



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 [first meeting](#) of the Ad hoc Technical Expert Group on Farmers' Rights (AHTEG), the Expert Group considered possible structure of the inventory based on a number of proposals made by members, agreed to utilize a [Template](#) for collecting examples of best practices and measures of implementing Farmers' Rights.

This document presents the updated information on best practices and measures of implementing Article 9 of the International Treaty submitted by PNG National Agricultural Research Institute on 29 April 2019.

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

Measures and Practices on the implementation of Farmers' Rights

Submission by: PNG National Agricultural Research Institute (Papua New Guinea)

Type			Title of measure/practice	Short description of measure/practice	Links
Technical	Administrative	Legal, etc			
√			Farmer Participatory Approach in increasing genetic diversity in farmers field with exotic Taro Plant Genetic Resources (PGR).	<p>A farmer participatory approach was adopted in increasing PGR taro diversity in farmer's field. Taro is an important aroid in Papua New Guinea but the genetic diversity of the crop in country is relatively low in farmers. While the crop does reproduce via seed, it is irregular and further affected by the inability to produce flower and set seed under changing climatic conditions. Hence, other approaches need to be adopted to increase diversity in the field and broaden the genetic base for development of taro varieties adapted to the changing climatic and commercial conditions.</p> <p>Application of the participatory approach requires wider consultation with the communities, leaders, councillors, rural development officers (RDO's) and farmers.</p> <p>This work was supported by a project funded by the European Union with the objectives in Papua New Guinea as follow: (a) <i>is to broaden the genetic base at the farm level and this can be done through, propagation, selection and evaluation of diverse or accession from different countries.</i>(b) <i>selection of the subset and distribute to 5 farmers per village communities</i> (c) <i>On-farm participatory selection of elite hybrids in C1 generation</i></p>	www.nari.org.pg

			<p>Phase 1 involved site surveys and selection of the farmers and focus group discussions to understand the diversity issues and the opportunities they face. These interviews and focus group discussions involved woman, betel nut sellers, village leaders, farmer groups and stakeholders such as the LLG RDO's.</p> <p>The main component of the activity was increasing the diversity on farm and increasing the farmer's and rural development officers (RDOS) capacity in participatory selection approach and improving farmer to farmer extension.</p> <p>In objective (a) & (b) 50 accessions from the within the South East Asia and Pacific region (Figures 1-4) were received from the Pacific Centre of Trees & Crops (CePaCT (Fiji) and evaluated on-station and 34 genotypes selected and distributed to 11 village communities with 21 farmers across four different provinces covering three different regions .</p> <p>The farmers were managing the trials and preliminary selection based on morphological characteristics such as low stolon, growth performance etc. At the final harvest farmers selected their preferred varieties based on corm shape, size and taste through sensory evaluation together with the NARI Research team. Farmer's selection of the best genotypes was incorporated into the breeding programme as the parent materials for the objective (c).</p> <p>Objective (c): On-farm participatory selection of hybrids in C1 generation.</p> <p>The controlled crosses were conducted on station from 60 parental lines based on farmer's selection in the previous trials with diverse genetic sources (Figure1-4). About 200 crosses were made and almost 5000 seedlings were generated and transplanted. A subset of the progenies were selected and distributed to the farming communities within two provinces. Over 900 hybrid seeds were distributed to 18 village communities. The main component of this activity 2 was that the farmers were involved in</p>	
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			<p>evaluation and selection of the progenies based on their taste and yield. Poor quality and highly stolon yield were selected out. The capacity design for each of these farmers to become a model in their community to train others on increasing diversity of taro within the community and increasing the sharing of plant genetic materials to improve food security.</p> <p>The main lessons learnt were:</p> <p>(a) PNG has a diverse culture and social structure that sometimes makes it difficult to successfully implement such activities. To enact changes, local, cultural and political factors of the communities need to be taken into account and relationship within the community leaders and the community need to be identified</p> <p>(b) Women keener learners than man. Woman do most of the farming activities such as planting, weeding and harvesting. Therefore, it is important to include them in the focus group discussion but must be separated from the man to avoid biasness.</p> <p>(c) If farmers are involved with to other socio-economic activities like betelnut selling along the roadside or produce cocoa and copra, they have little interest in food crop farming.</p> <p>(d) Some of the model farmers held leadership positions in the communities including local village council, chairman of the church and schools. The leadership position that some of the model farmers held and the interaction that followed ensured information sharing at various levels which enhanced communication and sharing of plant genetic resources to increase diversity at the farmer field.</p> <p><i>See figures 1-4 showing the diversity introduced to farming communities in faur different provinces. Numbers varies per site. The colour of the vertices indicated materials from different countries. The</i></p>	
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				<i>name in the middle with large circle shows the community and Province and the countries, are also indicated by large circles.</i>	
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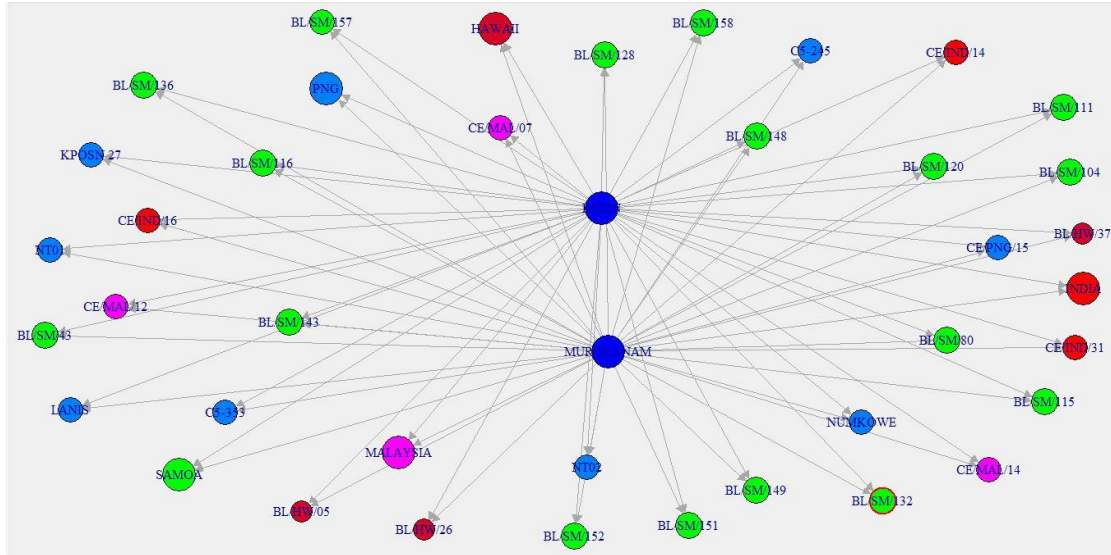


Figure 1. Showing the exotic and PNG taro lines introduced to increase diversity in two communities (Murukana & Derin) in Madang Province with colours representing different countries. Green (Samoa), Blue (PNG), Brown (Hawaii), purple (Malaysia) and red (India). Bigger circles are the countries and small circles are the varieties.

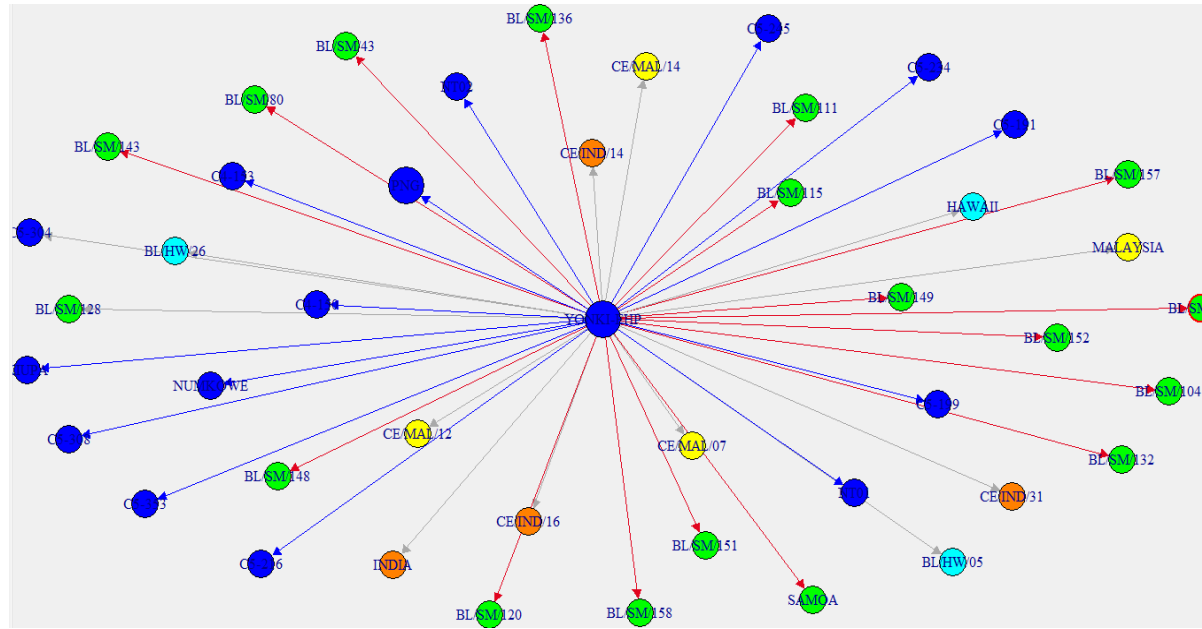


Figure 3. Showing the exotic and PNG taro lines introduced to increase diversity in Easter Highlands Province (Yonki) with colours representing different countries. Green (Samoa), yellow (Malaysia), Hue light (Hawaii), blue (PNG) and orange (India). Bigger circles are the countries and small circles are the varieties.

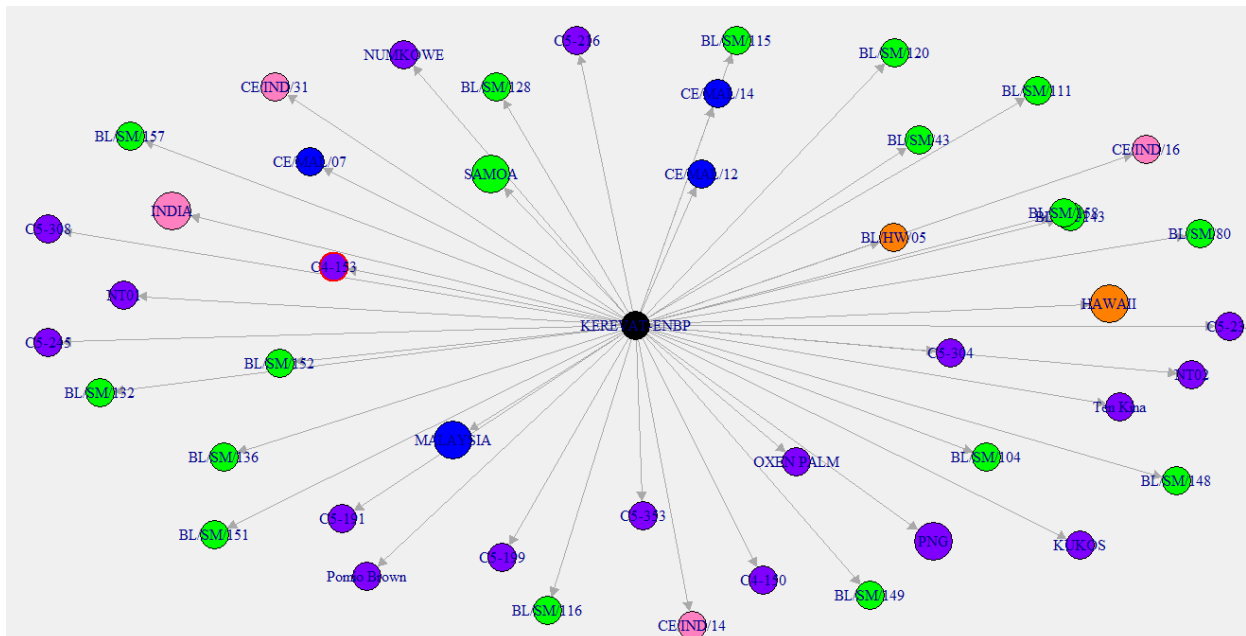


Figure 4. Showing the exotic and PNG taro lines introduced to increase diversity in East New Britain Province with colours representing different countries. Green (Samoa), blue (Malaysia), orange (Hawaii), light blue (PNG) and pink (India). Bigger circles are the countries and small circles are the varieties