



## HOW ODISHA MILLETS MISSION REVIVED A FARMERS' SEED SYSTEM IN INDIA: Building institutional frameworks around farmers' seed, expertise and needs through participatory and multi-stakeholder processes.

Participatory Varietal Trials (PVTs) increased farmers' involvement in the varietal selection process, which ultimately enhances the chances of adoption of these varieties. This has contributed to conservation of agro-biodiversity and ensured that a large number of farmers have access to good quality seeds of the most preferred varieties within a short time. Access to good quality seed, with changed agronomic practices, contributed to a 215% increase in the gross value of millet produced per farmer household between 2017-18 and 2018-19 and 120% increase in yield rate between 2016-17 and 2017-18. **Odisha Millets Mission**

### The success story

Odisha Millets Mission (OMM) is a flagship programme launched by the Department of Agriculture and Farmers Empowerment, Government of Odisha in India. This holistic, participatory and multi-stakeholder approach was initiated in 2017 in response to a shrinking of agro-biodiversity in finger millet due to lack of timely availability of quality seed, as well as unorganised markets. Through the success of this programme, the Government of Odisha has demonstrated the power of beginning with, and building on, farmer knowledge, practice and agricultural resources with assistance from a variety of stakeholders throughout the value chain.

The financial assistance of government facilitated local communities to cultivate and consume a wide selection of farmers' varieties of millet, which they

themselves identified as desirable and suited to their landscapes through participatory research. The participatory varietal trials showed that some of the farmers' varieties of millet perform better than the state released varieties, especially when using particular agronomic practices<sup>1</sup> within an agroecological framework.



<sup>1</sup> Sustainable Rice Intensification (SRI) principles and line sowing adapted for millet cultivation.

Farmer-managed seed systems (FMSS) were fortified through Community Managed Seed Centres (CMSCs), which have linkages with the Department of Agriculture and Farmers Welfare. The CMSCs play a vital role in conservation, multiplication and making seed available to the farmers on time. Standard Operating Protocols (SOPs) for farmers' seed systems was ultimately developed, which deals with conservation, multiplication, popularization and institutional mechanisms for mainstreaming farmers' varieties.

The Government has now decided to go for Crop Diversity blocks in Odisha with other crops like pulses, oil seeds, cereals to conserve and popularize preferred farmer varieties.

## How was it implemented?

### **Multi-stakeholder consultation, problem identification and strategy development**

This programme was initiated in 2017 with state supported multi-stakeholder consultations that sought to thoroughly understand farmer challenges in millet production systems and to review other successful civil society projects. The consultations brought together department officials, Farmers, Women groups, Community leaders, NGOs, Panchayati raj institution (a system of rural local self-governance in India) members and technical experts. Through these consultations, a consensus emerged to revive millets through promotion of consumption, production, marketing and enterprise support. It was decided to collaborate with NGOs and to promote farmer-to-farmer learning, as well as to adopt agro-ecological approaches suited to local contexts.

In 2020 an OMM Working Group on Seeds was formed by Odisha government's department of Agriculture and Farmers Empowerment. The group worked towards creating an enabling framework for mainstreaming FMSS, developing a Standard Operating Protocols for alternative seed systems. Members of this group included

high level researchers from both government and academic institutions.

### **Participatory varietal trials, multiplication and mainstreaming preferred varieties**

In collaboration with farmers, PVTs were conducted at block level (administrative units below District level) to identify preferred millet varieties. Seed varieties were selected based on their suitability to local conditions, while maintaining proper documentation of seed characteristics, yield, nutrition value and its resilience to diseases and pest infestation. Farmers' producer organisations played a lead role in seed multiplication of the identified preferred varieties, through facilitating seed multiplication programmes at the community level. Thereafter, multi-location trials were run in farmers' fields. The preferred varieties selected by women and men farmers were mainstreamed in the public domain.

These PVTs helped to map and collect the landrace seeds from farmers and proved to be an effective method for identifying appropriate cultivars for resource-poor farmers. OMM was instrumental in assessing the performance of recommended cultivars and popularizing them, with involvement of District and below District officials from Department of Agriculture and Farmers Welfare. Farmers are able to access to these landraces at cost through the CMSCs, which are responsible for multiplication of the preferred landraces<sup>2</sup>.

OMM has explored the landraces of millets which are still grown in few pockets in the state of Odisha. These varieties are kept both in field gene banks established in the block attached to the CMSS programme, and also in the State Seed Testing Laboratories (SSTL) in Bhubaneswar under a cryogenic system. There are currently 97 traditional millet varieties stored in SSTL. In the field gene bank, landraces are grown in farmer's fields each year and farmers choose the best varieties for multiplication. The farmers can access the conserved landraces from SSTL if there is a loss of landrace due to any natural calamities.

<sup>2</sup> Note that the formal seed system only deals with notified varieties and is not suitable for landraces. Seeds of non-released and notified varieties are not allowed for sale in labelled packaging.



Some farmers are designated by the mission as 'Seed Farmers' and they play leading roles in the conservation and exchange among farmers in their respective regions. It is important to recognize the preferred varietal characteristics highlighted by conservers based on their contextual, multi-functional and cultural knowledge. This is where the traditional knowledge from the field broadens agricultural education with regard to desired characteristics of the local communities. There is great emphasis on identifying, selecting, purifying and promoting the best local varieties.

## Engaging farmers producer organisations and women self-help groups

To ensure that farmers can access superior quality seed varieties, four or five CMSCs were set up in each block under the OMM. These CMSCs are managed by Farmer Producer Organizations (FPOs) at the block level and sub-centres of CMSCs are managed by women self-help groups (WSHGs) at the community level.

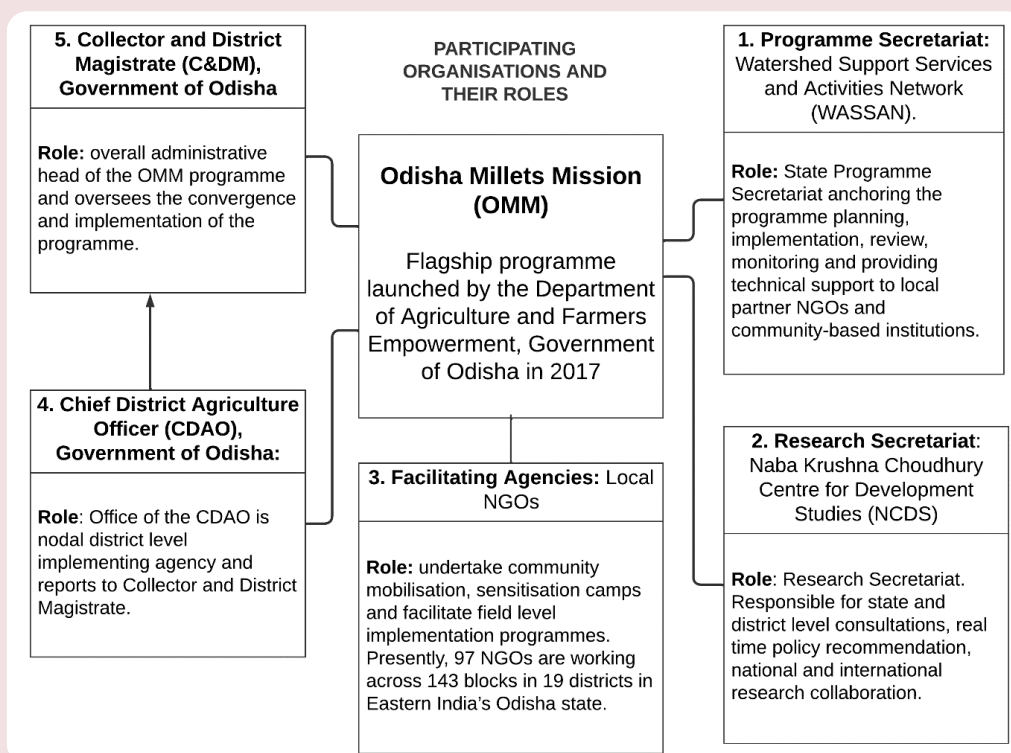
FPOs and WSHGs received training on the effective process of preserving quality seeds through using

storage bins, tarpaulin sheets, weighing machines and moisture meters. FPOs of the concerned block and selected farmers who showed interest in seed multiplication define mutually agreed terms and conditions of seed production and the agreeable price at which seed is to be purchased, along with quality and quantity parameters. FPOs are supported with working capital for acquiring seeds and overseeing operational costs.

Agricultural officials at block and village level provide the necessary guidance and support for this process. The seed multiplication plot is treated with organic inputs as per the guideline of organic farming along with a compulsory weeding. Guidance and support are given by state extension members.



## Odisha Millets Mission Organogram





## Key lesson

Policy changes to support neglected and underutilised food, as well as farmers seed systems, can make a significant impact on climate resilient sustainable production as well as the diets and incomes of the most vulnerable households without the need for additional resources.

## CROPS4HD

This document is an output of the CROPS4HD project ([www.crops4hd.org](http://www.crops4hd.org)): a consortium of SWISSAID, FiBL, and AFSA supported by the SDC and LED. CROPS4HD has three major components: production, market and policy advocacy.

AFSA, which is responsible for advocacy, is a broad alliance of civil society actors involved in

the fight for food sovereignty and agroecology in Africa. Its members represent small-scale farmers, pastoralists, hunters/gatherers, indigenous peoples, faith-based organisations and environmentalists from across Africa. It is a network of networks, currently with 37 members operating in 50 African countries.

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### WHO IS AFSA?

AFSA brings small-scale farmers, pastoralists, fisherfolk, indigenous peoples, faith groups, consumers, youth and activists from across the continent of Africa to create a united and louder voice for food sovereignty.

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