



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



The International Treaty
ON PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE

**Views, Experiences and Best Practices as an example of possible options for
the national implementation of Article 9 of the International Treaty**

Note by the Secretary

At its [second meeting](#) of the Ad hoc Technical Expert Group on Farmers' Rights (AHTEG), the Expert Group agreed on a revised version of the [template](#) for collecting information on examples of national measures, best practices and lessons learned from the realization of Farmers' Rights

This document presents the updated information on best practices and measures of implementing Article 9 of the International Treaty submitted by Southeast Asia Regional Initiatives for Community Empowerment (SEARICE) on 1 August 2019.

The submission is presented in the form and language in which it was received.



Basic information

- Title of measure/practice

Community Seed Banks: Enhancing Local Seed Conservation

- Date of submission

July 31, 2019

- Name(s) of country/countries in which the measure/practice is taking place

Bhutan
Philippines
Thailand

- Responsible institution/organization (name, address, website (if applicable), e-mail address, telephone number(s) and contact person)

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- Type of institution/organization (categories)

Government (Bhutan and Philippines)
Academic (Philippines)
Non-Government Organization (Thailand)



- Collaborating/supporting institutions/organizations/actors, if applicable (name, address, website (if applicable), e-mail address, telephone number(s))

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Description of the examples

Mandatory information:¹

- Short summary to be put in the inventory (max. 200 words) including:
 - Implementing entity and partners
 - Start year
 - Objective(s)
 - Summary of core components
 - Key outcomes
 - Lessons learned (if applicable)

The establishment of Community Seed Banks (CSB) has been undertaken by Southeast Asia Regional Initiatives for Community Empowerment (SEARICE) in collaboration with research institutions, universities, government and non-government organizations through various projects aiming to empower communities and small-scale farmers in Southeast Asia since 1996. CSB's are collections of seeds that are administered by the communities and play a significant role in ensuring seed security, conserving agricultural biodiversity and associated traditional knowledge, and providing options for climate-change adaptation; they can also contribute to the realization of Farmers' Rights. The main component of the practice was capacity development through Participatory Plant Breeding, Participatory Variety Selection and ecological management through experiential learning in Farmer Field Schools. In the Philippines, the CSB's became a model of both climate resiliency and agrobiodiversity: mitigating drought through seed distribution to affected farmers in Bohol and enriching the local 'Dinorado' variety in North Cotabato. In Bhutan, there was a resurgence of local crop varieties and the inclusion of conservation of PGRFA in their national policies. The impact extends further in Thailand, enabling the revival of the local cultural festival 'Bun Kao Mai', a Buddhist celebration of bountiful harvest, excellent seeds and diversity in rice varieties.

- Brief history (including starting year), as appropriate

SEARICE implemented community biodiversity management across Southeast Asia through its various projects. Community Biodiversity Development and Conservation (CBDC) program started in the Philippines and was followed shortly in Viet Nam and Thailand. The program mobilized farmers, agricultural specialists, policymakers, and funding agencies in a convergence of efforts on the promotion

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



of farmers' rights and empowerment towards proper management of PGR conservation, development, and utilization.

In 2006, CBDC was merged with another program called the Biodiversity Use and Conservation in Asia Program (BUCAP), another SEARICE program with different thrusts but with the same end goals as CBDC. CBDC-BUCAP further pushed for the development of the farmer-managed seed system, with the Participatory Plant Breeding (PPB) strategy helping build up the capacities of farmers for them to develop their own rice varieties and establish community seed banks (CSB).

Efforts continue with the implementation of the successor of the CBDC-BUCAP called Democratizing Agricultural Research and Extension or DARE which was implemented in 2011- 2013. Thus, empowerment of farmers has been an ongoing undertaking that enabled the strengthening of the initiatives of the CSB's.

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

The main component of the measure was the capacity development of farmers in crop breeding and seed production. As with the other country partners of SEARICE, farmer field school (FFS) was used as a learning and empowering methodology. Farmers enhanced their knowledge and skills on crop breeding and seed production through experiential learning.

Through Participatory Rural Appraisal (PRA) target communities were able to identify the problem areas including access to seeds and the conservation and preservation of local crop varieties.

Community Seed Banks store seed from a wide range of individuals, informal groups and non-government organizations that share seeds among themselves. The seeds are primarily obtained from participants' own production through individual selection process and handling skills, with some partnered with the formal seed sector and research institutes. CSB's have three common underlying principles: 1) farmers require steady and reliable access to a wide variety of appropriate planting material, 2) farmers are the stewards of agricultural biodiversity, particularly crop biodiversity, 3) optimal crop biodiversity requires sustainable use through on-farm conservation, i.e. the maintenance and recovery of viable populations and species in the natural surroundings where they developed their distinctive properties.

- 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)

The methods that farmers obtain and develop seeds are as old as agriculture. Most small-scale farmers in developing countries routinely save their seed from one harvest to the next, and would share and exchange seeds with neighboring, and even far-flung, farmers. This is how farmers have developed the widely diverse crops that humans enjoy today and evolved from weeds and wild plants. In many developing countries, farmers still source some 70-80% of their seeds from seeds that were saved on-farm.

These informal community systems of seed supply are increasingly coming under pressure. First, factors such as calamities, droughts, crop failure, conflict, storage conditions and poverty erode the quantity and the number of varieties available to farmers. Second, through agricultural modernization and the rise of formal breeding institutions and corporations, farmers are increasingly purchasing more of their seed requirements, where a few mass-produced and commercialized homogenous varieties replace so much of the local varieties. This shrinks PGR



diversity in two ways: the older local varieties become increasingly unavailable as they are neither planted nor stored, and no new local varieties are developed as farmers lose the knowledge in and resources for plant breeding.

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

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

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.		

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

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

⁴ Including seed houses.



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			

- In case you selected 'other measures', would you like to suggest a description of this measure, e.g. as a possible new category? _____
- Objective(s)
 - a) to address farmers' limited access to quality seeds and locally adapted rice and other crop varieties
 - b) to promote farmer's preferred varieties through maintenance and seed exchange among farmers
 - c) to conserve the local crop biodiversity and germplasm collection for genetic improvement
 - d) to develop local mechanisms to recognize and protect farmers' rights
 - e) to demonstrate farmers' empowerment and show how farmers can be an effective and efficient contributor to national seed security if given opportunities
 - f) to mobilize institutional support to CSBs through coordination mechanisms among relevant institutions and groups such as national government research/extension offices, local government units, academic institutions, CSOs, farmers' groups and consumers
 - g) to establish networks of CSBs and farmer- rice breeders to facilitate exchange of genetic materials, sharing of knowledge and skills, and to strengthen community-based efforts in conservation, development and sustainable use of seeds
- Target group(s) and numbers of involved and affected farmers⁵
- Location(s) and geographical outreach

Bhutan
Philippines
Thailand

- Resources used for implementation of the measure/practice
- How has the measure/practice affected the conservation and sustainable use of plant genetic resources for food and agriculture?

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



Community seed banks provide easy access of preferred seeds to farmers in a specific community. CSB materials are part of the pool of plant varieties continually being planted, multiplied, evaluated, selected and bred by local farmers over time. Depending on a community's access to materials from different sources, CSBs can store diverse materials based on farmers' varietal preferences. This can include traditional and farmer-developed varieties and also modern/formal varieties and exotic ones coming from other countries. Being an *in situ* conservation practice, the local crop varieties continue to evolve and adapt in their local environments.

CSBs address all concerns of a healthy seed system which provides diversity and stability. It has the capacity enable vibrant seed distribution within and across communities, of quality seeds that can adapt to the challenges changing climate and is a promising mitigation in times of natural disasters.

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

Community Seed Banks in the Philippines, became a model of both climate-resiliency and agrobiodiversity. Farmers' organizations in the province of Bohol established CSBs, with access to high-yielding and climate-resilient local rice varieties which are grown organically. In 2002, a severe drought was experienced by farmers specifically in Malitbog village of Dagohoy Municipality. Through the CSBs, farmers were able to mitigate the effects of drought through seed distribution to the affected farmers. CSB's enhanced the popularity of the local upland rice variety "Dinorado" in Arakan, North Cotabato, which is also grown organically. Arakan is now supplying seeds to various institutions, all-over the island of Mindanao.

In Bhutan, a resurgence of local crop varieties was experienced, including 30 for rice, 2 for maize. Vegetables and cereals were introduced to 5 farming communities, while upland rice to 13 farming communities which greatly improved crop diversity.

The case of Thailand showcases the CSB's exemplary impacts to the local communities. The bountiful harvest, production of excellent seeds and diversity in rice varieties enabled the revival of the "Bun Kao Mai" Festival, a traditional Buddhist celebration dedicated to "Mother Rice" or the rice spirits, which has been long shelved due to the effects of green revolution.

- Other national level instruments that are linked to the measure/practice
- Are you aware of any other international agreements or programs that are relevant for this measure/practice?
 - a) Convention on Biological Diversity
 - b) Nagoya Protocol
- Other issues you wish to address, that have not yet been covered, to describe the measure/practice

Ultimately, CSBs become useful and relevant to the community if these are managed by local farmers' groups that have clear goals and basic capacities towards conservation and sustainable use of rice seeds. The decision to set up a seedbank has to be based on a felt need of the communities and the concurrence of farmers' groups. In which case, farmers should have basic knowledge and skills in varietal evaluation, selection and plant breeding, line purification, storage, regeneration, among others.



Having said this, the support of government institutions is also important, raising their awareness on local situations and seeking their support for CSBs. This support includes allowing farmers to save, use, exchange, and sell their seeds using a quality-control system which they themselves developed; and facilitating the interconnection of other stakeholders.

CSBs are important in the sustenance of smallholder farmers and show significant potential not only on the production and development of climate-resilient crop varieties but also in mitigating the effects of natural calamities.

Lessons learned

- Describe lessons learned which may be relevant for others who wish to do the same or similar measures/practices (max 250 words).

Even while a common seedbank may exist for use by the community, individual farmers save and store seeds of their own selection of plant varieties for future planting, evaluation or breeding. Although household seed storage is usually for short-term purposes only this system helps ensure that diverse materials are available even outside of the CSB and this also serves as a kind of local backup or complement to the seedbank when materials there are damaged or rendered non-viable for some reason. As such, part of CSB initiative should be to engage or develop a network of farmers with their household level farmers' seed storage for vibrant seed distribution within and across communities.

CSBs need continuing infusion of materials to increase diversity and be able to meet changes in farmers' preferences and environmental conditions, especially with worsening Climate Change. In this regard, it is important for CSBs to be linked to each other for exchange and diffusion of materials. This helps make seeds of diverse varieties available to farmers across areas for evaluation, selection and breeding under various ecological conditions. Linkages among CSBs will also strengthen solidarity and facilitate mutual learning and support among communities in seeds conservation and use. Where possible, CSBs can be linked to and supported by institutional or NGO-managed seedbanks that will provide access to more seed materials and serve as back-up to the accessions in the CSBs.

- What challenges encountered along the way (if applicable) (max 200 words)

The common notion among key actors that CSBs are just the structure where seeds are kept and stored is quite challenging to break. This narrow understanding of CSBs contribute to its failure as in most cases, being disconnected from the actual use of the seeds turned many CSBs into seed museums and worse become channels for the so-called high yielding varieties, hybrids and even genetically-modified seeds.

Moreover, limited resources of small-holder farmers, particularly land, limits the potential of CSBs to store a more diverse collection of seeds. Land is needed for the seeds to be continuously grown, evaluated, selected, bred and multiplied by farmers. But this was remedied by organizing farmers into groups and collectively managing the CSBs with their shared resources.

Except for Bhutan, institutional support is also inadequate. The limitations of the CSBs are relieved through technical, material, equipment and supportive policies of the government. Institutional seed banks managed by schools, NGOs or government provide access to more seed materials and serve as back-up to the



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collections in the CSBs. These seedbanks, with better facilities to store larger number of accessions for relatively longer periods of time, can also facilitate capacity-building of farmers in managing CSBs.

- 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)

A strong community foundation of farmer's organizations, with the concurrent support of government and non-government institutions is crucial to the success of community seed banks.

To be relevant and dynamic in relation to community's plant genetic resource needs, CSBs should be part of a larger community initiative towards conservation, improvement, and selection of locally adopted or preferred plant varieties. This means that CSB materials are part of the pool of plant varieties continually being planted, multiplied, evaluated, selected and bred by local farmers over time. Without such a context, CSB materials tend to be used very little or disregarded totally by the community.

- Link(s) to further information about the measure/practice

For more information and other related projects, you may visit: searice.org.ph