



Clean Air and Healthy Soil is a unique soil **carbon sequestration project** which addresses the severe crop residue burning issue in North India in an environmentally sustainable and cost-effective manner. The project integrates Sustainable Agriculture Land Management (SALM) practices as a solution to stubble burning. The project ensures nutrient recycling, carbon sequestration, water conservation, weedicide savings, improved yield, climate resilience of crops, and change in farmer's behaviour, which is the primary reason for burning. The adopted practices bring significant improvements to farmer livelihoods, such as improved air quality, and the entire rural ecosystem.

**Background**

In India, agriculture is the primary source of livelihood for about 58% of the population, contributing to around 17% of the country's gross domestic product (GDP). The two states of North India - Punjab & Haryana - are the most fertile farming states. The states are known for their extensive irrigation system appropriate for farming and having 93% of the total productive land used to produce food grain.

However, there is a lot of wheat and paddy cultivation which generates much agricultural waste. These crop residues are burned every year, causing excessive air pollution in the area and in Delhi. In addition to that, excessive use of chemical fertilizer and the high water demand already degraded the land and significantly contributed to carbon emissions. Due to these developments, **the air pollution level is hazardous** with an air quality index exceeding 400-1000 µg/m3 according to the Central Pollution Control Board (CPCB). Meanwhile, the WHO guidelines state that PM2.5 shouldn't exceed 25 µg/m3, PM10 shouldn't exceed 50 µg/m3 and ozone (O3) is no higher than 100 µg/m3. Therefore, crop residue burning is a severe threat to the environment and health of millions of people

**Approach**

Since 2018, the Confederation of Indian Industry (CII) has been working with local farmers in Northern India on crop residue management with the project Clean Air and Healthy Soil. This project had a three-year roll-out, which began in August 2018 and ended in August 2021.

The proposed activities in the intervention area include, amongst others - mulching, composting and improved tillage. In the first two years of the project, these techniques were used on 50-80% of the land area and are now used everywhere.

FairClimateFund & CII are now also developing a carbon sequestration project to support the local farmers by including Sustainable Agriculture Land Management (SALM) practices. These activities **increase soil carbon sequestration** through improved cropland management and reduce GHG emissions by reduced crop residue burning, reducing N2O emissions and/or CH4 emissions.

**Impact**

The implementation of SALM practices offers social, environmental and economic benefits to the local farmers and the ecosystem. The crop residue management contributes to agriculture productivity and offers better yield to the local farmers which addresses bigger challenges like food security. The reduction of expenses with regards to the usage of chemical fertilizers also provides economic benefits. In addition, the carbon sequestration by the soil improves its health and increases the organic matter that provides necessary nutrients to the crop. Finally, the **removal of GHG emissions** addresses global warming.

Examples of other activities in the project are related to agroforestry where trees or shrubs are grown around or among crops or pastureland. This increases the green cover and reduces water retention and water consumption. The project also trains farmers to make the ecosystem more resilient to the impact of climate change.

With this, we offer future generations a chance for a sustainable income.

	<b>64,807</b>	Hectares of agriculture land covered
	<b>27,863</b>	Farmers supported
	<b>203,361</b>	Tonnes of CO2 sequestered annually



### Ambition

The project aims to scale up sustainable agriculture land management. It trains more farmers with activities like residue management, mulching, composting, growing green manure crops, reducing biomass burning and agroforestry. As a result, soil organic carbon enhances, which leads to higher carbon sequestration. Additionally, it avoids emission from residue burning - a prevalent exercise in the area which also protects the topsoil of these areas.

The certification of the project under VERRA will help to mobilize carbon income for farmers to improve soil health while also providing an opportunity for the private sector to fulfil their net zero target.

### Benefits of the project

### Contribution to the SDG's

#### Economic

- Reduced expenditure on chemical fertilizer and other farm inputs, like soil, water etc.
- Carbon income for managing the farm land in a sustainable way



#### Food security

- Improved soil health and increased agriculture productivity



#### Health

- Reduced air pollution and improved air quality index



#### Climate and environment

- Removed/sequestered CO2 emissions and storage in soil



### Do you want more information about this project?

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Pending approval of  
 Verified Carbon Standard



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