

# Carbon Offsetting Rice Emissions (CORE), India

Implemented by the *Fund for the Promotion of Innovation in Agriculture (i4Ag)*.  
As part of the Special Initiative *Transformation of Agricultural and Food Systems*.

## Background

Rice is the staple food for 3.5 billion people worldwide. 91 percent of rice is harvested in Asia; India is the second largest rice producer in the world. A significant share of the world's rice harvest is produced by **wet rice cultivation**. Besides its significant water footprint, wet rice cultivation is a large contributor to methane emissions (CH<sub>4</sub>), which is produced when organic matter decomposes in the absence of air. As methane is nearly 28 times more harmful to the climate than CO<sub>2</sub>, wet rice cultivation is a relevant driver of the **global climate crisis**. At the same time, rice cultivation itself is strongly affected by climate change, especially due to the increasing volatility of precipitation and extreme temperatures and droughts. **Smallholder** women and men farmers produce most of the rice harvest, leaving them particularly vulnerable to the consequences of climate change. Moreover, **women** take on a large share of the work in rice cultivation and post-harvest activities. With a lack of their recognition as farmers by themselves and by institutions, limited access to productive resources, agricultural knowledge and trainings regarding innovative cultivation methods, they are often unable to make sufficient use of new technologies and economic opportunities.

## Purpose

The project aims to create the conditions and mechanisms for smallholder farmers to valorise the reduction of greenhouse gas (GHG) emissions that occur in the rice value chain through the use of **climate-sensitive technologies** and practices in cultivation and post-harvest handling while adopting a **gender transformative approach**. A promising model is to introduce climate-sensitive technologies and have official standard setters for **carbon credits** and emissions trading recognize them. In this way, economic incentives can be set for the agroecological transformation and the diversification of smallholder business models.

Project name	Carbon Offsetting Rice Emissions (CORE), India
Project region	Haryana, Madhya Pradesh, Andhra Pradesh
Consortium Partners	International Rice Research Institute (IRRI) Olam Agri UN Entity for Gender Equality and the Empowerment of Women (UN Women) GIZ
Duration	12/2022 - 05/2026
Impact	<ul style="list-style-type: none"> <li>20,000 smallholder farmers trained in the use of technologies and practices to reduce GHG</li> <li>90,000 tons of CO<sub>2</sub> equivalents saved</li> <li>2,500 female smallholders strengthened as leaders and entrepreneurs</li> </ul>



## The Innovation

Public and private sector research is looking closely at the development of climate-sensitive rice cultivation and post-harvest methods (fewer GHG emissions, greater resilience to rainfall and temperature fluctuations). **Alternate Wetting and Drying (AWD)** is one example for climate-friendly rice cultivation where the fields are flooded only periodically. The positive impact of AWD is scientifically proven and recognised by international standard setters. There are comparable climate-sensitive methods, but these have not yet been recognised by standard-setting organisations. As a central innovation, new methodologies for the accreditation of carbon credits for **low-emission rice farming practices** will be outlined and assessed for their scientific validity, gendered impacts, scope and potential for acceptance. Methodologies with a positive assessment outcome will be submitted to a carbon certification standard organisation. The pool of methods for **carbon-mitigation to boost credit generation** will thereby be widened, contributing to resilient cropping systems to hedge against future GHG emissions.



From left to right: Smallholder women farmers in Haryana ©Olam Agri; Rice field in India ©Olam Agri



Static gas chamber for GHG sampling:  
Rice fields in Haryana ©Olam Agri



Mastertraining on AWD (Alternate  
Wetting and Drying) ©IRRI

*In line with our purpose to transform agriculture for a food-secure future, through CORE, we are actively working with GIZ and consortium partners, IRRI, and UN Women, to introduce climate-smart farming practices and promote gender equality in rice farming in India. As one of the largest rice merchants globally, our goal is not only to make the rice supply chain more resilient and environmentally sustainable, but to also enable and empower more women farmers to achieve success by providing equal access to resources and opportunities as men," said Paul Nicholson, Vice President for Rice Research and Sustainability, Olam Agri*

## Project Activities

To reach the project objectives the following measures will be implemented:

- **Technical trainings** for farmers and multipliers on climate-sensitive technologies and practices in rice cultivation and post-harvest activities
- **Women empowerment** through increased participation of women farmers in the project, entrepreneurial skills, and business development as well as integration of an overall gender transformative approach
- The identification and testing of **new innovative methodologies** to reduce GHG emissions
- Development of **Project Design Document** for the generation of emission certificates under a carbon accreditation methodology
- Improving national framework conditions for **generating and trading carbon credits**
- **Memorandum of Understanding** for **Scaling** of project results and learning experiences.

Through the division of responsibilities, the consortium partners will make their contributions alongside their key strengths and expertise, which ensures they are complementary and allow for an efficient implementation.

## Consortium Partners

### UN Women

UN Women is the United Nations entity dedicated to gender equality and the empowerment of women. A global champion for women and girls, UN Women was established to accelerate progress on meeting their needs worldwide. [www.unwomen.org](http://www.unwomen.org)

## Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

GIZ GmbH is Germany's leading provider of international cooperation services. As a federal enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development. [www.giz.de](http://www.giz.de)

### Olam Agri

Olam Agri is a market leading and differentiated agribusiness, focused on high-growth markets with a global origination footprint, processing capabilities and deep understanding of market needs for over 33 years. Focused on transforming food, feed and fibre for a more sustainable future, the company aims to create value for customers, enable farming communities to prosper sustainably and strive for a food-secure future. [www.olamagri.com](http://www.olamagri.com)

## International Rice Research Institute (IRRI)

IRRI, an international agricultural research and training organisation, is dedicated to abolishing poverty and hunger among people and populations that depend on rice-based agri-food systems. Through their work and partnerships, they aim to improve the health and welfare of rice farmers and consumers; promote environmental sustainability in a world challenged by climate change and support the empowerment of women and the youth in the rice industry. [www.irri.org](http://www.irri.org)

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