



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 Local Initiatives for Biodiversity, Research and Development (LI-BIRD) - Nepal on 31 July 2019.

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



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Template for submission of

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

Basic information

- Title of measure/practice: Landrace enhancement/Grassroots breeding
- Date of submission: 31 July 2019
- Name(s) of country/countries in which the measure/practice is taking place: Nepal
- 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): NGO/CSO
- 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: LI-BIRD, farmers' groups, cooperatives and community seed banks
 - Start year: 1998
 - Objective(s): To promote conservation and use of popular local varieties by bringing it into the formal and farmer managed seed system.
 - Summary of core components: The core components of the grassroots breeding includes i) identification of local crop diversity that plays an important role in local food security or income generation, ii) breeding goals setting based on in-depth discussion with the community, iii) collection of seed samples sometimes a few, sometimes a several hundred or more, iv) evaluation of collected samples, and v) registration, seed production and distribution by farmers' organization.
 - **Key outcomes:** A systematic method for landrace enhancement led to the development of *Pokhrelī Jethobudho*, a popular aromatic rice landrace in Pokhara valley. Applying more or less the same method, *Kalonuniya* rice landrace in Jhapa district, *Rato Kodo* (a finger millet landrace) in Jumla, *Dudhe Chino* (a proso millet landrace) in Humla, *Panhelo and Khairo Simi* (common bean landraces) in Dolakha and *Tilki* rice landrace in Dang districts, were developed. These varieties are now in the final development stage and for some, variety release/registration proposals have been submitted to the NSB. Community seedbanks or community-based seed producer groups are making the newly developed varieties easily and continuously available to farming communities in the locality.
 - **Lessons learned (if applicable):** This process directly contributes to the improvement of farmers' seed systems and promotes the exchange of seed. The seed production and dissemination of the developed varieties are directly contributing to enhancement of the local seed system and income of the farmers involved in seed production activities. The varieties about to disappear from the community can be again cultivated by many farmers in a large area.
- **Brief history (including starting year), as appropriate**

There are some examples of registration/release of local varieties from the national system but it was not considered as a method for promoting on farm conservation of local varieties until late 1990s. A locally popular rice landrace called *Jethobudho* from middle hills in Kaski, Nepal was purposefully chosen for landrace enhancement as a method of on-farm management of traditional crop genetic resources in 1999 as an activity of a global project on On-farm Management of Agricultural Biodiversity. The *Jethobudho* rice was chosen as it was very popular, had higher demand in the local

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



market but farmers had started complaining about the disease susceptibility, lodging, and complaints of consumers was about the decrease of aroma. So the breeding goal was set to improve those short coming and research was carried out from 1999 to 2006. Finally, an enhanced *Pokhreli Jethobudho* was released from the national system in 2006 and this is considered as a reference case for the landrace enhancement work in Nepal. The same method has been applied for the enhancement of *Kalomuniya* rice landrace in *Jhapa*, *Tilki* rice landrace in Dang, *Rato kodo* (finger millet) in Jumla, *Dudhe chino* (proso millet) in Humla, Beans in Dolakha and Amaranth.

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

The core component or the process of landrace enhancement/grassroots breeding includes understanding diversity, rarity and adaptability of landrace; collecting landrace diversity from the meta population, setting goal for landrace enhancement; diversity assessment for farmer’s preferred traits; market (consumer) survey for economic traits; selection of agronomic, yield and quality traits; participatory variety selection; community based seed production and variety release and maintenance of breeder seed. The landrace enhancement has been seen as a strategy to develop market incentives for the custodian farmers through the production and marketing 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)**
- 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 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).



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		

- 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)
- Target group(s) and numbers of involved and affected farmers⁵
- Location(s) and geographical outreach
- 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?
- Please describe the achievements of the measure/ practice so far (including quantification) (max 200 words)
- 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?
- Other issues you wish to address, that have not yet been covered, to describe the measure/practice

⁴ Including seed houses.

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



Lessons learned

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

Our experience has proved that the landrace enhancement is a useful method for on farm conservation of local varieties. Landrace enhancement is a quick method for demonstrating value of on-farm conservation to community and policy makers. At the community level, it is essential to link farmers with the market (private sectors), as the quickest way to generate income from their local products. While working with the landrace enhancement, it is also equally important to develop and empower farmers' group/organization so that once the variety is ready, the farmers' organization starts seed production and marketing activities. This not only allow farmers to get economic benefit from the landrace enhancement work but also dissemination of the landrace through easy access and availability and ensuring conservation.

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

The challenges of landrace enhancement is more or less same with the participatory plant breeding. Normally, we get a short term project and it is difficult to develop new varieties within a short project period and sometime it is challenging to find project for completing the remaining activity. Registration of the enhanced landrace from the national system is also tough. It is not possible to get approval without involvement of national plant breeding programme of the same crop but sometime such collaboration depends very much on the person. According to the seed law, the responsibility of maintaining breeder seed and foundation seed of the newly developed variety should be taken by the organization who owns it. It means, enhanced variety is owned by LI-BIRD and communities. But LI-BIRD does not have resources to continue seed production of these varieties once the project is over.

- **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)**

It takes time and resources so the funding agencies need long term commitment. Farming community and plant breeder should also be ready to contribute for long time to get the result. So a rigorous discussion during the initial days of the project is key. A PPB programme can only be successful if it is fully owned by community.

Further information

- Link(s) to further information about the measure/practice
On-Farm Management of Agricultural Biodiversity in Nepal: Good Practices.
http://www.libird.org/app/publication/view.aspx?record_id=62&origin=results&QS=QS&fl_4417=Bhuwon+Sthapit&union=AND&top_parent=221