

Evaluation of India Low Carbon Agriculture (Panel based)

CIFF, in partnership with Aga Khan Foundation and AKRSP(I), has been implementing a 3-year proof of concept to establish Low Carbon Agriculture's (LCA) potential to turn the agricultural sector into a net carbon sink and to increase the farming ecosystem's resilience. The intervention is being implemented in 3 agroecological zones spread across Gujarat, Madhya Pradesh, and Uttar Pradesh, targeting 18,000 farmers. The project's objective is that by 2024, at least 50% of the targeted farmers will adopt LCA practices and systems.

Sambodhi, as the evaluation partner, has been working with IRRI to evaluate the proof of concept and generate learnings for stakeholders to help guide prospective action. A mixed methods approach will be employed with quantitative (a quasi-experimental design using a panel of beneficiary and control farmers) and qualitative (stakeholder consultation and in-depth interviews) components. Along with indicators related to adopting LCA practices by farmers, women farmer empowerment, and water and energy use, Sambodhi has also been assessing bio-physical indicators (organic carbon content, water holding capacity, compact) by testing soil samples. The specific activities include

1. **baseline (2022) and endline (2024) data collection** for evaluation of Low Carbon Agriculture proof of concept – a panel of respondents would be covered for this evaluation (3000 respondents in each round),
2. **two monitoring rounds (2022/23)** covering two kharif seasons and collecting relevant data to support the adoption of practices and program progress (1500 respondents in each round), and
3. **data collection and verification on bio-physical measures** that will include physical, chemical, and biological properties of soil, water use efficiency, energy efficiency, and emissions from cropping practices.