation and management of existing bodies/watersheds, reviving water agricultural practices, and focussing on landless agricultural labour.





# WHY PROJECT GREEN THAR?

The western part of Rajasthan, lying beyond the Aravalli ranges, encompasses three main basins: Jaisalmer, Bikaner-Nagaur, and Barmer. Despite its geological significance, this region has often been overlooked due to concerns about harsh weather conditions. However, it's currently experiencing severe ecological challenges, leading to swift desertification in the Thar desert.

In the western part of Rajasthan State lies the extensive Thar Desert - which is covered in rolling dunes of sand for almost its whole expanse. It is noted that the annual precipitation in its northeastern area is 200 mm to 300 mm; where it has dry fauna with temporary vegetation during the rainy season. However, towards the western region, the amount of precipitation and vegetation continues to decline further. Due to this situation, the residents rear pasture animals and grow single crops during the rainy season. Being an arid area, the rainfall varies each year and income is not stable. Further, the residents are socially isolated as they reside in nearly 500 villages scattered around the desert with limited communication and road connectivity. Moreover, desertification is noted to increase exponentially (JICA, 2003\*); which impacts the existence of several villages and makes its infrastructure severely fragile.







### BEGINNING

In 2014-15, Project Green Thar was introduced to exercise agribusiness in the arid districts of Alwar and Barmer, which suffered from water insufficiency.

In recent decades, the region's groundwater levels have decreased significantly. In addition, the water salinity has increased tremendously due to the over-drawing from bore wells and tube wells. As a result, the area's farmers have yet to produce even two crops a year, leading to more barren lands.

To help the farmers secure a stable income, the SankalpTaru Foundation introduced 'Project Green Thar' to restore those barren townlands into fruit orchards, which would require considerably less water and upkeep compared to seasonal crops.













# CHALLENGES

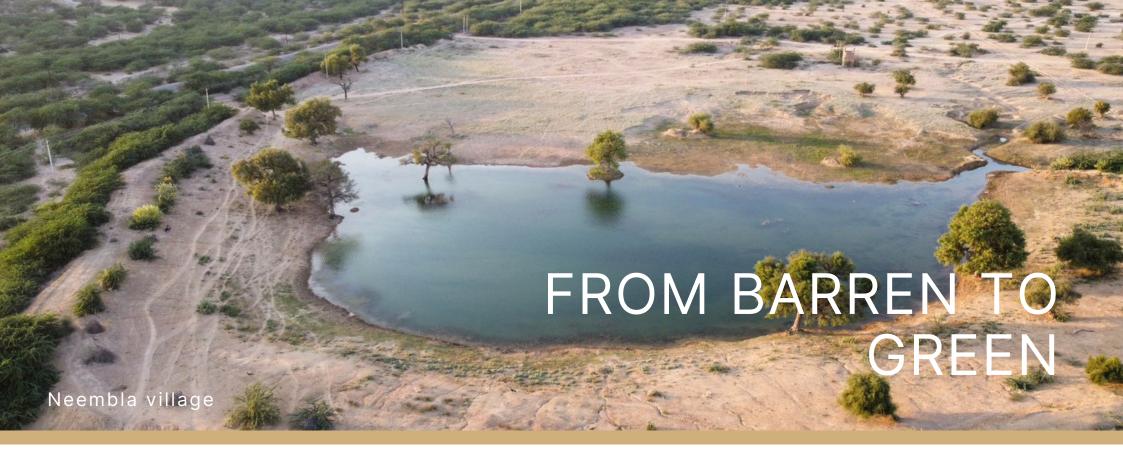
The growth of most fruit-bearing trees in the region faces difficulty due to the shortfall of water resources and deficient soil quality. A little alarmed to deviate from their heritage of practicing agriculture towards a relatively new practice of agroforestry and horticulture, farmers posed concerns.

Our on-ground team also dealt with early trial and error to test the survival frequency of fruit varieties in severe climate conditions. In addition, introducing and adapting the 'Microdrip Irrigation' method for the local farmers was challenging.

The sporadic weather pattern and climate change came in carrying some challenges about the survival rate. The dynamic fruit market rate was an added conflict that was sorted out for the farmers to include agronomy into their purview.







An existing oasis was further developed in Neembla with the initiation in 2015. SankalpTaru pushed this green development, surging and facilitating the farmers with a green economy and agribusiness, turning the barren land into a mini forest. This additionally boosted the forage for the animals as well.

Similar mini forests are taken in Sanchore and Ghotaru, where we are transforming the barren land into mini green patches for the flora and fauna of the region. The earlier classed area of the Northern desert thorn forest has been recast into vegetation boosters and other tree species taking care of shade in the scorching barren land stretches. The growing forest areas will also soothe the dry and extreme climate, featuring varied wildlife.



# IMPACT(2021-2022)

#### Number of trees: 1.5 lakhs

With the unwavering support of our green patrons, Project Green Thar has forged ahead. Counting a total of **7.5 lakh trees** between 2015 and 2023 has been gainful in terms of cost, and co-relatively, we have witnessed a considerable increase in the green area in the simulated districts. Our vision of agroforestry entails mixing and balancing traditional cropping techniques with horticulture, shielding farmers from the risks around weather uncertainty and boosting their livelihoods.

CO2 sequestered in a tree's lifespan

20,000+ Tonnes

O2 produced in a tree's life span

40,000+ Tonnes

Economic value for farmers after 1st harvest cycle

**INR 11 crore per season** 

Survival rate

90 %

No. of beneficiaries impacted

1000+

Fruit production per season

4500 Tonnes







#### **TESTIMONIALS**

Ridamal Singh from Jagsa, in September of 2022, joined hands with the SankalpTaru Foundation and received nearly 1500 pomegranate trees. He is highly grateful and says that his trees are growing healthy.

Ladu Ram, STF provided us with trees, and we are doing our best. We are full of gratitude to the organisation for their support.

More water is needed for irrigation for grains, and hence, our farmer-beneficiaries have now been uplifting their livelihood with the fruit-bearing trees received from the SankalpTaru Foundation.





Education is the cornerstone of a prosperous society and we welcome you to a sustainable architectural school. "Every individual must have the opportunity to access knowledge and contribute to the nation's development through education." - Maulana Azad.

Gajuo Ki Dhani is a remote village in the golden sands of Jaisalmer, Rajasthan, where the literacy rate is zero, and there is no school within a 25-kilometer radius. During our <u>ST MOVE Campaign</u>, we decided to ensure that primary education becomes accessible to the children of the village. The progress these children have made under the dedicated guidance of their teacher is truly remarkable. With every sunrise, the children are scripting their unique stories of progress and unwavering dreams. Their journey stands as a testament to the vision envisaged by our first Education Minister, Azad. Step into their world <u>here</u>.

# THE WAY FORWARD

With your continued support and trust, we know this green journey will not be short. Our Foundation aims to progress the project by increasing the number of beneficiaries and growing with them sustainably by earning their livelihood and proceeding towards a greener future.

We have received requests from the nearby farmers to extend the project to their areas and help them become climate-resilient. Certainly, it would be a delight to watch your contributions mitigate the risks of crop failures by planting fruit-bearing trees on farmers' lands.



