

# Conservation of Agro-Biodiversity in Timor-Leste – A gender based approach

## BACKGROUND

In Timor-Leste, one of the newest countries in the world (independence from Indonesia in 2002), food security is a prevalent problem, especially in rural areas. 79% of the Timorese population suffer at least 2 months a year from food shortages. Half of the children under 5 years are undernourished. At the same time, the country has to offer an extraordinary abundance of agro-biodiversity (ABD). Yet it is endangered by overuse of agricultural land, high population pressure which leads to less available land for agricultural use, monocultures, deforestation and invasive species. Both, women and men, play a crucial role in the cultivation and use of ABD as they have their traditional gender-roles and functions in their farming systems on the one hand, and their gender-specific skills and knowledge regarding ABD on the other hand. As in other sectors, the assignment of tasks and responsibilities in agriculture is gender specific. Generally, rural Timorese women perform traditional gender roles, participate less in decision-making and have a higher illiteracy rate than men. Domestic violence is regarded as normal in society, 38% of women in Timor-Leste over the age of 15 have experienced physical violence.

The project "Promotion of Sustainable Use of Agro-Biodiversity" forms part of the GIZ programme "Sustainable Management of Agro-Biodiversity in Timor-Leste". It promotes the protection of biodiversity in agriculture applying a gender specific methodology. Sustainable use of local species, varieties, and landraces as well as the application of biodiversity-friendly farm practices are implemented taking into account specific needs of women and men. The target group are persons involved who use natural resources (adults) or will use them in the future (children and youth). The majority of the target group is supported in form of farmer field schools. The economic use of ABD offers additional food security and gender differentiated income possibilities. Main project partners are the Timorese Ministry of Agriculture and Fishery (MAF), the Ministry of Commerce, Industry and Environment (MCIE) through the National Directorate of Biodiversity, the Secretariat of State for Environment (SEMA) and the Ministry for State Administration (MSATM). The project closely cooperates with the University of Timor-Leste (UNTL) and the national NGO PERMATIL.

**Agro-Biodiversity (ABD)** includes all components of biodiversity of relevance to food and agriculture. The CBD identifies 4 dimensions of ABD:

- Plant/animal/microbial and fungal **genetic resources for food and agriculture**
- **Components of biodiversity that support ecosystem services**: *inter alia*, nutrient cycling, pest and disease regulation pollination and pollution
- **Abiotic factors**: e.g. the physical structure and functioning of ecosystems
- **Socio-economic and cultural dimensions**: traditional and local knowledge of agricultural biodiversity, cultural factors, participatory processes etc.

**Source:** Convention of Biological Diversity

## METHODOLOGY

Giving women and men equal voice and access to activities, roles and functions as well as new technologies coming up can provide better results and increase the sustainability of our work on conservation of ABD. A gender-based approach was chosen in order:

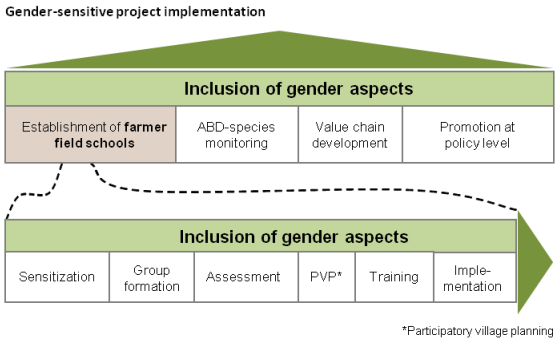
- To provide gender segregated space for men and women to articulate their needs and priorities, to create self-confidence, to participate in decision-making and prioritize activities.
- To include senior male and female farmers in order to appreciate their traditional knowledge regarding ABD and pass it on to younger generations.
- To allow both sexes to benefit from non-monetary effects of sustainable ABD management (e.g. balanced nutrition and improved food security) and monetary impacts (e.g. value chain development).
- To empower both rural women and men in society, so that they can demand agricultural service delivery by private and government extension providers.
- To create gender awareness at partners' level in the medium term in order to provide extension and other services in a gender-balanced way and allow for a balanced participation of men and women in new technologies.

**Gender principles** considered in all project steps:

- All ABD-project steps in the field are carried out – together with the partners – in a gender-differentiated way during group works and Participatory Rapid Appraisal (PRA) activities.
- All women and men discussions and group products or decisions are brought to plenary for joint discussion and final decision-making.
- Criteria for group formation and farmer field school trainers include gender balance.
- Value chain development and access to new technologies (e.g. for processing of local species) starting in 2014 will focus on equal participation of women and men.
- Women are encouraged to take over leadership functions.
- Implementation of field activities is done by women and men jointly.
- All activities are documented in a gender-differentiated way.

**ACTIVITIES/MEASURES**

The following figure shows the main steps of project implementation. As the project only began one year ago, value chain development has not been put into practice yet. Women and men participate in the ABD species monitoring in the pilot villages. Promotion of ABD at policy level is an ongoing process and includes gender dimensions. The establishment **of farmer field schools** was fostered during the first implementation year. The different steps of this process are shown in the figure below.




**Sensitization on agro-biodiversity (ABD)**

The stepwise approach of the project starts with a one-day-community sensitization on the nature and importance of ABD and the methodology and support provided by the project implementation team. The latter is composed by the national agricultural extension staff, the GIZ/AMBERO-IP-NIRAS team, a national NGO (PERMATIL), short-term-experts and the University of Timor-Leste. During this first contact with the communities, groups of women and men are separately asked to draw resource maps of the natural resources in their village, in order to deepen the understanding of natural resources and agro-biodiversity and the need to use and protect them for their conservation and development. The maps produced by groups of men and women are often not identical but rather complementary.

**Group formation**

Those participants of the sensitization events who are interested in maintaining their ABD are supported in forming a farmer group. Extension workers are trained beforehand and facilitate the group formation together with the GIZ/AMBERO-IP-NIRAS team. Thus, they can directly apply the newly acquired knowledge (on-the-job-training). The groups are formed for joint learning and skills development on ABD, which is a new approach in Timor-Leste, where farmer groups are usually only formed for input-supply. Group membership is following criteria which have been developed together with the partners. The participation of both, women and men, young and older farmers is one criterion. All groups select their leadership structure. The groups are encouraged to select not only men, but also women to take leading positions.

**ABD - assessment**

As a next step, farmers and the implementing team jointly assess the agro-biodiversity in the village. The assessment has both technical survey as well as participatory elements. In focus group discussions both women and men discuss their natural resources, trends, the existing ABD, problems and challenges they face. Subsequently, women and men carry out transect walks through their farming area in separate groups, males accompanied by a male and women accompanied by a female facilitator. In these group walks women and men discuss about plants and crops they come across, their use, abundance etc. As a third step women and men groups list the species and varieties in their village, including wild plants, herbs, spices and

medicinal plants they use. The results of group walks and participatory group listings are presented in the plenary by both men and women. The participation of women and men is documented and mapped separately. The plant lists prepared by the community groups are compiled by the implementing team to a plant register of the village, outlining not only availability and abundance of plants, but also their use and access by women and men. All information is underpinned by GPS data; hence GIS based maps concerning the cultivation of old varieties, ABD-fostering agricultural practices or protectable biotopes are developed. The plant registers in turn, are compiled to an ABD plant database and maintained at national level. They are also returned to farmer groups for their own documentation and follow-up. In the first project phase, 386 species and varieties in 15 villages have been documented. Outstanding plants which have been identified and are potential options for value chain development are black and red rice, moringa, *Centella asiatica*, mint and others.

**Participatory Village Planning**

Based on the results of the plant assessment, farmer groups plan and prioritize their implementation activities and respective training contents. This planning process is facilitated by the implementation team. After plenary discussions, female and male groups split up and discuss their needs and priorities. In those gender-segregated groups women and men have their protected room, in which they can openly discuss and voice their problems, experiences and priorities. While women in open community or official discussions traditionally tend to follow decisions taken by men, they are able to discuss and take decisions in their group. In the plenary, women can learn to defend their views and decisions taken in the group. Activities chosen by farmer groups of the first implementation year have been the installation of demonstration plots, training on biodiversity-friendly cultivation practices, in situ cultivation and the realization of seed fairs.

**ABD-Training of Trainers (ToT) and Cascading down to farmer groups**

The participants of these training are the future trainers for the farmer groups at the farmer field schools. They comprise the extension worker of each village as well as two group leaders, ideally one men and one woman. Training takes place in a farming environment through theoretical and practical, plenary and group sessions. One village per district is selected to host the event. Group sessions are again differentiated by sex and results presented and discussed in the plenary. Cascading down and transferring the training content to farmer groups is provided by the extension worker and -mostly - by the lead farmers. They train all group members without further gender-differentiation in order to allow joint implementation by the group. One positive unplanned effect of hosting the ToT in a village was that farmer representatives suggested organising the second training in another village in order to foster farmer-to-farmer experience exchange.

**Implementation**

Implementation started with the establishment of demonstration plots for local species. During the first year, further joint activities comprise compost preparation, seed selection and germination test, preparation of organic pesticide, nursery preparation and erosion control measures (A-frame). All these activities are performed together by women and men. The first farmer groups decided to cultivate red and black rice, local millet varieties, to intercrop corn, local bean varieties and tuber crops as well as to install vegetable-, herb- and medicinal plant gardens. While the implementation support, further training and demonstration plots are ongoing, expansion to pilot villages in two new districts and value chain development on native species are starting in 2014.



**RESULTS/EFFECTS/SUCCESS**

As the project is still in a relatively early phase, statements on results are limited. However, first achievements and observations can be summarized:

- 50 % participation of women/men in all planning and survey steps
- 50 % participation of women/men in the farmer groups
- 3 out of 16 pilot groups are pure women groups
- 25 % of group leadership by women.

In contrast to the traditional practice, where women wait for the decision-making by men, in the project groups they feel free to talk and to take decisions. During project activities remarkable outcomes have been produced by female members of the groups (e.g. more precise and detailed resource maps, exemplary design of demonstration plots). Furthermore, it became evident that women, including the younger generation, have enormous knowledge on medicinal plants, which is an important finding in the project context. In gender differentiated transect walks, women feel free to talk about medicinal plants, herbs and spices they collect and use. Men generally appreciate the work products of women. Plant lists of women and men do often complement each other. The use of and access to certain species and varieties may differ. In an environment, where agencies and government tend to distribute free inputs, women were often more interested to learn, even without greater inputs from the project side. Additionally, the project team states that the gender balanced team composition has been very helpful for joint gender-based implementation and advisory services to MAF. The only female extension worker has been providing excellent assistance to the farmer groups so far. Some innovative activities of female farmers which include the production of liquid compost for sale and conducting field research on the liquid compost and organic pesticide are also worth to be mentioned. The farmer field school approach was taken up by MAF in a concept paper for a nationwide application. However, the project has to handle the limited provision of well trained partner personal for the implementation which often lacks resources, especially transportation means and/or budget for fuel. Therefore, the implementation of farmer field schools needs close follow up by the project team.

The awareness of sustainable use and conservation of ABD together with the acknowledgement of linked traditional knowledge was raised on different society levels. Local varieties and biodiversity-fostering cultivation practices were integrated in the nationwide rice campaign of 2013/14. The results of data collection reveal the necessity to train small-scale farmers in biodiversity-fostering cultivation practices as well as to conserve and spread local rice-/corn varieties, home gardening and fruit trees.

The implementation of these measures will lead to a decrease of pressure on ecosystems and an improvement of food security and livelihoods.

**PIT FALLS AND TRICKS**

The following recommendations should not be considered strict blueprints since social and cultural circumstances differ from country to country. In the Timorese context it was helpful to:

- Address women directly in often male dominated meetings, especially if they are hesitant to participate.
- Support women groups by female implementation staff initially in new tasks, such as resource mapping, planning etc.
- Set criteria of female and male membership in the groups and encourage women to take over leading roles.
- Carry out specific trainings for women and men separately and join both groups later.
- Sensitize men on the need of participation of women.
- Include and invite men to attend training topics that would traditionally attract women in the first place (e.g. nutrition).
- Proceed in a gender-sensitive way continuously to sensitize farmers and partners.

**LESSONS LEARNT**

In the course of the project implementation it became apparent, that it has been of great advantage to include a holistic gender approach from the beginning. Although there have been doubts - by men and women - concerning the performance ability of women at the start, women's knowledge proved to be of high relevance for the project. Generally, women tend to be more restrained initially and in some cases needed initial support by a woman to achieve the group work result. The team observed that women's self-confidence may be increased successively, if the approach is maintained throughout the field work in a continuous way. Now, the consideration of gender aspects is completely normal and accepted by the target group. Women, shy at the beginning, are more self-confident and defend their points of view. Men, now appreciate and value inputs of female group members.

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