



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 Indonesia on 31 July 2019.

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

MEASURE/PRACTICE 11

BASIC INFORMATION

- **Title of measure/practice** : **Building Food Sovereignty Based on Local Community Food Sources**
- **Date of submission** : 31 July 2019
- **Name of country in which the measure/practice is taking place** :
- **Responsible institution/organization**
 - Name** : Indonesian Biodiversity Foundation
 - Address** : Indonesian Biodiversity Foundation
No. 3b Bangka VIII street, Pela Mampang, South Jakarta
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 - Telephone number** : 62-21- 7183185
 - Contact Person** : Puji Sumedi Hanggarawati
- **Type of Institution/organization** : Non-Government (NGO)
- **Collaborating/supporting institutions/organizations/actors** : Maria Loretha
Larantuka Social and Economic Development Foundation, East Flores, NTT

DESCRIPTION OF THE EXAMPLE MANDATORY INFORMATION

- **Short summary of the measure/practice** : Indonesian Biodiversity Foundation is one of local institutions that provides support for the development and preservation of Indonesia's biodiversity. Indonesian Biodiversity Foundation provides support in the form of funding to NGO partners and communities in the region.
For local food conservation, Indonesian Biodiversity Foundation is partnering with local institutions (Larantuka Social and Economic Development Foundation) in East Flores and the Lembor Farmers Alliance in West Manggrai.
In addition to working with communities and NGOs, then a lot of support from parties such as Indonesian Cereals Research Institute Maros for aspects of seeding and efforts to variety protection. Local government through agricultural Department then provides:
2012: Awarding to one of the sorghum conservationists, Maria Loretha, which were then continued with funding for partners in Lembor and East Flores.
2013-2019: programs are still being carried out and expanded in location.
Activities:
 - a. Development and cultivation of sorghum plants on farmers' land
 - b. Increasing farmer capacity: cultivation-post-harvest-processing-consumption; entrepreneurship, economic balance, food nutrition,

- c. Promotion, education, advocacy
- d. Support for post-harvest and processing tools.
- e. Synergy and networking with the government: local-national

- Brief history

: Indonesian Biodiversity Foundation supports the preservation and utilization of various local foods for arid regions in eastern Indonesia. The program's focus is on re-utilizing neglected and underutilized crops such as barley, millet, sago, sorghum, taro, and tubers. By utilizing these local foods, Indonesian Biodiversity Foundation believes that food security will be achieved, while genetic resources will be maintained. By returning to preserve and conserve local food, the type of biodiversity will be maintained and can be utilized as a source of income to improve the economy of farmer families.

In East Nusa Tenggara, the area which consists mainly of dry land is one of Indonesian Biodiversity Foundation's interventions in utilizing community-based local food sources, especially sorghum specific in dryland areas. Since 2013 till now, the program is still focused on Flores Island starting from West Manggarai to East Flores and surrounding small islands such as Adonara, Solor and Lembata.

The people lived in East Nusa Tenggara basically have a tradition of consuming food sources of carbohydrates other than rice including sorghum for cultivation. In fact, in Nggela, Ende Regency, there was a special ceremony for Nggoa lolo, namely the sorghum ceremony. However, along with the food policy, the people increasingly abandon their food patterns and switched consumption to rice. Along with these conditions, the local wisdom of local culture through ceremonial rituals before planting to harvest to indicate an "appreciation" of food sources is increasingly lost.

Why Food Diversification Is Important

1. The availability of potential diversity of food spreading throughout Indonesia can be used as food in accordance with the natural and cultural conditions of the local community.
2. In terms of health, various types of food sources with good nutrition are needed
3. Utilizing the potential of food available in the regions will support local food sovereignty, culture and the economy of the community

On the other hand, the availability of food sources faces various threats:

1. Increased population
2. Conversion of agricultural land for other uses
3. Pollution
4. Climate Change

In terms of food diversification, carbohydrates consumed by Indonesian people is less diverse, nutritiously balanced, and safe, but still dominated by rice and flour.

Advantages of Sorghum on Dry Land in East Nusa Tenggara

Sorghum bicolor Sp (*Sorghum* spp.) is a multi-functional plant with many advantages and benefits as well as high adaptive properties. In Indonesia, this plant is commonly found in Java, East Nusa Tenggara, and West Nusa Tenggara, especially in dry and marginal lands.

Sorghum which was grown in areas such as Central Java (Cantel), East Nusa Tenggara (Pena Mina, solor corn, mesak, Watablolo / lolo / Corn Rote / Terae / Penbuka / Wataru) began to diminish and slowly disappeared due to this plant no longer planted and utilized, land conversion, and policies and other causes. As an example is sorghum was commonly planted in intercropping and used as a food source for the community in past.

Sorghum is a source of carbohydrates that has nutritional value not inferior to rice and corn. In fact, sorghum is very potential to replace flour which is still imported until now.

Some areas in Flores are dry land (rock land). The East Nusa Tenggara region has always been at risk of experiencing food insecurity, while on the other hand the availability of local food sources of sorghum has begun to be abandoned by the community (the tradition of Lamaholot, Lio).

Advantages of Sorghum:

1. Sorghum is easily cultivated and needs low operational cost.
2. Adaptive in all land with good nutrients or marginal land.
3. Sorghum can be harvested more than once in one planting period.
4. Sorghum need low water input.
5. Sorghum is usually resistant to pests and low fertilizer input.
6. In addition to food, it can be used as bioethanol, feed, etc.
7. It is Healthy, highly nutritious food accompanied by high protein content and gluten free
8. The form of sorghum is similar to rice.
9. Potential production of 3-5 tons / ha

- Core components of the measure/practice :
 1. Extensive planting area specific on dry land
 2. The involvement of farmers and the community
 3. Farmer institutions and farm business institutions
 4. Diversity of food consumption of the target location communities
 5. Change in knowledge and thought of the community
 6. Support of the parties
 7. Supporting regulations
 8. Alternative income

- Description of the context and the history of the measure/practice is taking place :
 - Dynamics of the assisted group
 - Dynamics of local government (supporting and not supporting)
 - Personal interests of some people who sometimes want to take advantage
 - Project mindset shortly

Supporting conditions:

 - Local wisdom such as traditional ceremonies before planting and harvesting, seed guards
 - Champion or farmers and highly committed mentoring
 - Diocesan support through based groups and people

- To which provision(s) of Article 9 of the International Treaty does this measure relate :
 - Art. 9.1
 - Art. 9.2a
 - Art. 9.2b

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):

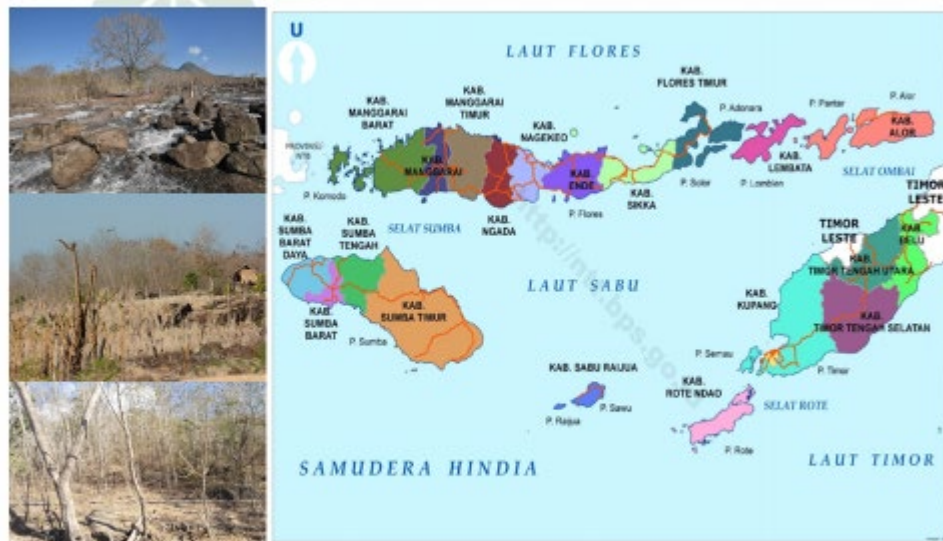
No.	Category	Most relevant	Also relevant
1.	Recognition of local and indigenous communities', farmers' contributions to conservation and sustainable use of PGRFA, such as awards and recognition of custodian/guardian farmers		
2.	Financial contributions to support farmers conservation and sustainable 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, 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		

- Objective(s) :
 - Availability of a variety of local food-based carbohydrate for food sovereignty.
 - Maintaining sorghum germplasm
 - Revitalizing community food institutions in developing community food systems and as an effort to overcome climate change adaptation.
 - Initiation of 3 centers for developing sorghum: Likotuden (East), Ende (middle), & Lembor (west) belonging to the community.
- Target group(s) and numbers of involved and affected farmers : 200-250 Farmers' Household



- Location(s) and geographical outreach : Dry land, land dominated by rocks and very little rainfall, as well as land depend on rainfall and water; and rainfed agriculture. A limited access to the location is a result of rocky roads and rain.

Tantangan dari “Batu Bertanah”



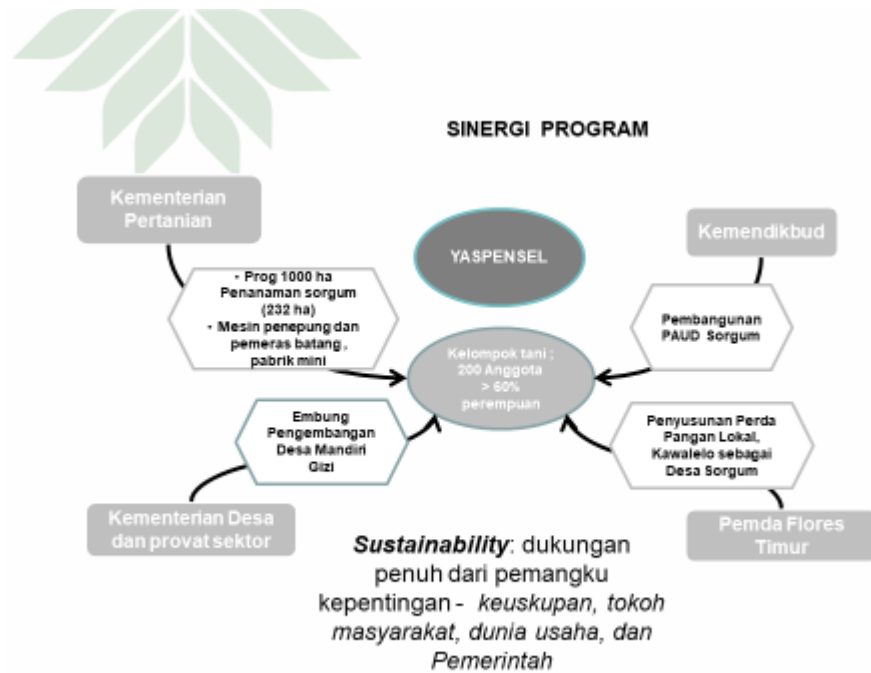
- Resources used for implementation of the measure/practice : 1,5 M
- How has the measure/practice affected the conservation and sustainable use of PGRFA? :
 - Based on Local Wisdom & Local Biodiversity → The role of society and culture takes precedence.
 - Together with the Church and the Larantuka diocese and women's groups mobilized residents in Lembor, Ruteng, Golewa, Likotuden, Lewoleba, Larantuka.
 - Together with the Regional Government and Regional People's Representative Assembly, NGOs / farmer groups for additional planting area in Lembata.
 - Together with the Sorghum Farmers Association for Food Sovereignty East Nusa Tenggara develops sorghum in Lembor, PSE in Ruteng, KWT in Ngada, Ende, Maumere, Solor, Adonara and Lembata.
 - Together with Research and Development Center, especially Maros cereal research center and Indonesian Ministry of Agriculture to improve the protection & quality of seeds and post-harvest.
 - With the local community health centers, making sorghum as supplementary feeding for Toddlers and Elderly People.
 - Initiation of 3 centers for improving sorghum: Likotuden (east), Ende (center), & Lembor (west) belonging to the community / village-owned business entity.
- Please describe the achievements of the measure/practice so far (including quantification) : -
- Other national level instruments that are linked to measure/practice : In terms of policy, several supporting regulations:
 1. Food Law No. 18 of 2012 which is a revision of the food law in 1996 mandates the consumption and diversification of local food according to its potential.
 2. Village Law
 3. Presidential Regulation No. 22 of 2009 concerning the Policy for Accelerating the Diversification of Local Resource-Based Food Consumption according to local potential.
 4. Minister of Agriculture Regulation No. 43 of 2009 concerning the movement to accelerate the diversification of local food.
 5. The Strategic Plan of the Ministry of Agriculture of the Republic of Indonesia 2015 - 2019 which relies on the Nawa Cita agenda, specifically the Nawa Cita Goals of Food Sovereignty, increasing food diversification as a target of one mission to realize food sovereignty with the aim of increasing availability and diversification to realize local food.
- Are you aware of any other international agreements or programs that are relevant for this measure/practice : Some communities in India and reinforced movements carried out by Vandana Shiva
- Other issues you wish to address : This program is carried out by revitalizing the local wisdom of the people in East Flores, especially the Lamaholot Tribe Tradition and Lio in Ende.

that have not yet been covered to describe the measure/practice

The myth of Tonu Wujo and Ine Pare which is similar to the mythical Java Dewi Sri is also trusted by the people in East Flores. Till now there were known traditional figures of seed guards and still carried out customary traditions during the planting and harvesting seasons. Thus, preservation of local germplasm sources cannot be released from local wisdom. If germplasm is lost then local wisdom is lost as well.

LESSONS LEARNED

- Describe lesson learned which may be relevant for others who wish to do the same or similar measures/practices



1. The community has food preservation and consumption patterns change from totally rice to mix with sorghum.
2. The community has alternative food and income.
3. Local governments then provide support through road improvements and policy expansion.
4. Expansion of the intervention location from the original only in West Adonar, mainland Flores, West Sumatra, Lembata, East Adonara, Ende, Solor.
5. Women farmers have additional knowledge regarding food nutrition and sorghum food processing for economic improvement.
6. Diversification of products into rice, flour, cereals, liquid sugar, cake, ethanol.
7. Collaboration with community Health centers, about sorghum for the Supplementary Food Program for nutrition improvement. Gempur Stunting with Sorghum and Moringa.
8. Learning in several schools and distributing sorghum in kindergarten.
9. Sorghum paud

Keyword :

- Institution for continuation → in line with the cultivation process, also carried out the establishment of community institutions via farmer groups and Joint Savings and Loans Business as managers of farmer income from sorghum cultivation and development into Cooperatives (Koperasi)
- Mentoring is the key to progress → inviting people to re-plant sorghum to get around suboptimal land while at the same time providing alternative local food when droughts are a sustainable process and require ongoing assistance as well.

Network partners:

- Ministry of Agriculture, Ministry of Education
- University & Polytechnic
- Private Sector (Buyer and CSR)
- Local government
- Churches in Flores
- Farmers
- Joint Venture
- Larantuka Socio-Economic Development Foundation
- Lembor Farmers Alliance (APEL)

- What challenges encountered along the way (if applicable) :
 1. Geographical conditions are very heavy
 2. Changing the mindset of the community that initially joined government assistance through the assistance of poor rice and other assistance sometimes made them compare old and new programs so that intensive assistance was needed.
 3. At the start of minimal support from the local government, even underestimated

Future challenges:

- Adding sorghum processing facilities in the eastern, central and western regions of Flores Island
- Mentoring and Strengthening sorghum farmer institutions
- Identification of dry land that has the potential to be a new sorghum farm
- Expanding sorghum consumption as local food
- Strengthening network
- Strengthening synergies with relevant local governments
- Branding of sorghum processed products, such as making souvenirs in Labuan Bajo etc.
- Synergy with Buyers developing Fair Trade values

- Protection of varieties and support for the release of several local sorghum varieties as the local origin

- Link to further information about the measure/practice : -

