



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 World Agroforestry (ICRAF) on 22 July 2019.

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



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:** Participatory tree domestication of indigenous tree species
- **Name(s) of country/countries in which the measures/practices are taking place:** Cameroon, Burkina Faso, Mali, Niger, Senegal
- **Responsible institution/organization:** World Agroforestry (ICRAF), United Nations Avenue, Gigiri, Nairobi, Kenya | Post: PO Box 30677, 00100, Nairobi, Kenya
- **Contact person:** Alice Muchugi
- **Type of institution/organization (categories):** International Research organization

Description of the examples

Mandatory information:¹

• Short summary to be put in the inventory (max. 200 words) including:
Since 1990, the World Agroforestry Centre (ICRAF), together with national research, education and training institutions as well as farmers and farmers' organizations, has developed a decentralized approach for participatory tree domestication to improve indigenous tree species in the African Sahel region and to encourage their cultivation. Core components include priority setting exercises carried out since the early 1990's, through which farmers identified preferred tree species, based on criteria such as nutritional, medicinal and income-generating values. Furthermore, potential 'plus mother trees' with the preferred characteristics were identified. Tree improvement based on these accessions is being carried out through 'Rural Resource Centres' (RRCs), where farmers are trained on how to propagate and manage the seedlings in the nurseries; seedlings are established on community/farmers' land, and farmers are actively involved in the evaluation. Improved material is owned by the communities and farmers can freely distribute the improved material among themselves. A value chain training component on fruit processing and related business skills is also incorporated to enhance the economic benefits from indigenous tree cultivation. Key outcomes include improved skills of farmers in tree propagation and management, conservation and sustainable use of tree genetic resources and enhanced recognition and use of indigenous knowledge.

(199 words)

- Implementing entity and partners
 - World Agroforestry Centre (ICRAF)
 - ICRAF collaborates essentially with national research, education and training institutions research institutes, and farmers and farmers' organizations. The national research institutes include:
 - Institut de l'Environnement et de Recherches Agricoles (INERA), Burkina

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



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Faso,

- Institute of Agricultural Research for Development (IRAD), Cameroon
- Institut d'Economie Rurale (IER), Mali
- Institut National de la Recherche Agronomique du Niger (INRAN), Niger
- Institut Sénégalais de Recherches Agricoles (ISRA), Sénégal

○ Start year -1990s

○ Objective(s)

Participatory tree domestication with aim of improving indigenous tree species in the African Sahel region

○ Summary of core components

Many tree species that are important to the local communities' livelihood are threatened by deforestation and land degradation. These trees are important to these communities due to high nutritional values, however, farmers largely rely on wild harvests. They rarely plant these tree species and the main reason linked to this is lack of quality planting material while compared to exotic tree species (e.g. indigenous trees take longer to mature, they display a lot of variability, poor fruit storage qualities etc). Improvement of these tree species will therefore encourage their cultivation. ICRAF set out to work with partners to address this issue and bring this tree species into cultivation as agroforestry tree species. The nature of tree germplasm (long reproductive cycle and need for large space) necessitated working with farmers. Through priority setting exercises carried out in the early 1990's farmers identified their preferred tree species to be targeted for improvement; The species in the West Central Africa region identified the following species *Adansonia digitata*, *Vitellaria paradoxa*, *Parkia biglobosa*, *Tamarindus indica*, *Ziziphus mauritiana*, *Dacryodes edulis* and *Iringia gabonensis*.. The species were preferred by farmers because of their nutritional, medicinal and income-generating values. The priority setting set the basis of domestication activities in the region. Working with the respective collaborators, ICRAF synthesized the qualities desired on the selected species. The local communities identified the "plus mother trees" with the preferred characteristics. Tree improvement using selected accessions was initiated and has been going on in the last 20 years yielding good results for some species. Improvement is carried out through a rural resource centres (RRC) model managed by local communities. In the RRCs, farmers are trained on how to propagate and tender the seedlings in the nurseries. The seedlings are established on communities/farmers land where the farmers are actively involved in the evaluation. Improved material coming out of these collaborations is owned by the communities. Farmers rights are safe guarded by ensuring no PVP is taken on such material and that the farmers can distribute the improved material among themselves. A value chain training component on fruit processing and related business skills is also incorporated to enhance the economic value of the tree species.

○ Key outcomes

- Improved skills in tree propagation, tree management
- Sustainable use and conservation of tree genetic resources
- Recognition and use of indigenous knowledge



- Improved tree cultivars/types
- Lessons learned (if applicable)
 - Farmers willingness to share indigenous knowledge on tree species.
 - Farmers perception and acceptance to techniques varies with culture/agroecological zone where the group belongs. Those from forest pay less attention on tree planting /adoption compared to those from areas where land degradation is more noticed.
 - Appropriation is boosted and sustained when government is involved in sensitization and support the initiative at the end of a project.
 - A good strategy of benefit sharing put in place guarantees the successful of the adoption.
 - The more the tree species is important to a farmer, the more the farmer is likely to contribute to its conservation, protection and improvement.
 - Farmers are motivated by the participatory tree improvement approach-they own the process of improvement.
- Brief history (including starting year), as appropriate

The World Agroforestry Centre (ICRAF) has developed a decentralized approach named participatory tree domestication involving scientists and farmers, working in close collaboration to improve indigenous tree species across sub- Saharan Africa since 1990. Farmers rights are taken into considerations-indigenous knowledge on the tree species uses, existing diversity/types that help in identifying “plus tree”; ownership of germplasm; free access to improved germplasm. Participatory domestication contributes to conservation and sustainable use of the tree genetic resources.
- Core components of the measure/practice (max 200 words) *Refer to summary of core components section above*
- 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)

Refer to summary of core components section above-traditional valued fruit trees threatened by deforestation and ecological changes; Participatory domestication addresses this by aiming to avail quality planting material and skills to local communities so that they can continue to access the tree products. This contributes to improved livelihoods via access nutritious fruits, sale of fruits and their products; It also contributes to the sustaining the community cultural heritage.
- 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 √



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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		

- 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)

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.



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- 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

Lessons learned

- Describe lessons learned which may be relevant for others who wish to do the same or similar measures/practices (max 250 words).
- What challenges encountered along the way (if applicable) (max 200 words)
- 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)

Further information

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

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