



**Food and Agriculture
Organization of the
United Nations**



The International Treaty
**ON PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE**

Submission of

Measures, Best Practices and Lessons Learned from the Realization of Farmers' Rights as set out in Article 9 of the International Treaty

1. Basic information

- **Title of measure/practice:** Strengthening informal seed system
- **Date of submission:** 01 September 2021
- **Name(s) of country/countries in which the measure/practice is taking place:** India
- **Responsible institution/organization (name, address, website (if applicable), e-mail address, telephone number(s) and contact person)**
PAIRVI (Public Advocacy Initiatives for Rights and Values in India)
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- **Type of institution/organization (categories):** Not for Profit
- **Collaborating/supporting institutions/organizations/actors, if applicable (name, address, website (if applicable), e-mail address, telephone number(s))**
ITPGR, FAO
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2. Description of the examples

Mandatory information:¹

PAIRVI, a capacity building and advocacy support organization with a focus on agriculture, initiated the work (in 2019) to improve of-farm and *in-situ* conservation of pulses and oil seeds in rice fallow areas of tribal belts of 5 Central and East Indian states following a participatory approach. The aim is to strengthen the local informal seed system so that diversity of pulse and oil seeds becomes available to the farmers for cultivation and eventually for consumption and they become technically equipped to sustainably utilize the plant genetic resources. Key objectives are:

- Documentation of indigenous knowledge of local seed systems related to pulses and oil seeds
- Establishment of robust informal seed system
- *In-situ* conservation of pulses and oil seeds, participatory variety selection to make available a range of rice fallow varieties to farmers to fit into their land types
- Enhanced nourishment to the tribal families, livelihood support and climate resilience in farming

Key Outcomes

- Taking benefits of the resources being made available through the project the farmers of the project area in Bihar have started cultivation of different varieties of pulses and oil seeds in three seasons. About 41 varieties of pulses, beans and oil seeds have been successfully re-introduced in the project villages.
- It is after a period of 25 years that farmers have started cultivating pulses in the monsoon season in the project villages in West Bengal.
- Concept of community seed banks and seed sovereignty are well received and seed banks have become instrumental in enhancing pulse and oil seed biodiversity in all the 5 project sites.
- Results have inspired the farmers from outside the project area especially in Bihar and West Bengal to cultivate pulses and oilseeds.

Lesson Learned

- Better results are obtained when the scientific knowledge is combined with traditional knowledge of the farmers.
- Interventions become successful when participatory approach is applied for all the phases of planning and execution.

Brief history (including starting year), as appropriate

PAIRVI started work to strengthen pulse and oil seed biodiversity required for the rice fallow period in the tribal areas of 5 states in 2019. Setting up of community seed banks have been initiated in early 2020. First round of on – farm participatory trials of the farmer’s and improved varieties have been completed

¹ This mandatory information is required in order for the measure/practice to be included in the Inventory.



in 2020-2021. This year (2022) is largely dedicated to the reintroduction of the farmer's preferred varieties to the fields.

Core components of the measure/practice (max 200 words)

Core components of the measure are:

- Documentation of indigenous knowledge of local seed systems
- Strengthening informal seed system via setting up community level seed banks and promotion of local seed exchange
- Reintroduction of the pulse and oil seeds varieties to the farmer's fields, systematic selection of the farmer's preferred varieties for the area through participatory variety selection, characterization of the varieties
- Farmer's capacity building on conservation and sustainable use of crop biodiversity, seed quality control and multiplication of quality seed

Description of the context and the history of the measure/practice is taking place (political, legal and economic framework conditions for the measure/practice) (max 200 words)

~82% of the total 12 million hectare rice fallow area in India lies in the Central and Eastern Indian states. A large part of this area is inhabited by tribal communities. Non availability of suitable seeds, lack of moisture at planting time and lack of irrigation has been the main reasons behind this huge rice fallow area. It is a big challenge for food security and farmer's economy as farmers are able to cultivate only one crop a year.

The post monsoon season offers a window of opportunity (October-March) to cultivate short-duration pulses and oil seeds. Pulse cultivation is important as (i) per capita availability of pulses have reduced from 60 g to 41.7 g/ person/ day in the past 60 years (ii) pulses are an important source of proteins. The reduced per capita availability of protein has caused Protein-Energy-Malnutrition (PEM) especially among children below the age of five years in India.

Despite the government's efforts to strengthen seed production and distribution, a shortage of 50,000 tonnes of seeds of pulses have been a major roadblock in increasing area under pulse production highlighting the requirement of decentralized model of seed production. There is a diverse genetic resource of legumes and other varieties of pulses available but due to the absence of robust local seed system they remain underutilized. Due to fast changing climatic conditions a strong need is being felt to bring the useful varieties back to the farms (on farm conservation) and make them ready and available for the farming community.

- To which provision(s) of Article 9 of the International Treaty does this measure relate

- Art. 9.1 X
- Art. 9.2a X
- Art. 9.2b
- Art. 9.2c X
- Art. 9.3 X



3. Other information, if applicable

- Please indicate which category of the Inventory is most relevant for the proposed measure, and which other categories are also relevant (if any):

No.	Category	Most relevant ²	Also relevant ³
1	Recognition of local and indigenous communities', farmers' contributions to conservation and sustainable use of PGRFA, such as awards and recognition of custodian/guardian farmers		
2	Financial contributions to support farmers conservation and sustainable use of PGRFA such as contributions to benefit-sharing funds		
3	Approaches to encourage income-generating activities to support farmers' conservation and sustainable use of PGRFA		√
4	Catalogues, registries and other forms of documentation of PGRFA and protection of traditional knowledge		
5	In-situ/on-farm conservation and management of PGRFA, such as social and cultural measures, community biodiversity management and conservation sites		√
6	Facilitation of farmers' access to a diversity of PGRFA through community seed banks ⁴ , seed networks and other measures improving farmers' choices of a wider diversity of PGRFA.	√	
7	Participatory approaches to research on PGRFA, including characterization and evaluation, participatory plant breeding and variety selection		√
8	Farmers' participation in decision-making at local, national and sub-regional, regional and international levels		
9	Training, capacity development and public awareness creation		√
10	Legal measures for the implementation of Farmers' Rights, such as legislative measures related to PGRFA.		
11	Other measures / practices		

²Please select only one category that is most relevant, under which the measure will be listed.

³Please select one or several categories that may also be relevant (if applicable).

⁴ Including seed houses.



- **Target group(s) and numbers of involved and affected farmers⁵**
 - Tribal farmers of 26 villages situated in 5 different states of Central and East India are the target group of the project.
 - 500 farmers have directly and around 1200 farmers have indirectly benefitted with this work till today.
- **Location(s) and geographical outreach**

Project area is spread in 26 villages of 5 states of India. More precisely the project villages are situated in Dhar District of Madhya Pradesh, Bilaspur district of Chhattisgarh, Jalpaiguri district of West Bengal, Deoghar district of Jharkhand and Jamui district of Bihar.
- **Resources used for implementation of the measure/practice**

Human resources for technical support and outreach, farmer's contribution for space and seed material, financial resources from ITPGR
- **How has the measure/practice affected the conservation and sustainable use of plant genetic resources for food and agriculture?**

Farmers of the tribal rich project area have long left cultivating pulses and oil seeds in the rice fallow season. Strengthening informal seed system via setting community level seed banks for pulse and oil seeds, capacity building of farmers on conservation and sustainable use of plant genetic resources, participatory on farm trials and variety selection and seed exchange via seed fairs in the tribal villages have successfully resulted in revival of a culture of pulse and oil seeds cultivation post monsoon in the area.

Many varieties (including many traditional ones) have returned to the farms after a gap of 25 years. *In - Situ* and of - farm conservation of seeds in village level seed banks run by communities have restored pulse and oil seeds' biodiversity and enhanced seed sovereignty of the farmers.

The strong participatory approach deployed for conservation and sustainable utilisation of plant genetic resources for food and agriculture has strengthened the collaboration between tribal farmers especially women farmers, scientists & researchers and field coordinators. Various local actors and practitioners observing the impacts of the project are becoming increasingly aware of the usefulness and urgency to conserve and sustainably utilize the locally available genetic biodiversity for sustainable farming, diversifying livelihood options and nutritional support.

- **Please describe the achievements of the measure/ practice so far (including quantification) (max 200 words)**

500 tribal farmers from 26 villages spread in 5 states have directly benefitted from community seed banks during COVID-19 pandemic (2020 to 2021). _____ farmers became part of participatory trails, 42 farmers received extensive hands on training on sustainable seed conservation, cultivation and multiplication and 50 youth were trained through Farmer's Field School. A major success has been that the results have inspired the farmers from outside the project area especially in Bihar and West Bengal to cultivate pulses and oilseeds.

⁵ Any classification, e.g. of the types of farmer addressed, may be country-specific.



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- Other national level instruments that are linked to the measure/practice
Protection of Plant Variety and Farmers Right Act, 2001 (PPVFR Act)
The Biodiversity Act, 2002
National Mission for Sustainable Agriculture

Lessons learned

- Describe lessons learned which may be relevant for others who wish to do the same or similar measures/practices (max 250 words).
One of the most important achievements of the project has been the revival of a culture of cultivation of pulses after 20-25 years (as in the case of West Bengal). Farmers are encouraged to cultivate pulse varieties available within the project area and from outside the project area (as in case of West Bengal and Jharkhand). The project has created a momentum of pulse and oil seeds cultivation so much so that farmers want to experiment with pulses, not only during the rice fallow season but also during the regular monsoon season. The important lessons drawn from our experience is that
 - Reviving/ strengthening pulses and oilseeds cultivation culture is possible with only a little support from outside (seeds and other planting material, and technical support) when participatory engagement and consistency of efforts is there.
 - Women farmers are the source of traditional knowledge for treating and storing seeds.
 - For the best on-farm results scientific information needs to be coupled with traditional knowledge
- What challenges encountered along the way (if applicable) (max 200 words)
In the project area the traditional biodiversity of pulses have vanished over a period of time along with the knowledge associated with it as revealed by the house hold survey. Farmers are cultivating only one crop a year in the monsoon season. Finding traditional local pulse and oil seed varieties for rice fallow season (post monsoon) and taking along all the sections of the society to cultivate it scientifically has been a challenge.
- What would you consider conditions for success, if others should seek to carry out such a measure or organize such an activity? (max 100 words)
Participatory approach at each level of planning and execution of the activities for *in-situ* and of farm conservation builds confidence and a sense of belonging towards the work.
- Link(s) to further information about the measure/practice
<https://www.pairvi.org/index.php>