

Building Climate Resilient Communities in India

The M S Swaminathan Research Foundation (MSSRF)¹ is a not-for-profit organisation set up in 1988 to work for sustainable and equitable rural development. The Foundation's approach is to harness modern science and technology to improve the lives and livelihoods of tribal and rural communities. Towards this end, MSSRF undertakes participatory and anticipatory research for sustainable development in partnership with local communities, leveraging support from other knowledge-based institutions and public and private sector organisations. Climate change is a major cross cutting theme across all initiatives. Headquartered in Chennai, MSSRF works in the States of Tamil Nadu, Kerala, Odisha, Andhra Pradesh, Telengana, Maharashtra, Karnataka and the Union Territory of Puducherry. Its work currently spans 31 districts, 113 blocks and 452 villages across the country, reaching out to nearly 2,00,000 households.

Adoption of climate-smart agriculture practices and soil health management is a major approach adopted to enhance the food and livelihood security of farm households. While soil and water conservation is an effective climate adaptation strategy, Integrated Pest Management and Integrated Nutrient Management reduces the use of chemical fertilizers/pesticides and thereby reduces the emission of green-house gases like nitrous oxide and carbon dioxide. The Foundation has developed training material to create a cadre of community level 'Climate Risk Managers', who can create awareness about climate risks and adaptation measures. Research at the laboratory level focuses on developing crop varieties with resistance/tolerance to a biotic stress conditions including drought. ICT



Demonstrating feasibility of FSN approach in terms of increase in area and availability of climate resilient nutrient dense crops. (Photo: FSN, LANSA)

tools are used to provide need-based agro-advisories for horizontal dissemination of knowledge at scale. Women farmers groups in Vidarbha, Maharashtra² have been trained on sustainable and climate resilient agriculture practices under the programme for empowerment of women farmers: *Mahila Kisan Sashaktikaran Pariyojana* (MKSP).

Both millets and pulses are being promoted across Tamil Nadu, Odisha and Vidarbha as rain fed and climate resilient crops, under different initiatives. More recently, MSSRF has been working with small, marginal farmers in a cluster of villages in Wardha district, Maharashtra and in Koraput, Odisha to demonstrate feasibility of a Farming System for Nutrition (FSN) approach to address malnutrition under a research programme on Leveraging Agriculture for Nutrition in South Asia (LANSA).³

MSSRF has demonstrated effective soil health management interventions focusing on application of bio-inoculants produced by women self help group managed eco-enterprises; enhancing soil organic matter through organic inputs like vermin composting, and

enhancing soil carbon sequestration by maintaining continuous plant cover, no tillage and fallow land conversion. It has implemented a bio-industrial watershed programme in Tamil Nadu and Odisha; and partnered in implementing a "ClimaAdapt" Project in the states of Tamil Nadu, Andhra Pradesh and Telengana, focusing on water use efficiency in the context of climate change.

NABARD has recognised MSSRF as a project partner in implementing Adaptation Fund projects of UNFCCC and currently MSSRF is implementing an Adaptation Fund project in Andhra Pradesh. The Foundation's work on sustainable and climate resilient agriculture practices has been recognised at different forums like the Global Humanitarian Water and Food Award⁴ and Groundwater Augmentation Award.⁵ ■

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1 <http://www.mssrf.org/>

2 <http://mssrf-fs-mksp.org/>

3 <http://www.lansasouthasia.org/>

4 <http://www.mssrf.org/?q=content/mssrf-placed-2nd-global-waf-award-2014>

5 <http://www.chennaifirst.in/2014/05/30/farmers-notebook-pulse-panchayat-gains-momentum-in-tamil-nadu/>