The initiative called *The Economics of Ecosystems and Biodiversity for Agriculture and Food* (TEEBAgriFood) aims at equipping decision-makers with the tools and information to recognise the value that ecosystems provide to food systems

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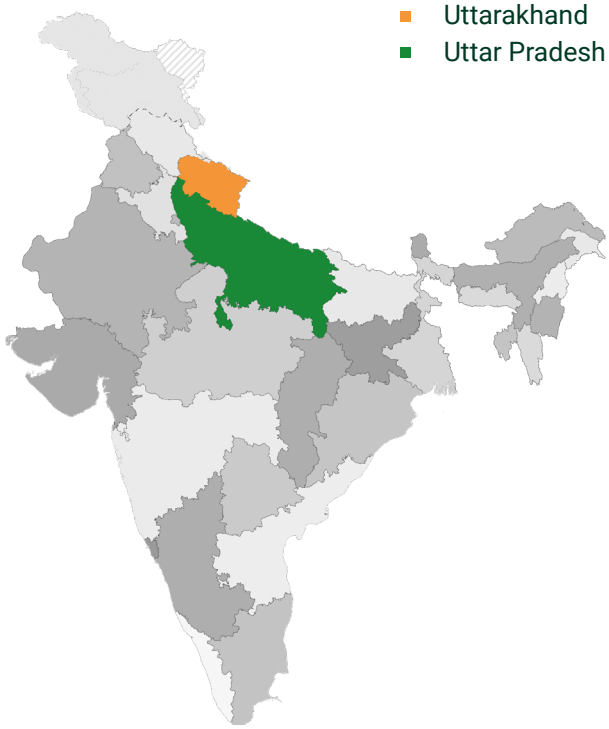
INDIA

Organic Farming and Agroforestry in Uttar Pradesh and Uttarakhand

Context & Focus

The Ganga basin region of Northern India, which includes Uttar Pradesh and Uttarakhand, is also known as the food bowl of India. A major part of the country's rice and wheat production happens here. Intensive farming, however, has resulted in severe pressure on land, water and other natural resources. Over the years, river Ganga has become heavily polluted due to runoff from fertilizers and other industrial waste.

Picture by: **Ashwini Chaudhary**
"Farmer harvesting sugarcane in Uttar Pradesh"



Location

The project focuses on the states of Uttar Pradesh and Uttarakhand, in Northern India.

Uttar Pradesh - Facts & Figures - Uttarakhand

With a population of **204 million**, Uttar Pradesh is the most populous state in India and home to almost **20%** of the country's total population

The total number of land holdings are **22.45 million** out of which:

- **08%** Medium & large farmers (> 2 ha)
- **14%** Small farmers (1 - 2 ha)
- **78%** Marginal (< 1 ha)

Fertilizer consumption in Uttar Pradesh is among the highest in India:

4.7 million tonnes/year

Terrain: Out of a total geographical area

- About **50 million** tonnes of foodgrains are produced in Uttar Pradesh every year – almost **20%** of the country's overall production.
- Major crops are **wheat & sugarcane.**
- Uttar Pradesh is one of the biggest states of India with **9 agroclimatic zones.**

- of 5.35 million ha in the state of Uttarakhand, 4.6 million ha (86%) is hilly area, and 0.74 million ha (14%) is plain area. The project has selected field sites in both hilly and plain area for a holistic assessment.

(Source: Agricultural Statistics at a Glance)

- Fertilizer consumption varies significantly across hilly and plain areas. The hilly areas are almost 90% rainfed and by default organic. Average fertilizer consumption is about 5 kg per ha in the hilly areas and more than 100 kg per ha in the plains.

Method & Objectives

The Government of India has decided to promote organic farming to reduce the river pollution through two national schemes PKVY (Paramparagat Krishi Vikas Yojana) and NMCG (National Mission for Clean Ganga). The TEEB project in India aims to strengthen this ongoing work of scaling up organic farming. The project will also align with the National Agroforestry Policy for which customised solutions are needed for different states. The project aims to inform planning processes by providing comprehensive, scientific evidence to support agriculture and food system policies.

The study will include scenario analysis, using decision support tools and biophysical models such as CROPWAT tool (Crop Water and Irrigation Requirements Program of FAO), APSIM (Agricultural Production Systems Simulator) for scenario analysis of agricultural productivity, and InVest tool for valuation of integrated ecosystem services. It will also include field demonstrations to assess the impact of organic farming and agroforestry over time.

Picture by: **Nandhu Kumar**
"Harvesting paddy fields in India"

Project Duration: **January 2019 – December 2022**

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