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**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 ICRISAT on 18 June 2021.*

*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 Technology development and Selection approaches to develop cultivars relevant to farmers' needs
- Date of submission  
17th May 2021
- Name(s) of country/countries in which the measure/practice is taking place  
Malawi and Zambia
- Responsible institution/organization (name, address, website (if applicable), e-mail address, telephone number(s) and contact person)  
Responsible institution/organization: International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), P.O. Box 1096, Lilongwe-Malawi. Website: [www.icrisat.org](http://www.icrisat.org) (name, address, website (if applicable)),  
e-mail address: [J.Mwololo@giar.org](mailto:J.Mwololo@giar.org) telephone number: +26599387213/+2547205763353 and contact person: Dr. James Mwololo
- Type of institution/organization (categories)  
An international non-profit organization that undertakes scientific research for development and a member of the CGIAR consortium
- Collaborating/supporting institutions/organizations/actors, if applicable (name, address, website (if applicable), e-mail address, telephone number(s))  
Department of Agricultural Services (DARS Malawi) o Zambia Agricultural Research Institution (ZARI), Msekera Research Station, Chipata o Out-grower farmers' foundation-Chipata, Zambia o National Smallholder Farmers' Association of Malawi (NASFAM)-Lilongwe, Malawi

#### Description of the examples

##### Mandatory information:<sup>1</sup>

- Short summary to be put in the inventory (max. 200 words) including:
  - Implementing entity and partners: Lead Institution: International Crops Research Institute for The Semi-Arid Tropics (ICRISAT). Partners: Department of Agricultural Research Services (DARS)-Malawi; Department of Agricultural and Extension Services (DAES)-Malawi Zambia Agricultural Research Institute (ZARI)—Zambia; Farmer Out Growers' Foundation-Zambia; Mthilakubili Cooperative Center-Zambia
  - Start year 18 June 2019
  - Objective(s):

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



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1. To support farmers to sustainably use and conserve PGRFA for food and nutrition security
  2. To re-introduce, conserve, disseminate or bred locally adapted varieties with farmers' participation and other stakeholders in the Agricultural sector
  3. To build the capacity of farmers and technical staff to be able to innovate and do research for food and nutrition security
- **Summary of core components:** Key components include; 1) targeted PGRFA which comprises all resources for breeding or development of improved materials in addition to farmer collections; 2) beneficiaries, the target farmers or community groups; 3) gender, a definition of the roles played both men and women in the agricultural production; 4) Impacts, effect of PGRFA and or cropping systems on the livelihoods of the target groups;
  - **Key outcomes:** There are three (3) key outcomes all premised under the goal "Improve productivity, nutrition and on-farm incomes of farmers in Malawi and Zambia through use and conservation of adapted dry land legumes and cereals germplasm"
    1. Farmers supported to maintain and conserve agrobiodiversity in areas vulnerable to climate change and food insecurity
    2. Research and development strengthened and accelerated to produce climate ready crops
    3. The knowledge and skills of farmers and technical staff on the use of genetic resources for food and nutrition security enhanced
  - 
  - **Lessons learned (if applicable):**
    - 1) Farmer participation is key in technology development and delivery for impact

#### Brief history (including starting year), as appropriate

Agriculture is the mainstay of Zambia and Malawi contributing 22% and 28% to the GDP of the two countries respectively. Food crop production is mainly in the hands of small-scale farmers who constitute more than 60% of the farming community. As such, crop productivity is still low, and both countries are food insufficiency and nutrition insecure owing to a number of challenges such as lack of access to inputs, output markets, technical knowledge and climate variability. Grain legumes and dryland cereal crops share multiple values in agri-food systems as resilient crops that provide nutritious food, income and or feed for livestock. The project was conceptualized to address the latter by harnessing dryland legume and cereals genetic resource for food and nutrition security and resilient farming systems in the two countries. The project which started in 2019, is being implemented in five districts i.e. Mchinji and Salima in Malawi; Chipata, Lundazi and Mambwe in Zambia, selected based on the role played by these crops as food and in income generation. The project is working in these districts towards underpinning agricultural growth and livelihoods through: i) intensification of cropping systems and ii) technology development/innovations using dryland legumes and cereals to address food and nutrition insecurity and grow incomes of smallholder farmers. Four entry points identified as key towards achieving the project goal included: (i) Conservation and exploitation of existing genetic resources (ii) high yielding resilient varieties that are nutrient dense (iii) Partnerships, capacity building, innovations and strengthening and/or working with community based structures (iv) Community dialogue/farmer research network including gender mainstreaming. The areas of operation in the two countries have similar weather patterns with effective rains commencing in the month of November/December of each calendar year. **To achieve these objectives, various platforms have**



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been developed and these include 1) Learning centers in which trials and demonstrations are being conducted 2) training programs for various activities to improve farmers' capacity to innovate and enhance crop production 3) Innovation platforms for community engagement

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

Target PGRFA: The project targets groundnut, pigeonpea, millets and sorghum. **A total of 2,950 genotypes have so far been tested in Malawi and Zambia including improved varieties germplasm and farmer varieties.**

Beneficiaries: To date **over 500 farmers and 13 staff have been reached in total through variety selection and access to various trainings including on crop production, agri-business, seed production).**

Impacts: The efforts are geared towards contribution to food, nutrition and income security; adaptation to climate change and to science and innovation. Currently 15 varieties have been introduced to the farming communities through demonstrations (**15**). In terms of capacity building and science advancement, a training workshop on PGRFA was held at Mount Makulu Research Station, Chilanga, Zambia, whereby **13 technical** staff drawn from the National Plant Genetic Resources Centre (NPGRC), SADC Plant Genetic Resources Centre (SPGRC) and the commodity research teams (Maize, Sorghum and Millet, oil crops, tree crops and wheat) of the Zambia Agriculture Research Institute (ZARI) benefited. Among the 13 participants, 7 were female and 6 were male. In Malawi, the project has engaged a **First year MSc student, Mr Shadreck Kadwa** studying at Lilongwe University of Agriculture and Natural Resources (LUANAR), Bunda campus, with focus on crop sciences. He will be supported for his research work while contributing to further development of the existing genetic materials with the aim of generating information that will add value to the final variety packages. In terms of cropping systems, two systems each with two planting patterns that include legume double up (groundnut + pigeon pea) and spatial arrangement (maize + pigeon pea) have been evaluated via participatory approach with farmers for them to select most suited systems for their respective localities, in support of sustainable intensification and climate smart agriculture.

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)

**Participatory variety selections (PVS):** This is whereby farmers are engaged in the process of variety development. The objective is to solicit farmer views on the technologies being developed because they are eventually the end users. This process also aims to improve the adoption rate once varieties are released. It is a policy by both government and or release committees to have data and or farmer input before a variety is released. All technologies pass through this process.

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

- |           |                                     |
|-----------|-------------------------------------|
| Art. 9.1  | <input type="checkbox"/>            |
| Art. 9.2a | <input type="checkbox"/>            |
| Art. 9.2b | <input type="checkbox"/>            |
| Art. 9.2c | <input checked="" type="checkbox"/> |
| Art. 9.3  | <input type="checkbox"/>            |



**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 <sup>2</sup>	Also relevant <sup>3</sup>
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 <sup>4</sup> , 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) \_\_\_\_\_

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

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

<sup>4</sup> Including seed houses.



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- Target group(s) and numbers of involved and affected farmers<sup>5</sup>
- 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).  
**Mobility of extension staff:** Implementation of field experiments/demonstrations and other out-reach activities were done in collaboration with the Department of Agricultural Extension Services (DAES) through AEDOs in various EPAs. The main challenge with system is that AEDOs are sometimes overwhelmed with many activities they undertake for government and other NGOs in the area in addition to distances they have to travel. Provision of support in terms fuel minimizes their mobility challenges.
- What challenges encountered along the way (if applicable) (max 200 words)  
**Covid-19:** The covid-19 pandemic was the major challenge experienced during the project implementation whereby restrictions on travels and number of people per gathering were put in place, thus impairing the execution of a number of activities.
- 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)  
**Collaboration:** The collaboration we have with DARS, ZARI and DAES has been key especially in establishment of trials and demonstrations. These partners have been key in collection of crucial data.  
**Farmer participation:** Farmers in the project have owned project activities and this has been a revelation for the smooth operations especially on the management of trials and demonstrations, and this comes with the right training and approaches for farmers.  
**Availability of PGRFA:** The existence of PGRFA with ICRISAT and National gene banks as well those availed by farmers have been key in supporting demonstrations and trials  
**Technical expertise:** Technical expertise from ICRISAT, DARS, ZARI and DAES has been pivotal in the design and implementation of various activities in the project

### **Further information**

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

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