

FINAL REPORT

IMPLEMENTATION OF THE AGREEMENT

**BETWEEN NFP FACILITY FAO
AND FAKULTAS PERTANIAN UNIVERSITAS PATTIMURA
PR NO. 37773, OCTOBER 2007**



**A M B O N
2008**

FOREWORD

Forest has the large contribution to the human lives through its direct benefits, such as: source of income, food, protein, medicine, fuel wood and source of oxygen. In addition, forest has also indirect benefits, such as: controlling the earth water system, absorbing the CO₂, stabilizing the regional climate, improving the soil fertilization, preserving the habitat of animals, creating the landscape for ecotourism and etc.

Today Maluku has about 5,4 million hectares of forest with the speed of degradation estimated about 2 - 3 % in each year. The main causes of this degradation are legal and illegal logging, shifting cultivation, forest burning, conversion of forest land to the agriculture activities and commercial crops plantation.

Since year of 2004 the Indonesian government has tried to replanting all the unproductive forest through the program called National Movement of Forest and Land Rehabilitation (Gerhan in Indonesian term). By this program, the speed of planting forest and marginal lands in Maluku are estimated about 1000 - 3000 hectares in each year.

Based on data of satellite indicated that Maluku has about 1,2 million hectares of marginal land. This means that Gerhan program in Maluku just able to planting about 1 % of marginal land in the last 3 years. If in the 3 years of Gerhan program can be only planted 1 % of marginal land, it will need more than 100 years to plant 1,2 million hectares of marginal land in Maluku. Therefore the idea to overcome this problem is not only depend on the Gerhan program but also asking the donors in or outside Indonesia.

National Forestry Program Facility (NFPF) is an institution under the Food and Agriculture Organization with the main objective to facilitate the process of the Forestry National Program of each country in the world. In Indonesia NFP Facility has been processed since year 2000, however in Maluku and North Maluku just started in year of 2006 and the Agriculture Faculty of Pattimura University was the local partner.

In July 2006, the NFP Facility has helped Maluku and North Maluku by a workshop to identify issues and programs of forestry development for both the provinces. Furthermore as the implementation of the workshop, 6 NGO/CBO have selected to conduct 6 projects in forestry development. The selected NGO/CBO were Yayasan Titamae, Yayasan Hualopu, yayasan Toma Lestari, Yayasan inulins, Kewang Haruku and Kelompok Studi Uwen.

The selected NGO/CBO has conducted all the projects activities base on the monitoring and evaluation by the team work of Fakultas Pertanian. Further the NGO/CBO presented the results of the project activity through a workshop on 8th November 2008. The workshop was successfully done and 47 stakeholders from related government institutions were attended the workshop.

In this change I would like to convey my great respect to NFP Facility for all its process and programs in Maluku and North Maluku, and also to the NGO/CBO for the success of the project activities. I hope that in future, NFP Facility can be continued and extended this program to the main problems and priority programs of the forestry development in Maluku and North Maluku.

Dean of Agriculture Faculty
Pattimura University Ambon Maluku Indonesia



Maris E. Th. Hetharia

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A. MAIN REPORT

Under the term of the agreement between NFP Facility and Fakultas Pertanian dated in October, 2007, as the Recipient Organization, Fakultas Pertanian shall submit to Mr. Jerker Thunberg, Manager of the Facility, FAO Forestry Department, Rome, through Ms Marguerite France-Lanord, APO, FAO, Rome, the final report, including the Proceedings of the regional workshop to share results, experiences and lessons learnt from Facility-funded activities implemented by the non-state stakeholders and the draft work-plan for the next year of Facility funded activities, within one month following the completion of the project.

The report comprises of the followings:

- 1) The Implementation of training on the forest planting in Maluku and North Maluku
- 2) Monitoring of the implementation of six activities carried out by NGO/CBO
- 3) Workshop of the implementation of six activities carried out by NGO/CBO

1. Training on Forest Planting

Fakultas Pertanian had already conducted a two days workshop on the subject: Training on Forest Planting in Maluku and North Maluku (see the annex on agenda) held in Ambon Manise Hotel on 12 - 13 Dec. 2007 (see Fig. 1 and 2). The proceeding of the training is also attached here. The training was successful with the participants from the selected 10 NGO/CBO (see annex 1.1) and with the forewords from the Dean of the Agriculture Faculty. Based on the agreement between participants and the trainers, the training used method of discussion in classroom and practiced in the field. In the training 4 topics were and discussed, and then continued to practice in the land field of Fakultas Pertanian to increased skills and techniques on how to planting forest. Another 4 topics as additional lessons were also discussed to increase the awareness and attention of the participant about concept and strategy to develop forestry in Maluku and North Maluku (see Annex 1.2).

The objectives of the training itself were first, to build knowledge and perception of the stakeholders on meaning, role, concepts and policy about forestry development on small island in Maluku and North Maluku, second, to increase the awareness and attention of the stakeholders to develop the forest independently, and third, to increase the skill and improve the techniques use by stakeholders in forest cultivation in order to develop high quality of forest.

The training result was hopped to bring enlightenment on forestry developments in Maluku and North Maluku. One of the major factors that hindered or caused failure in forest plantation was the quality of human resources involved in the project. A good knowledge on the seed producing tree is important so that there would not be a failure on seed selection as well as seed treatment prior to plantation. Good quality seed is determined by the quality of the seed producing tree i.e. the tree where the seed came from. Genetically, a good quality tree will produce a good quality seed. Therefore, training on forest plantation is very important in order to increase the capability of the stakeholders working in the forest sectors.



Fig.1. Presentation in the training



Fig.2. Questioning by participant

Annex 1. 1. The participants of the training are shown in the next table.

No.	Name	NGO/CBO
1	Joseph TUHULERUW	Yayasan Mekar Mandiri
2	B.J. de FRETES	C.V. Agung Mulia
3	A.H. KOLLY, SH	Yayasan Nuduwa Siwa
4	Paulus HELAHA, ST	Pemerhati Lingkungan Amahusu
5	Erman MATINAHORU	Kelompok Tani Nanuyara-Kaibobu
6	Soleman Lende DAPPA, SHut	Yayasan Pelangi Nusantara
7	J. KAILOLA, SHut	Kelompok Tani Desa Kao
8	Markus J. LATUPAPUA, SHut	Politeknik PADAMARA
9	Ir. L.O. KAKISINA, MSi	CV. Datu Abadi
10	Johan Semuel PASANEA	Yayasan Marga Dega Nusa

Annex 1.2.

The activity schedules of the training is depicted in next table.

Tuesday, 11 Dec, 2007

No	Time	Topics	Speaker	Moderator	info.
1	17.00 - 20.00	Discussing the method of the training	Dr. Ir. J.M. Matinahoru	Ir. D. Liliefna, MSc	

Wednesday, 12 Dec., 2007

No	Time	Topics	Speaker	Moderator	info
1	08.00 - 09.00	Opening by Dean of Agriculture Faculty			Committee
2	09.00 - 10.00	Paper: The role of the forest to human lifes	Ir.Th.E.O.Huwae, MT	Ir. P.P.E.Papilaya, MSc.F	
3	10.00 - 10.30	Snack			
3	10.30 - 11.30	Paper: Deforestation in Maluku	Ir. S. Limba, MS	E. Parera, S.Hut, MP	
4	11.30 - 12.30	Lunch			Committee
5	12.30 - 13.30	Paper: Forestry Development Policy in Maluku	Chairman of Regional Forest State of Maluku Province	R. Maail, S.Hut, MS	
6	13.30 - 14.30	Paper: Forest Development based on Ecosystem and Community	Prof. Dr. Ir. R. Oszaer, MS	H. Marasabessy, S.Hut	

Thursday, 13 Dec., 2007

No	Time	Topics	Speaker	Moderator	info
1	08.00 - 09.00	Presentation: Procedures to determine seed trees for seed collections	Dr. Ir. J. M. Matinahoru	F. Letelay, S.Hut, MP	
2	09.00 - 10.00	Presentation: Seed Technology	A. Sahupala, S.Hut, MP	L. Latupapua, S.Hut, MP	
3	10.00 - 10.30	Snack			
3	10.30 - 11.30	Presentation: Nursery	Ir. L. Pelupessy, MP	M. Tjoa, S.Hut,MP	
4	11.30 - 12.30	Lunch			Committee
5	12.30 - 13.30	Presentation: Planting and Cultivation	L. Siahaya, S.Hut, MP	H. Lellotery, S.Hut, MP	
6	13.30 - 16.00	Planting practices (planting demonstration)			Committee
7	16-00-17.00	Closing by Faculty Dean			

2. Monitoring and Evaluation

Fakultas Pertanian had finished its three phases monitoring and field visit to each stakeholder activity area prior to the workshop activity. The data and information were collected by interviewing the local community, stakeholder, and/or joining the currently held activity with the stakeholder. The following report was organized per each stakeholder activity as follows.

2.1. Strengthening Capacity and Environmental Education of Local Community in Haruku

Local community in Haruku village has long established a community based institution or body called Kewang to regulate and monitor the use of the natural resources in their surrounding environment. This Kewang has finished their Facility funded activity which was started around February 2008. The activities were focused on environment, its rehabilitation and education for children as depicted in Table 2.1.1.

In the rehabilitation of maleo bird habitat and water resource about 3,000 tree seedlings were provided for replanting the habitat of the Maleo birds and the down stream areas of the Wae Meme River. The tree species were mainly the species that grew along the shore and river basin. The tree species and its quantity of seedling were *Rhizophora* (1,000), *Albizia* (500), *Callophyllum* (500), *Barringtonia* (500) *Inocarpus* (500), *Intsia* (100), *Buea* (100), and *Erythrina* (100).

The 5 by 5 m² library with the collection on environmental issues had been constructed using wooden boards and sago palm leaves as its roof. There were three bookcases contained 50 titles of the environmental books, tables, chairs and five long benches available in this library.

During July 2008, study on environmental problems related to forest ecosystem in Haruku village was conducted by scientists from Pattimura University where the results indicated that the forest ecosystem of Haruku village was influenced and destroyed during the activities of the Haruku communities. People cut the forest for a number of reasons such as shifting cultivation, building materials and fuel wood. In August 2008 the workshop of this study result was held Haruku village with 20 participants from different levels of the communities.

Drawing competition for children was held in August 2008. About 15 teenagers attended the competition. The competition was evaluated by the Department of the Education and Culture of Maluku Province. During this month some activities such as planting of seedlings in the areas of Maleo habitat, determining and preparing the materials and tools for training, and preparing four announcement boards to forbid environmental destructions were finished.

The training on water resource conservation and management of Maleo bird habitat had been completed in September 2008. Twenty teenagers attended the training and participated in planting activity. Five hundred calendars were printed in the first week of October 2008.

Website of Kewang Haruku had been designed and could be read at www.kewang-haruku.org. The figures of the project activities were presented chronologically as shown bellows:



Fig.2.1.1. Meeting with the local community



Fig.2.1.2. Tree seedlings for the water resource and Maleo bird habitat conservation

Tabel 2.1.1. Realization of the Project Activities on The Strengthening Capacity and Environmental Education of Local Community in Haruku

Main activity	Sub activity	Schedule	Indicators	Realization (%)
Rehabilitation of maleo bird habitat and water resources	1. Preparing the tree seedlings	February 2008	Number tree seedlings available	100
	2. Study on the environmental problems in Haruku	July 2008	Study report	100
	3. Workshop on the results of study	September 2008	Participant list	100
	4. Planting of seedlings	August/Sept 2008	Planted seedlings	100
	5. Maintenance of the planted seedlings	August/Sept 2008	Interviewing the communities involved	100
Constructing special library on environmental issues	1. Building construction	March 2008	Physic of building	100
	2. Preparing the library infrastructures	March 2008	Physic of infrastructures	100
Training on the conservation of water resources and maleo bird habitat	1. Identification of participants	August 2008	Participants Interview	100
	2. Preparing training materials and tools	August 2008	Interviewing the trainee	100
	3. Implementation of the training	September 2008	Participant list	100
Environmental campaign	1. Announcement boards on prohibiting environmental destructions	August 2008	Physic of announcement boards	100
	2. Printing of calendars with environmental issues	September 2008	Physic of calendars	100
	3. Drawing competition for the teenagers on environmental issues	August 2008	Drawing results and participants interview	100
	4. Development of website to promote Kewang activities	September 2008	Physic of website	100



Fig.2.1.3. Workshop on rehabilitation of water resources and Maleo Bird Habitat



Fig.2.1.4 The Habitat of Maleo Bird



Fig.2.1.5. Egg of Maleo Bird



Fig.2.1.6. Mini Library on environmental issue



Fig.2.1.7. Training on the conservation of water resources and Maleo Bird habitat



Fig.2.1.8. Planting of tree seedlings



Fig.2.1.4. Announcement Boards for preventing the destruction of environment



Fig.2.1.5. Children drawing competition on environmental issues

2.2. Seminar and Workshop on the Community Traditional Knowledge toward Sustainable Forest Management for Conserving Water Supply in Kei Island by Yayasan Inlulins.

Seminar and Workshop on Community Traditional Knowledge toward Sustainable Forest Management for Conserving Water Supply in Kei Island held by local community based organization called Yayasan Inlulins, funded by Facility, were conducted successfully. These activities which incorporated the local indigenous knowledge as well as their experiences were believed to support the forest rehabilitation and conservation of water resources in Kei Island i.e. Ohoinol-Evu area.

The project consisted of four sub activities i.e. preparation, Field Study, Seminar and Workshop, and Publication and Dissemination of the workshop result. All of the activities were completed in the given time schedule as depicted in Table 2.2.2.



Fig.2.2.1. Evu water resource



Fig.2.2.2. Seminar and workshop

The local communities living in the South Kei Kecil (Ohoinol and Evu villages) as well as the nearest village communities were involved in the Seminar and workshop (Fig.2.2.2). The workshop were attended by 90 people from the indigenous communities, 28 people from related governmental institutions, two politicians, and 10 representatives from local NGO's /CBO.

Management, conservation and the use of the water as well as forest resources were presented by the local forest ministry staff during the seminar and workshop. Following this, a discussion was held regarding the use of drinking water, forest resources, and other relevant topics including the socio-economic matters of the communities. The seminar and workshop was held in St. Jacob hall, located in Langgur town. The workshop was held in two days to present and discuss two main papers and 8 related papers as depicted in Table 2.2.1.

Table 2.2.1. Papers Presented in the Workshop.

No.	Paper	Title
1	Main Paper	<ol style="list-style-type: none"> 1. Traditional knowledge in sustainable forest management for water supply in Little Kei island 2. Government Forest Management Policies in conserving Ohoinol-Evu forest areas as main water resources of the Little Kei island
2	Related Paper	<ol style="list-style-type: none"> 1. Protection of clean water through the biodiversity conservations of forest and coastal areas for the sustainable use of Small Islands 2. Agroforestry and Agro-ecotourism developments for sustainable living in Kei islands 3. Organic farm, traditional food and the self supporting of Little Kei island among the island groups 4. Small business entrepreneur as a product of creative culture and the credit union 5. Key notes of small island natural resources include Little Kei island and its prosperity threats, 6. Fuel wood utilization and the sustainable of water on small islands in Maluku 7. Indigenous-religion communities of Kei Island civil society and business orientation: local government partnership in the sustainable of forest management and small islands in the era of autonomy region 8. Good governance in forest management and development of sustainable Little Kei island: the trend of new public administration in the era of reformation-democracy-autonomy region

Table 2.2.2. Realization of the Project Activities on The Seminar and Workshop on The Community Traditional Knowledge toward Sustainable Forest Management for Conserving Water Supply in Kei Island

Main activity	Sub activity	Schedule	Indicators	Realization (%)
Preparation	1. Reference study	Dec. 2007	Material copies	100
	2. Orientation of study area	Dec. 2007	Interviewing the village communities	100
Field Study	1. Permission letters of local government	March 2008	Copy of letter	100
	2. Research instruments	March 2008	Physic of instruments	100
	3. Data collection	March 2008	Copy of data	100
	4. Data analysis and discussion	March 2008	Interviewing the discussion group	100
	5. Draft of report	March 2008	Copy of draft report	100
Workshop	1. Identification of participants	April 2008	Interviewing the participants	100
	2. Preparing workshop materials and tools	April 2008	Copy of materials	100
	3. Implementation	April 2008	Participants list	100
Publication and Dissemination	1. Discussion on draft of proceeding	May-August 2008	Interviewing the discussion group	100
	2. Publication	Sep. 2008	Copy of proceeding	100

There were 150 proceeding published and distributed to the participants, local communities and related governmental institutions.



Fig. 2.2.3. Proceeding books

2.3. Strengthening the role of the community in the sustainable forest management in Nusalaut Island by Yayasan Hualopu.

The size of Nusalaut Island is about 32.5 km² with the human population around 5,954 people. Current population density is about 183 people/km². In this dense populated island, the forest management is a crucial and sensitive matter. The local community based organization called Yayasan Hualopu through the Facility funding has elaborated an effort to establish a community based forest management and conservation in the island.

The role of the communities in forest use and its management has long been plied by a representative body called Kewang. Kewang usually is comprised of a group of people selected among the communities or the prominent figures of the villages. The main tasks of kewang are to control and protect the environment including forest from the over utilization or destruction by human activities. Therefore, Kewang usually applied a traditional conservation method called Sasi to regulate the harvesting of crops, catching of fish, etc. In Sasi, a number of resources can only be harvested in a given period of time determined by Kewang. This project focused on motivating indigenous communities living in several villages in Nusalaut island to sustain their local customs in protecting and control the environment from destructions.

The activity was introduced to the community by visiting each village. The team work then meet with the local community to discuss and share their experiences and opinions regarding the community based forest management and conservation. Nalahia village was visited by team work on March 24-25, 2008 (30 people involved), Akoon on March 28-29, 2008 (20 people involved), Abubu on March 30-31, 2008 (20 people involved). The communities were very enthusiastic with the activity. The team work that was formed consisted of two village staffs, two community leaders and four young men and women selected among the community. The team and the NGO's staff socialized the programs to the communities in the aforementioned villages (Fig.2.3.1).

A workshop on the roles of kewang and sasi was held in March 2008 attended by about 100 people. Several decisions were recommended for revitalization of kewang and sasi through a workshop scheduled in September 2008.



Fig.2.3.1. Socialization of the activity

As a follow up, the team and the NGO's staff visited communities in the village of Nalahia, Akoon and Abubu between 4th and 14th of April 2008 to mark the boundary of the land use based on the natural sign (Fig. 2.3.2.). Data would then be used to construct a land use map among the villagers.



Fig.2.3.2. Team work and the NGO,s staff: briefing and site visiting

Four villages (Nalahia, Akoon, Ameth and Abubu) were determined and 10 people were selected from each village to participate in project activity. The selected people then were trained on how to collect data, measure border line and design map. Data were evaluated and then presented to the village communities and local government for improving the draft of land use map through a one-day meeting held in August 2008. There where about 100 people attended meeting to discuss the map of land use for each village (Fig.2.3.3).



Fig.2.3.3. One-day meeting to present data and draft of land use map

Workshop on revitalization of the role of kewang and sasi was held in the last week of September 2008 beginning with identification of the participants (Fig.2.3.4 and Fig.2.3.5).



Fig.2.3.4. Identification of the participants for the workshop on revitalization of kewang and sasi



Fig.2.3.5. Workshop on revitalization of kewang and sasi

Near the end of the workshop a consensus was made among the seven villages (Ameth, Akoon, Abubu, Titawai, Leinitu, Sila and Nalahia) in the island to reorganize Kewang and apply sasi to protect the environment of the island (Fig.2.3.6). All of the project activities were completed in the given time schedule as depicted in Table 2.3.1.



Fig.2.3.6. Signing of the agreement letter on revitalization of kewang and sasi

Table 2.3.1. Realization of the Project Activities on Strengthening the Role of the Community in the Sustainable of Forest Management in Nusalaut Island by Yayasan Hualopu.

Main activity	Sub activity	Schedule	Indicators	Realization (%)
Workshop on the roles of kewang and sasi	1. Identification of participants	March 2008	Interviewing the participant	100
	2. materials and tools preparations	March 2008	Copy of workshop materials	100
	3. Workshop implementation	March 2008	Participants list	100
Data collection and design of the land use map	1. Area identification and orientation	April 2008	Interviewing the participant	100
	2. Land borders construction	April 2008	Interviewing the participant	100
	3. Design map	April 2008	Draft of map	100
One-day meeting to present data and draft of land use map	1. Identification of participants	August 2008	Interviewing the participant	100
	2. Preparing meeting materials and tools	August 2008	Copy of workshop materials	100
	3. Implementation	August 2008	Participants list	100
Workshop on revitalization of the role kewang and sasi.	1. Identification of participants	Sep. 2008	Interviewing the participant	100
	2. materials and tools preparations	Sep. 2008	Copy of workshop materials	100
	3. Workshop implementation	Sep. 2008	Participants list	100

2.4. Improvement of Forest Area Utilization According to Land Zone Approach in Horale by Yayasan Toma Lestari

Land zone approach is one of the methods that divide the forest land into blocks or sub divisions based on their physical conditions to achieve optimal productivity. The community based organization called Yayasan Toma Lestari had focused on the implementation of Land Zone Regime method to conserve forest land and its ecology in Horale village.

During the first period of the activity a conflict aroused between people from nearest village and people from Horale village itself, however, the project was not significantly affected by this condition and the project then could be proceed as was expected.

The project was started by studying the local traditional method or knowledge on land use in March 2008. The study was started by interviewing local people about their experience in using forest land for farming, home garden, shifting cultivation, agroforestry, hunting, etc. (Fig. 2.4.1). The study then was continued by conducting direct observation on the targeted field.



Fig.2.4.1. Identification and interviewing the respondents

The results of study had been presented in April 2008 through a workshop on land use management to protect forest land based on land zone criteria which was attended by about 30 participants from different levels of the village communities i.e. teenagers, youth, men and women, prominent figures of local custom and of the village (Fig.2.4.2).



Fig.2.4.2. Workshop on land management regime

The main activity i.e. the implementation of zone management regime criteria in Horale was started around April 2008 by preparing the land and tree seedlings (Fig.2.4.3).



Fig.2.4.3. Field and tree seedling preparation

The planting of tree seedlings which comprised of multi purpose tree species and agricultural crops were conducted in the early September 2008 (Fig.2.4.4). By the end of September 2008, the tree seedling and the crops were started to grow in healthy condition (Fig.2.4.5). The weed control was applied periodically (Fig.2.4.6).



Fig.2.4.4. Planting of seedlings



Fig.2.4.5. The growing seedlings



Fig.2.4.6. Weed control activities

In the implementation of the management regime criteria, Yayasan Toma Lestari had trained 30 local farmers to practice the system.

In the study of ecotourism potential, Yayasan Toma Lestari had determined and trained 10 people to involve in group of study. They were trained on how to collect data and design the map of the ecotourism potential in their village. The potential site or objects for ecotourism found in the area were shown in the figures bellows.

Government, church representatives together with the local communities were involved in the activities coordinated by Yayasan Toma Lestari. All of the activities were completed in the given time schedule as depicted in Table 2.4.1.

Table 2.4.1. Realization of the Project Activities on the Improvement of Forest Area Utilization According to Land Zone Approach in Horale

Main activity	Sub activity	Schedule	Indicators	Realization (%)
Study on the land use system based on the local knowledge	1. Identification of respondents	March 2008	Interviewing the respondents	100
	2. Preparing the questionnaires	March 2008	Copy of questionnaire	100
	3. Implementation of study	March 2008	Study report	100
Workshop on the local community knowledge about land use system	1. Identification of participants	April 2008	Interviewing the participants	100
	2. Preparing materials and tools	April 2008	Copy of materials	100
	3. Implementation of workshop	April 2008	List of participants	100
Implementation of management regime criteria	1. Determination of sample area	April 2008	Observing the area	100
	2. Grouping of participants	May 2008	Interviewing the participants	100
	3. Preparing plant seedlings	May 2008	Number of seedlings	100
	4. Planting the seedlings	Sep. 2008	Number of planted seedlings	100
Identification of ecotourism potential	1. Determination of study group	August 2008	Interviewing the study group member	100
	2. Materials and tools of study	August 2008	Copy of materials	100
	3. Data collection	August 2008	Copy of field data	100
	4. Draft of ecotourism map	Sep. 2008	Draft of map	100

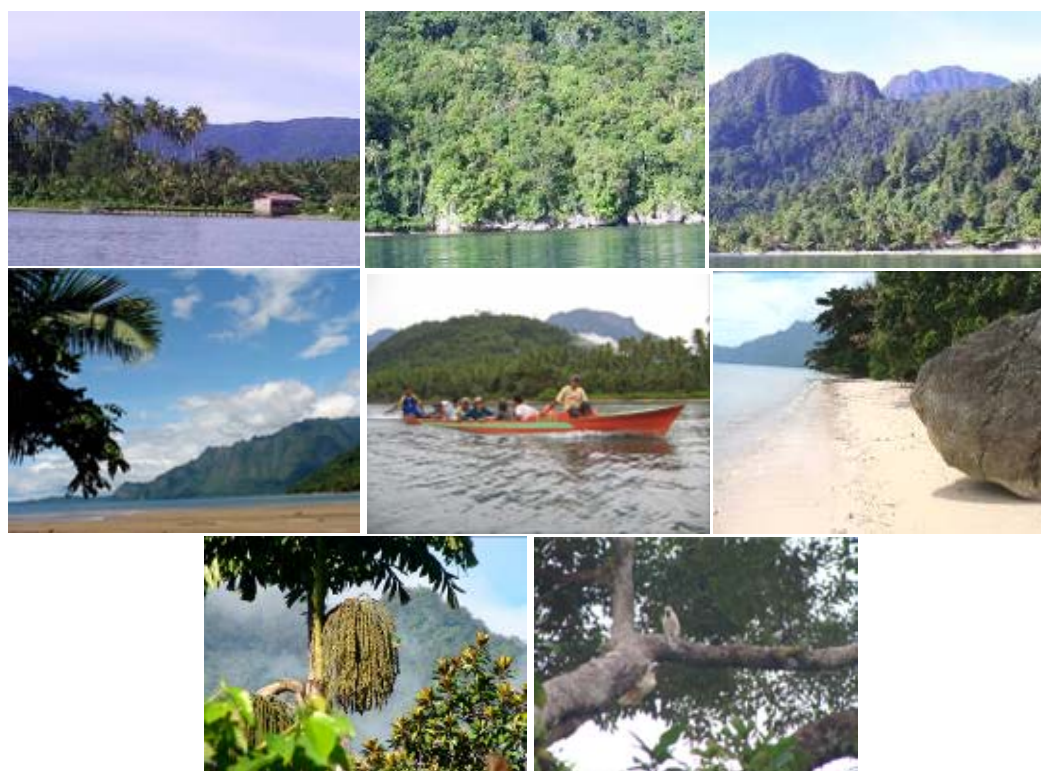


Fig.2.4.7. The potential sites and objects of ecotourism in Horale

2.5. Participatory Rehabilitation Model of Marginal Land by Agroforestry in Sukawati Village by Yayasan Titamae

The project was started in March 2008 by socializing the planned activities to the Sukawati village communities. There were 11 people selected as the group leaders to be participated in the activities. In April 2008 these people were trained on how to practice agroforestry system on marginal lands. Some experts from Pattimura University were invited to train the participants. After two days training, then the participants were involved in preparation of seeds of agricultural crops and seedlings of forest trees as well as multi purpose tree species (MPTS).

There was an adjustment on the first targeted rehabilitation site due to the lack of ownerships; therefore the church community's garden was selected as the project implementation site instead. However, the objectives of the project could still be maintained through the implementation of agroforestry scheme in this alternative site.

The project has two main activities i.e. training and application of agroforestry technique. During the training participatory working groups consisting of Sukawati farmers were formed and trained on planning, implementation and management of agricultural system with an agroforestry scheme. A presentation on agroforestry system was held and the farmers were involved directly on the demonstration of seedling preparation (Fig.2.5.1, and Fig.2.5.2).



Fig.2.5.1. Socialization and group meeting



Fig.2.5.2. Discussion in training group

On the second week of April 2008, a hectare of marginal land belongs to the church community was cleaned and in the first week of May 2008 several kinds of seeds of agriculture crops were planted. The application of agroforestry system was introduced started from the land preparation. All members of participatory working groups were involved in this activity. The activity was carried out by means of combination of mechanical and chemical techniques. The dense coverage of land by weeds was first removed by using grass cutter and hoes. After the weeds removal the land was cleaned and prepared for planting (Fig.2.5.3).



Fig.2.5.3. Weeds removal, land preparation and seed planting

From the monitoring activity it was shown that from May to June 2008, all crops have been planted. The agriculture crops and forest tree species as well as the MPTS have been planted based on the planting map designed by the expert. The plant species used as forest tree were *Agathis* and *Pterocarpus*, whereas for the MPTS were durian and coconut (Fig.2.5.4). The tuber and annual crops used were cocoyam, taro, corn, cassava, beans, peanut, pumpkin and legume (Fig.2.5.5 and Fig.2.5.6).



Fig.2.5.4. Seedlings of forest tree species and MPTS



Fig.2.5.5. Agricultural crops



Fig.2.5.6. Weeds control in agroforestry system

The maintenance of the location site was started since planting activity in May until October 2008. Weeds removal was applied periodically by the participating communities (Fig.2.5.6). All of the activities were completed in the given time schedule as depicted in Table 2.5.1.

Table 2.5.1. Realization of the Project Activities on the Participatory Rehabilitation Model of Marginal Land by Agroforestry in Sukawati Village

Main activity	Sub activity	Schedule	Indicators	Realization (%)
Project socialization and grouping of participants	1. Socialization of project activities	March 2008	Interviewing the prominent figures of the village	100
	2. Grouping the participants	March 2008	Interviewing the participant	100
	3. Determination of agroforestry area	March 2008	Field observation	100
Training on Agroforestry	1. Preparing material and tools	April 2008	Copy of training materials	100
	2. Implementation of the training	April 2008	Participants list	100
	3. Proceeding of training	September 2008	Book of proceeding	100
Land preparation and planting crops	1. Clearing the land	April 2008	Field observation	100
	2. Preparing the seeds of agricultural crops	April 2008	Field observation and interviewing the participants	100
	3. Preparing the seedlings of forest crops	March 2008	Number and species of seedlings	100
	4. Planting crops	May- June 2008	Number and species of crops	100
	5. Maintenance	May-October 2008	Quality of crops, seedlings etc.	100

2.6. Strengthening of Proprietary Right of Native Community in the Forest Resource Management in Taniwel

The conflict on forest land use aroused between forest entrepreneur and local communities because both parties had claimed to have the right on the same object. The proprietary rights or ownership on forest land claimed by the communities is based on their unwritten native cultural law and native proprietary rights, reference the historical and cultural aspects. On the other hand, the government licensed forest concession is based on written legal law issued by the government. This conflict also aroused in Taniwel sub-district. Therefore, it is important to study the local community proprietary rights and cultural law in relation to the forest land use and in turn empowered the community to have a proprietary interest in forest harvesting, land use and management. Uwen village located in Taniwel sub-district was selected for the case study.

The project was started by conducting the study on the interaction among the community, forest and the forest product utilization. Field study was started, beginning of April 2008 by socializing the activity to the selected community members including the village staff and its chief (Fig.2.6.1.). There were 12 local people included in this activity. The data was collected by interviewing the respondents selected in the study. There were about 20% of the communities of the Uwen village and its surrounding villages selected for the interview (Fig.2.6.2.).

Site visit and determination of borderline among the properties of the community was made around the 2nd week of April 2008 (Fig.2.6.3).



Fig.2.6.1. Communities, village and figure staffs during the socialization of the activity



Fig.2.6.2. Interviewing the respondents



Fig.2.6.3. Site visit for borderline determination

The workshop on the result of first activity was held in July 2008 and it was participated by 46 communities, 20 prominent figures of the village and 12 local custom figures (Fig.2.6.4).



Fig.2.6.4. Workshop on the results of the study

The last activity i.e. mapping the borders of the forest land ownership was carried out from August to September 2008 (Fig.2.6.5). All of the activities were completed in the given time schedule as depicted in Table 2.6.1.



Fig.2.6.5. Map and sign post installation: border line based on the forest land ownership

Table 2.6.1. Realization of the Project Activities on the Strengthening of Proprietary Right of Native Community in the Forest Resource Management in Taniwel

Main activity	Sub activity	Schedule	Indicators	Realization (%)
Study on the interaction among the community, forest and the forest product utilization	1. Identification of respondents	April 2008	Interviewing the respondents	100
	2. Preparing the questionnaires	April 2008	Copy of questionnaires	100
	3. Implementation of study	April 2008	Data of the study	100
	4. Study report	May 2008	Report	100
Workshop on the results of the study	1. Identification of participants	July 2008	Interviewing the participants	100
	2. Preparing materials and tools of the workshop	July 2008	Copy of materials	100
	3. Implementation of workshop	July 2008	List of participants	100
	4. Proceeding of the workshop	July 2008	Book of proceeding	100
Mapping the borders of the forest land ownership	1. Identification of village and family group	August 2008	Interviewing the figure of the village	100
	2. Mapping the area of villages	August 2008	Draft of map	100
	3. Design the borders between the family group property in the map	August 2008	Draft of map	100
	4. Checking the borders in the field	August 2008	Interviewing the field workers	100
	5. Map of forest land ownership	Sep. 2008	Draft of map	100

3. Workshop on Activity Results of Six Selected NGO/CBO in Maluku and North Maluku

Fakultas Pertanian has already conducted one-day workshop on November 8th, 2008 to share results, experiences and lessons learnt from the above activities by the six stakeholders. The workshop itself was one of the activities carried out by the Recipient Organization agreed upon under the term of the agreement.

The objectives of the workshop were to socialize result of the FAO/NFP program to the stakeholders in Maluku and Maluku Utara, verify and increase the quality of the report of the activities carried out by the selected stakeholders, and discuss the benefit and the direction for the next work plan.

The workshop was held on November 8, 2008 from 8.30 AM to 5 PM at the hall room of Manise Hotel Ambon. The workshop was opened by the Dean of Fakultas Pertanian (Fig.3.1). Each representative from the six NGO/CBO was given the opportunity to present the results of the activity and after that the audiences were given the opportunity to raise questions or suggestions.

Beside the member of the six NGO/CBO, there were participants from the Regional Forestry Department, Related institution of Local Government, University and NGO/CBO. There were 47 people attended the workshops (Fig.3.2).

During the discussion there were suggestions from the participants that the support from the Facility should be increased in the future (Fig.3.3). In summary, the workshops has pointed to the two main issues regarding the development of forestry in Maluku and Maluku Utara i.e. empowering the economy of the communities in or around the forest, and rehabilitation and conservation of the forest.



Fig.3.1. Report from the head of the FAO/NFP team work and the speech from the Dean as the opening ceremony of the workshop



Fig.3.2. Participants



Fig.3.3. Group Discussions

Annex 3.1. Participants of the workshop

No.	Name participants Institution	No.	Name participants Institution
01.	BC. Tity. M. Oratmangun BAPEKOT KOTA AMBON	02.	Sugeng Handoyo, S.Hut BALAI TN. MANUSELA
03.	Sartje M. Untajana, S.Hut DISHUTBUN SBB	04.	Ir. Thomas M. Silaya, MP KELOMPOK STUDI UWEN
05.	Prof. Ir. B. Kewilaa, MS YAYASAN TITAMAE	06.	Andre Tan, S.Hut DINAS KEHUTANAN PROMAL
07.	Ir. Th. E. O. Huwae, MT FAKULTAS PERTANIAN	08.	Dr. Ir. Simon Raharjo YAYASAN TITAMAE
09.	M. Tjoa, S.Hut, MP YAYASAN TOMALESTARI	10.	Ir. Sadli IE DINAS KEHUTANAN PROMAL
11.	M. Loiwatu, S.Hut, MP YAYASAN TITAMAE	12.	Ir. Jimmy Titarsole, MP FAKULTAS PERTANIAN
13.	Ir. L. Pelupessy, MS FAKULTAS PERTANIAN	14.	Ir. Jacob H. Pietersz FAKULTAS PERTANIAN
15.	Ir. A. A. Tuhumury, MS FAKULTAS PERTANIAN	16.	R.J. Waifly, S.Sos BAPEDALDA PROMAL
17.	Yan Persulesy, S.Hut YAYASAN TOMALESTARI	18.	Dr. Ir. E. Manuhuwa, MSc FAKULTAS PERTANIAN
19.	Ir. Conradus Ufie, Msc YAYASAN INLULINS	20.	August Johannes Ricolat Ufie YAYASAN INLULINS
21.	Edward ST. Dumadumun, SP DISHUTANAK KOTA AMBON	22.	Alfred Tanahitumessing, SP DISHUTANAK KOTA AMBON
23.	Eka Nurmala Sari, S.Hut BKSDA MALUKU	24.	Lentjie S. Y. Leleulya, S.Hut BPTH MALUKU PAPUA
25.	Fatimah Tuakia, S.Hut BPDAS WAEHAPU BATU MERAH	26.	Fransisca Y.R. Luturmas, S.Hut BPTH MALUKU PAPUA
27.	Zulham, S.Hut BKSDA MALUKU	28.	Deddy Syofan BPDAS WAEHAPU BATU MERAH
29.	Adnan Hakim BPDAS WAEHAPU BATU MERAH	30.	Jacobus Birahy, SPi YAYASAN HUALOPU
31.	George Corputty, SP JARINGAN BAILEO MALUKU	32.	John Lewerissa YAYASAN HUALOPU
33.	Andjela Sahupala, S.Hut, MP FAKULTAS PERTANIAN	34.	Ir. Lieke Tan, MS FAKULTAS PERTANIAN
35.	Chr Flavi Ruban, SPi YAYASAN HUALOPU	36.	Pieter Toumahuw, SPi YAYASAN HUALOPU
37.	Eliza Kissya KEWANG HARUKU	38.	Ir. Gazali Daties BAPPEDA MALUKU
39.	Chr. Waliulu AMBON EKSPRES	40.	Ruben Tiranda, S.Hut BPTH MALUKU PAPUA
41.	Ny. N. Sopacua BAPPEDA MALUKU	42.	V.I. Saiya KEWANG HARUKU
43.	Ir. E.L. Madubun, MS FAKULTAS PERTANIAN	44.	Andre Kiriweno BAPEKOT KOTA AMBON
45.	Ir. C. K. Pattinasarany, MP FAKULTAS PERTANIAN	46.	Troice E. Siahaya, S.Hut, MP. FAKULTAS PERTANIAN
47.	Moda Talaohu, S.Hut FAKULTAS PERTANIAN		

Annex 3.2. Schedule of the workshop

Time	Topics	Speakers	Moderator	Remarks
08.30 - 09.00	Registration	-	-	Workshop Board
09.00 - 09.30	Opening	Dean of Agriculture Faculty	-	-
09.30 - 10.00	Snack	-	-	Workshop Board
10.00 - 12.30	Results activities of involved NGO/CBO	- Yayasan Hualopu - Yayasan Inlulins - Kelompok Study Uwen	Ronny LOPPIES	-
12.30 - 13.30	Lunch	-	-	Workshop Board
13.30 - 15.00	Results activities of involved NGO/CBO	- Yayasan Titamae - Yayasan Toma Lestari - Kewang Haruku	Jopie HITIPEUW	
15.00 - 15.30	Snack	-		
15.30 - 16.30	Benefits of NFP Facility Process in Maluku and North Maluku	Group I	Dantje LILIEFNA	
	Work-planning for next NPF Facility activities	Group II	Johan MATINAHORU	
16.30 - 17.00	Discussion result	Group speaker	-	Workshop Board
17.00 - 17.30	Closing	Dean of Agriculture Faculty		

B. ADDITIONAL REPORT

This section comprises of the reports on the activity results of six selected NGO/CBO in Maluku and North Maluku.

1. Strengthening Capacity and Environmental Education of Local Community in Haruku

1. Introduction

Background of the activity

Human being is the creation of God who has a complex needs those needs are sometimes, change based on the civilization, classically the needs of the human being are : main, second and tertier needs the changes are happening based on human civilization and are of them is because of life style.

The increasing of the population of human, are also cause the increasing of their needs, and of course the production process to full fill the needs directly makes the exploitation of the natural resources. If the arrangement of the natural resources are not wisely used will cause the disaster. An old saying of Mahatma Gandhi said that, "The earth is sufficient for all people but not sufficient for the greed of a person" .

Maluku province is consist of thousands large and small islands but most of them are small islands which has the character just like others small islands. They have the limited of supporting effort and had of fast negative ecology changes if the exploitation on the land is done without any control.

The spreading of the population is imbalance. The concentration of the people on the small islands make a great pressure to that small islands. The locking of green field that change to living site, over farming and cutting down the trees as the source of the problems that we face recently such as flood and erosion when the rainy season comes and the locking of the water summer.

Beside the natural resources as the local deeds, such "sasi". This knowledge is one of the strength that needs because of its role based on the character of the local society "sasi" is the value that inherited by ancestor that arranges the balance between the human being and the nature. It grows become a part and society custom perspective in arrange the natural resources.

Eventhough it was prevented systematically by the regulation during the rezim but the local deeds such as " sasi" and kewang are still survive the confession the custom government through the regulation No.32/2004, so the it heald the local deeds and the custom.

Haruku is a village on Haruku island. Since 1600 it has a local deed "sasi". It is the prohibition of the taking or harvesting of a certain commodity on the land or on the sea at the certain time. The other local deed such as the counting of the ageing of the month and connect it to the influence of the biophysical condition of the current of the sea, wind to know the ideal condition for fishing or taking the woods or bamboo on the forest.

As a custom village that still has kewang and sasi institution, they try to keep themselves as a custom institution that still survive in doing their job one of the strength of the arrangement of the natural resources. Because of their hard work in preserving the environment Haruku village they got kalpataru award as the savior of the environment category on 1985 from republic of Indonesia government.

The environment problems that still face by kewang are :

- The supremacy of custom law that cannot run perfectly because of Haruku hadn't has definite government.
- The damage of the stream of wai Memi and wai Ira because of cutting down the trees and the taking of mineral.
- The locking of society awareness of the importance of preserving the environment.

- The locking of the information about the environment and the government rules about environment to the society.
 - The hunting of make and farming that done by the people that erese the field and the source of the food of maleo, that their population.
 - The exploration of the minng that rejected by the people,
- The problems above will be handled by kewang, because of that based on capacity, the prior problems will be handled first.

2. The aim of the activity

1. Improve the damage of the stream and catching water and reused the ecology of mongrove forest.
2. Increase the knowledge, role and awarness of the people in society arrangment and natural resources.
3. Fertilize the loving to the environment to the children.
4. Strengthening the capacity and position of kewang in the custo,.

3. The expected cutput

The expected short term output :

- There are value transform, informastion and knowledge on the society that can change the society misconception about the use of natural resources.
- Preserve the local deeds related with the use of natural resources.
- Provide a center activity of the living environment (concervation, seeds, study and play) to the community especially young people.
- Strengthening the isntitution capacity and the network between kewang and stake holder that giving the support (government, college, press, ect).

Longterm out put :

- In long term, the influence of the healing environment, will be felt such as the preserving of the enviroment quality and the continuous of the natural resource.
- By the preserving of the quality o the environment will make the continue pf the specific sources, such as "ikan lompaa"

4. General Description about the location of the action.

a. The amount of population

The total population of Haruku village is 2205 people or 529 famillies, consist of logs male, and N40 semale.

The job of the society :

- Farmer 475 people
- Government officiaal 45 people
- Merchant 18 people
- Freeder 10 people
- Fisher 175 people
- Tailor 6 people
- Private worker 5 people
- Brick layer 60 people
- Carpenter 60 people

b. Education

The education of the society

- Eelentary graduation 999 people
- Junior high scool gradution 356 people
- Senior high school 212 people
- D2 gradution 20 people
- D3 gradution 10 people
- S1 gradution 10 people

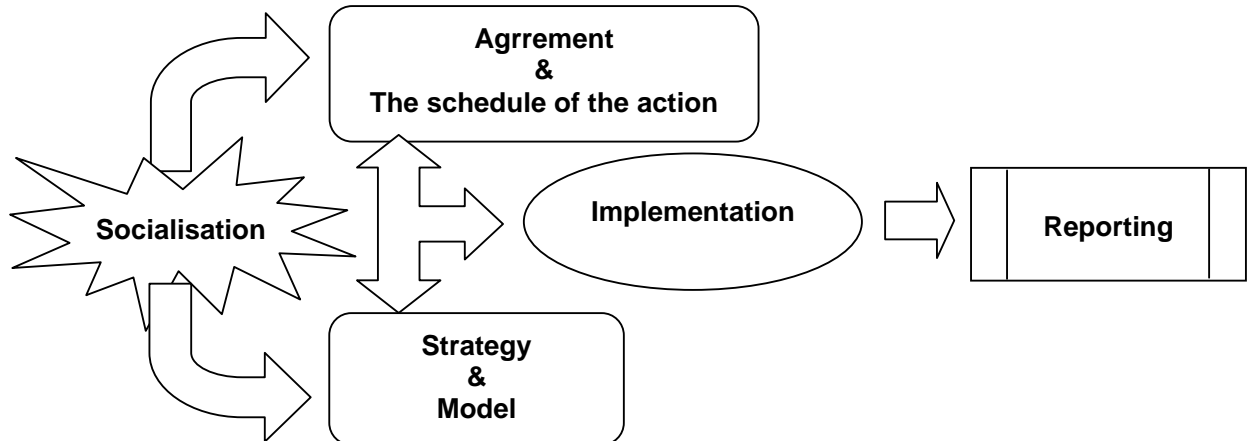
5. The Method of the action

a. Location and time of the action

The location of the action is Haruku village, Haruku island of the central Maluku. The agreement was done on November 1st 2007, the action was started at the early 2008. The activities were about getting the important input by doing the socialisation to the program. Pre-socialisation action was making the foundation of the library started on May 2008 and ended by the planting of green trees at the end of October 2008.

b. The procedure of the action

The action was done in some steps :



A. Socialisation of the action

The socialisation was done before the action to gain the support to the program also to get important input to the development of the program.

Stakeholder who contacted were local government, religious men, the headmaster from kindergarten to senior high school, society activist and N60 activist on this stage, the support successfully gained from the stakeholder and also planning and the contribution to each stakeholder.

The method used is focus group discussion (FGD). From FGD that was done, it got : a) The agreement and action schedule. b) The action model and the strategy. Socialisation was done to identify the problem and the target group program.

→ Making and identifying the target group

Identification was done to the society group that potential can help the environment education process to the society.

Identification of the stakeholder are those who :

→ Proved to have concern on the environment problem

→ Able to push and move or influence people to participate to arrange the natural resources.

Based on those simple criteria, then it was got the people who related with this program, they are local government, educators, and religious people.

This program facilitates them to make a strategy planning of the workshop that has been done.

→ Local government and "saniri negeri"

Their involvement in planning an activity and workshop had given them some strategic steps that is continuous planning. Because of there is definite government, some of the agreement had been taken as the strategic planning in arranging the natural resources and become the input to the new local government.

- Teacher
The teacher are very important to influence the students as the young generation. Environment education ideally given since the early time. When the FGD was done with some teachers, it was found that the environment are sometimes / almost been forgotten as the theme. This is because the environment has not been the major discussion in education, it is still the minor discussion in some subjects of the formal curriculum in almost all levels.
Socialisation was done to 3 headmasters elementary school and 1 junior and senior high school.
- Religious and society people
Religious people are the priest and the leader of the congregation the aim was to make the environment be more valuable and become the point of view in serving the materials to the people. Beside the society people, the businessmen were also involve in the discussion and training related with the used of natural resource, chensaw, farmer and those who concern in to the natural protection and advocate ruler than non-environment. 2 priest involves and 3 leader of the congregation
- Sunday school teacher
The Sunday school teachers are very potensial because they train the children and the teenager. At this age, they are searching their identity because of that information and knowledge about environment is very important. Because of that, before they teach the children, they need to make their perception among them to make curriculum material, because the environment material is less. The more materials about environment, can change the young generation point of view that hoped to be the society point of view, there were 4 Sunday school teacher who involved in the discussion and the training of the continue planning.
- Children and teenager
Children and teenager are school age children. Through his program the education was lead not only to the school students but also to the failed school students. They were involved on this program as the group who love the natural or little kewang. Their jobs are not to be kewang but being the children & teenager who care the environment they are expected have a good point of view in arranging the natural resources. They will be the pioneer in preserving the environment.
- NGO'S Activist
FGD was done between kewang and Ngo activists (Baileo Maluku net) that support to build the strategy and facility the training activity.

B. Implementation

The action

The action of this done as follow :

- 1) Rehabilitate the area of Maleo bird
 - a) Identify the problem of the source of the water and Maleo bird two rivers on the Haruku village, they are wai Memi dan wai Ira and meet on the wai Learisa Kayeli where the "ikan lompang (trichostema baelama) are in and lays egg.
The taking of the material of the stream will lost half of the area including the area of maleo's egg.
The maleo birds are decrease in numbers. The result of identification and observation on the field were found some factors the cause the this problems :
 - the cutting of the tress along the stream to build the house when the riot happened in 1999.
 - The taking of the sand and stone to the same needs.
 - The activity of washing the clothes on the river that poison the river
 - The hunting of shooting trapping the maleo bird by the people and the predators.
 The result of this observation then presented in the workshop to the village. It is expected, the strategic steps can be taken to preserve this species.

- b) (To Fance) The protection area where maleo lays egg.
From the step untk now the protection area is (To Fance) by using Bamboo to prevent from the predator, boar or human.

The Advantages

The advantages of this activity is providing an area about 30 x 12 m² maleo bird to lays egg. There are 5 to 13 eggs that produce by maleo every morning. Those eggs are saved from the hunting of human and others predators.

- c) Providing the seed and green plant
Until now the 2983 young tress of the green plant that planted at the early program, that done by kewang by making the seed or seed bank and spread to the society has increased become 4000 young frees og different wood tress and fruit trees.
The the beginning, the collections were boutgh but then they are provided by kewang & little kewang members.

The Advantages

Provide the green seed to the society

- C) Adding to society knowledge through workshop.

To get the same perception of the society about the importance of preserving the natural and arrange the strategy of the natural resources in Haruku village, the input of the ecerptsts are needed to give information about the importance of arrange the natural resources among the stake holders.

The workshop was held on Agustus 30 th 2008, attended by = educators, local government, kewang, Ngo activiest, fishery businessmen, chensaw businessmen, and religisusmen there werw 27 people attended the workshop.

The were some recommendation production in this workshop :

1. The needed of revitalisation of kewang institution in Haruku
2. The needed of local regulation about the arrangement of natural resources.
3. rejected the government rules in any form that related with damage exploitation of natural resources in Haruku.
4. Working together with the neighbour village in arrang area.
5. Environment education must be the subject of the currilucum of the formal education.

The Advantasy

The awaeness among the stake holder to make the movement based on the result of the recommendation.

- 2) Build the library to the society
 - a) Buil the library
The size the library is 6 x 5 m² the wall is made of Rumbia and completed with the light 450 w.
 - b) Providing the books about environment
There are 600 tittles of the reading materials including : books, megazine, researchthesis. Until the and of October 2008, it is visited by 4047 visitors.
 - c) Providing of table, chair and others.
The library has some support facility, they are " 5 bench, 3 desk, a gerden reading and aplay field to the children.

The advantages

- 3) The reaining of water source protection and Maleo bird.
 - a) Identify the participant

The prior participants were children & teenagers including those who care the environment, Or had caught Maleo, involved in ouriting opinions, the visitors of the library and also the parents who had fisherman, or cutting the tress background.

It was expected, this knowledge can make them have a great care in preserving the natural, so they can influence others to do the same thiry. The participants then become the workshop environment or little kewang.

Because of the limited of the financial this training involded 20 people. Now, the little kewang doing their job by planting the participants then become the volunteers to observe the maleo eggs field, they save the eggs that just lays outside the preservirs area.

b) Providing the trainer and facilitator.

This program facilitate by Ir, George Corputty and the trainer were from farming facully of Pattimura University Prof. DR. John matinahoru, M.Se and Ir. Agus Tuhumury MS.

The Advantages

The form af little kewang star in planting the green trees.

The others advantages, there ar 4 little kewang save the maleo eggs tey found out of the preserve area they also note the eggs every morning.

4) Environment Campaign

a) Making the prohibiltion board, the advantgaes of Natural regurcesdestructive

Environment campaign was done by making the prohibition board with destruction method and the prohibilitin of taking make's egg. The impact can be seen wherw people began to stop to take the stone from rivers Learissa Kayeli. But, fish bombing sometimes done by the people in Haruku.

The Advantage

The people stop to take the stone from the river. The people aslo began to inform the aim of the use of destructive method to other people.

b) Making the Calender

The message that put on the calender was aimed to changes the peoples begaviour to arrange the natural resources and not to exploit it.

c) Drawing competition and writing opinion

Thise competition were done together and there were 200 participant took turn on them.

The prizes were given from the ist winnwe to the 6th winner the juges of the drowing competiton was Dani Ultra : he was an environment activist who had got education campaign with caricatur mdia. The judges of writing opinion was Honny Sampoy SH, a journalist from ambon Express newspaper.

d) Making kewang website

Through this program kewang was facilitate to have their own website, it www.kewang-haruku.org , to inform the activities that had been done by kewang in Haruku. Beside that it is also to build the network with a wide stake holder.

5) The problem faced

→ The flictute of the financial. This was happened because it rokk one year between the planning untik the implementation.

→ The tecture agenda planning ion the village sometimes comes together with the time has been planned.

6) Recommendation

A. Society

1. The society awarness didn't inciadentially happen but it was done intergrate happened and continuous.
2. The up date regulations on the local needed
3. The strategic planning is needed to build the village who have an environment perspective

B. Government

1. Ned to support the initiative of the local organization in preserving and protecting the natural
2. Need to strengthening and empowering them

C. NFP Facility

The continu support of the evironment eduction is needed not only financial but also advocate and networks.

2. Seminar and Workshop on the Community Traditional Knowledge toward Sustainable Forest Management for Conserving Water Supply in Kei Island by Yayasan Inlulins.

PREFACE

This final report is a revised version of the paper presented in "NFP-FAO Project Results Presentation" held by NFP-FAO Maluku and North Maluku Committee at Amans Hotel, Ambon, November 8, 2008, and is a summary of the whole NFP-FAO funded project activities which has completely presented on the proceeding published by supporting of Faculty of Agriculture University of Pattimura.

By finishing this final report, INLULINS are grateful to all who have directly or indirectly involved in supporting the successful of the activity of Seminar and Workshop (SEMILOKA), especially National Forest Programme (NFP) - FAO in Roma who funded this project. We are also grateful to Dean of Faculty of Agriculture University of Pattimura Ambon for his responsibility on this project, and Dr. John Matinahoru, the project officer.

Our special thanks are due to indigenous community and head of village of OHOIFUNWARMANEU (Ohoinol, Marfun, Warwut, Semawi, Letvuan, Evu), local government (forestry, plantation and environmental office), people of local agencies, member of local legislative, priests and nuns, teachers, local civil servants, journalists, coordinator of St. Jacobus TMM's meeting room, local committee, and Faculty of Agriculture publisher.

This final report hopefully will meet our expectation.



1. INTRODUCTION

1.1. Background of the Activity

Kei Island, in particular the Southern Kei Kecil is a very strategic area for water supply through its outlet in Evu Village (Authorized-Local Drinking Water Company - PDAM Evu), for both coastal rural communities and Langgur as the capital of Maluku Tenggara (Southeast Maluku), as well as Tual city and Dullah island's communities. The two islands

(Kei Kecil and Dullah islands) are connected by USDEK Bridge. Naturally, Kei Kecil island is formed by uplifted young coral-reef of Pleistocene-period (0,6-11 million years ago), and is very fragile of degradation of forest, soil and fresh water due to population growth and the rapid increasing of development under the impact of global warming at present and in the future.

Field observation showed that water supply capacity by PDAM to meet the needs of local community and to support the growth of Langgur and Tual cities (and the surrounding villages) tends to be decreasing nowadays. This condition has limited water distribution for housing as well as lodging of tourists. The ongoing crisis of clean water supply in Maluku Tenggara has explicitly mentioned by head of Commission -C Team DPRD Maluku (House of People's Representative at Provincial level) (Suara Maluku newspaper 27/3/2007). The degradation of water resource related to the exploitation and decreasing of forest function (in equilibrium with nature) and the weakness of traditional community and local knowledge institutional at upstream and downstream areas will become a major problem in the future when the ongoing problems are not properly addressed.

The request programs such as sustainable forest management to meet the needs of indigenous local communities, national and global at present and in the future should be pursued (Forest Dept. and GTZ, 2005). It was emphasized that the program mentioned are not government programs, but is a participative dialog processes (from local communities) toward an agreement of sustainable forest management plans. The term *forest* is not only limited to forestry sector but also other sectors in holistic.

In relation to local community participation including female group, so the understanding of "traditional cosmology of the reality of world as a universal natural equilibrium, custom, and the reality of human life in the mystic think-framed, global/holistic, and intuitive (Yumarma, 2006) is important. And it is expected is to be applied in the Southern Kei Kecil community land of OHOIFUNWARMANFU (Ohoinol, Marfun, Warwut, Semawi, Letvuan, Evu). Ecologically, forest destruction (deforestation) in the upstream areas (buffer zone) will have negative impacts on water source in the down stream of Evu. This forest destruction involves indigenous people of villages or *ohoi* which are locally connected. Indigenous people (*Nuhu Duan* in Kei terminology) is understood as a group of people living based on values of their tradition (heritage from their ancient) which is also applied for non-local people (*Marvutun*) either new or old generation.

In old paradigm, indigenous people (*ohoi*) is considered as the forest destruction agents, lack of knowledge of forest management or the function of forest or trees for living and their benefits (MIPA, 2005; Envirocare, 2005). Therefore forest reclamation /forestry with different managements tend to be focused on this point of view, and ignoring the participation in application of indigenous knowledge and the existing local wisdom within the communities in relation to sustainable forest management. Consequently, this community's local wisdom is weakened even extinct and restricting sustainable forest management. However, by working together and participatory/constructively sharing with *ohoi* rural communities on environmental issues, traditional culture products will help to understand that sustainable forest management and traditional culture have been practiced for years and they contain useful and authentic knowledge/experience that can be applied for sustainable livelihood and physical-spiritual welfare in the future (ecologically, economically, and socio-cultural).

The weakness and lost of local indigenous knowledge (the root of Kei culture) occurred along with Kei language erosion and the on-going forest and environmental destruction is the actual problems accelerated by the rapid growth of population as well as poverty, local market growth, materialistic cultural-oriented, globalization, sectoral top-down development policies (for example, introduction of new commodities/plant seeds, and inadaptable technology packet). Such a rapid development and cultural homogeny-oriented have marginalized indigenous people. The rapid growth of population and poverty along with centralistic top-down development policies without participation and integration, and the weakness in law enforcement have forced the local indigenous

community to burden their land with agricultural activities and forest exploitation for a short-term benefit, over a happiness/welfare-principle (material-spiritual), and environmental based-traditional sustainable management.

Indigenous people and local communities both male and female in the upstream areas tend to be lack of confidence about their indigenous management capability (such as *Atuvun* and variety products of wisdom-creative cultures) to sustainable help themselves. They interested in short-term external instant solutions to solve their poverty problems by exploring their land resource (forest cutting and wood selling, chemical input-agriculture with monoculture planting system, introduced-new varieties and side effect rich-chemical pesticides). As results, erosion and flooding in rainy season along with coastal resources degradation and drought during the dry season (water supply crisis) have become serious environmental problems in Kei Kecil islands today.

By concerning the dependency of indigenous community on external development management (consequently of top-down sectoral planning) up till now, marginalization of language as a media of indigenous knowledge (cultural degradation) and lack of capable in solving life problems and its implication on people's needs such as the distribution of drinking-water by PDAM Evu. In other word, planning decisions made by "outside people" are beyond people needs and local wisdom culture, and therefore resulting programs which do not suitable in poverty alleviation (increasing people's welfare), reducing social gap and environmental degradation.

Therefore, there is a need of promoting an alternative approach planning model (in a framework of *clean development*) involving *multi-stakeholders* from *governance* or local development organization (indigenous community and other civil societies, and local government through a workshop to facilitate an agreement on sustainable forest management planning strategy for water supply as well as poverty alleviation and conflict prevention. The type of planning is participative, bottom-up decentralization based on community traditional knowledge/culture of OHOIFUNWARMANEU, which is beneficial for all people of the island toward sustainable development of the small island.

For such participative planning strategy as a component of sustainable forest management based on traditional knowledge, and as a humanism entry point in which all stakeholders involved through SEMILOKA (Seminar and Workshop) based on the adaptive real needs of the target areas, thus an initial study is needed to identify key issues and problems, and to solve the expectations in a holistic way. Qualitative results of the initial study (PRA-SEMILOKA) can be used to determine alternative subjects offered to participant of SEMILOKA planning strategy. Sutomo et al.(2002) stated that such planning topic is useful to arrange a covered area of programs and avoiding irrelevant conversation, so outcomes of this SEMILOKA will really meet local people needs (OHOIFUNWARMANEU), national and global, and cross-generation (*Tuv Har Vit Ne Mav Derat* - terminology by Kei's people)

1.2. Goals of Activity

General goals

To achieve a better independency-prosperity and safety of indigenous community both male and female in the areas of OHIFUNWARMANEU (Ohoinol, Marfun, Warwut, Semawi, Letvuan, Evu) as well as the community of Kei Kecil and Dullah islands by sustainable forest management for soil and water sustainable uses based local community indigenous knowledge.

Specific goals (objectives)

- To carry out an initial study (*small research*) to discover key problems and issues, a contextual of expectation, and the spirit of community's indigenous knowledge of OHIFUNWARMANEU of Kei Island in sustainable forest, vegetation, soil and water management.
- To carry out a Seminar on results of the initial study and supporting papers

- To conduct a Workshop on planning strategy (consensus of vision, accepted action plan) in order to enhance local community participation in sustainable forest management toward the preservation of water resource and a better life.
- To publish and disseminate both process and results of planning strategy as well as accepted actions with regard to achievement of *good local governance*.

1.3. The Expectation Outcomes

- Undertaking the initial study that involved collecting and documenting data and information of current problems, and potential of indigenous knowledge of Kei Kecil Island specifically area of OHIFUNWARMANEU (mainly both male and women from the previous generation) in relation to sustainable forest management and exploitation for the preservation of water resource (sustainability of forest-soil-water), and economic-creative resources to sustain local community welfare as well as local wisdom culture.
- Strengthening public awareness and participative especially local indigenous community on root of traditional knowledge/culture and improvement interaction between stakeholders (*strengthening local institution and human development*) corresponding to protecting and sustainability of forest management, and on their motivation to develop the best cultural manner and products, constructively and environmental orientation-based Kei Kecil heritage.
- Achievement of active-participation of all related-stakeholders in building consensus of planning strategy that focus on visions, goals and action programs priority for sustainable forest and water resources management based on indigenous knowledge/culture of local community which is more creative and comprehensive and having a positive impact on sustainability of all aspects of living in small island, including tourism.
- Publishing and dissemination of all results and accepted action plan as a recommendation and a local content to all stakeholders related to building cultural community resources and local institution strengthening in sustainable forest management based science and technology, traditional/local wisdom for sustainability of water resource as well as conservation coastal areas of small island "*Nuhu Roa*" as anticipation the risk of global warming in the future.
- Organizing innovative-synergetic formats of long-term innovative-humanism multi-stakeholders/discipline/ dimension together with public servant government offices in a participative forest (natural resources) management based on local indigenous knowledge.
- Actualization of *good governance* by local wisdom empowerment in integrative-participative-adaptive and sustainable forest management, ecologically, cultural-economically and politically to meet basic needs of people in Kei Kecil and Dullah Islands, and Kei Island in general.

2. Overview of the Project Areas

2.1. Population

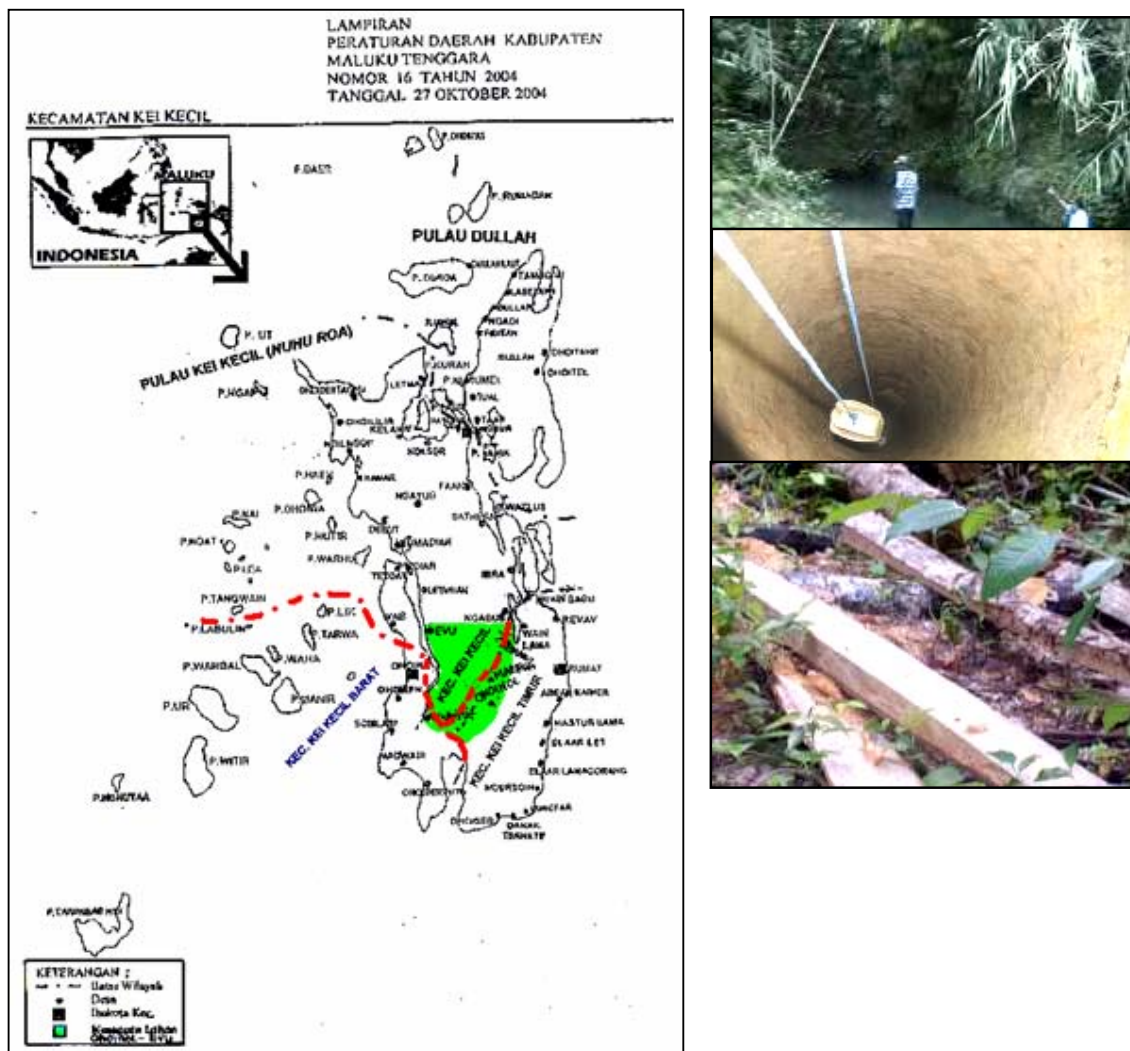
Table 1. Total Population and Ratio of Growth (2005 - 2004)

District	2005				2006				2007			
	M	F	T	R	M	F	T	R	M	F	T	R
Kei Kecil	18.228	18.426	36.649	9,9	18.567	18.763	37.330	1,0	18.829	19.020	37.849	1,0
Kei Kecil Timur	5.049	5.120	10.169	1,0	5.147	5.226	10.372	1,0	5.314	5.385	10.669	1,0
Note : M=male, F=female, R=ratio Source : Southeast Maluku in number												

2.2. Livelihood, Education and Income

Most of population showed in Table 1 work as farmers either agriculture or fishery, and only about 10% work as civil servants (PNS) and military, and 5% is entrepreneur working in informal private-sectors (micro-business unit). Daily household income is commonly low.

Picture 2. Situation Map of Kei Kecil Island and Study area



3. Methods of Project Implementation

3.1. Location and Time of Project Implementation

Target location of the study was six villages (“*Ohoi*”) located in two districts in Kei Kecil Island, they were district of East Kei Kecil and Kei Kecil.

The initial study (Pra-Semiloka) was conducted at the third to fourth weeks of December 2007 (first stage), followed by consolidation stage at the first week to April 2008 and field validation stage on 22 to 24 April 2008. One day seminar on 23 April 2008 and followed by Workshop on Planning Strategy on 24 April 2008. Final publication and dissemination were the final stage.

3.2. Procedure of Project Implementation

The initial study was conducted (pra-Semiloka) by using a qualitative method or interview (RRA, PRA in depth), focus group discussion, and participatory field observation (Chamber, 1996; Irwanto, 1998; Selener et al., 1999; Stubenvoll, 2000; Adimihardja and Hikmat, 2001; Sutomo et al., 2002; Santoso, 2003; Sugiyono, 2007). The basic characteristics of designing a quantitative study are general, flexible, dynamic, and become visible in study process;

The project activities consisted of 2 days SEMILOKA in Langgur and 1 day focus group discussion in 3 villages.

Procedures of the initial study (Pra-Semiloka) were:

a. First Stage

The first stage started at the third weeks of December 2007, after the contract was signed by INLULINS as the second collaborator. Results of the first stage study in six villages (OHIFUNWARMANEU) are presented in Table 2.

b. Consolidation and mobilization

This stage started at the first week to 19 April 2008, included:

- Re-evaluate and reformulate the results of the first stage into the main problem and issues, hope and key issues in sustainable forest management based on indigenous knowledge, secondary data interpretation and brainstorming (INLULINS team).
- Confirmation and grouping of information and relevant field data (from the first stage) through literature study toward understanding and clarification of problem aspects as well as key issues founded in the field (Table 2).
- Confirmation SEMILOKA's materials and schedule, and a relevant main facilitator: an experience senior lecturer with background of social geography and well understanding about Kei including its socio-cultural aspects (indigenous knowledge), and planning strategy including participative multi-stakeholders, institutional strengthening and human resource development.
- Multiplying and distribution of brochure/guideline of SEMILOKA, and invitation to main facilitator in Manado (Johannes Esomar, PhD) and facilitators INLULINS, unwritten and written approach followed by invitation, brochure/guideline of SEMILOKA to Bupati (major of Southeast Maluku), head of local Forestry, Plantation and Environment Department, legislative, and other related departments (Agriculture, Cooperative and Micro Business, Tourism, PDAM). Invitation to community of six involved-villages OHIFUNWARMANEU (by their village's head), and other related-stakeholders (local entrepreneurs, teachers, priests and nuns).
- Mobilization of facilitators (by plane and ship) to Langgur, coordination with local supporting team, arrange final preparation (consumption, seminar/workshop room, theme, decoration, sound system, multimedia, local transportation, computer, in focus, etc)

c. Field Validation

Second field study was on 20-22 April 2008 covered the area of OHIFUNWARMANEU to confirm the finding (problems, key issues, and hopes), and *up dating* a formula for the next discussion (on SEMILOKA). By this stage, it is hoped that problems formulation and effective and valid solving efforts can be addressed.

Field study was conducted by using RRA (*Rapid Rural Appraisal*) combined with PRA (*Participatory Rural Appraisal*), Focus Group Discussion, and formal interview with key stakeholders of indigenous community. In this qualitative study, field research team worked as a main instrument with focus on key questions that arose interactive questions in describing complex reality, and recorded by *handycam* and *digital camera*. Overall field study included:

Data collection

- Interviewed with stakeholders about their daily activities and roles in forest management, problems and constraint faced, their strength and experiences about traditional knowledge, and how this local wisdom internally influence their strategy and interest to participate in activities done, and what contribution can be given.
- Visited villages and interviewed indigenous community (male and female) to gain information and general description of real physical conditions of water quality and discharge (qualitative), present land use and their tendency of changing from year to year, government programs related to forest conservation of *recharge* areas and

the participation of community in this program, well-traditionally protected areas (dense forest) due to people belief/indigenous knowledge instead of government suggestion (for example location of *Nen Dit Sakmas*), home or hand-made products and variety local cultural creative-products (second products of forest and agricultural yields), welfare and population growth, etc.

- Examined problems, issues and hopes found, with emphasized was on recognizing actions needed to be implemented to improve sustainable forest and other natural resources exploitation either traditionally (*yamad ubud*) or formal.
- Confirmation/validate consultation

Analysis and feed-back

- First stage field data analysis (problems, issues, hopes of success, potency, opportunity toward identification of solution alternatives) in the field (with stakeholder), followed by qualitative and quantitative analysis by INLULINS team (facilitators) and presenting the results (text, tables, pictures) in preliminary report along with literature review.
- Re-visited to study areas by INLULINS team and shared results of the first stage data analysis with stakeholders to obtain feed-back. Results, problems identification and reformulation of issues were discussed and refocused throughout this stage. Ideas and planning of sustainable actions in the future was confirmed. The feed-back of traditional community was important to strengthening and developing of ownership *feeling*.

Reporting

- All results found at the first stage activities were chosen as the main topic in planning strategy and as the issues (discussion subject) in Seminar and Workshop.
- The feed-back obtained at the second stage was reformulated and arranged according to selected topics, and became the main issues in one day seminar. The results were then arranged as a planning strategy contained focused-vision, program priority for 5 years (the first year target operational may be identified in SEMILOKA).

d. Seminar and Workshop (SEMILOKA)

Seminar that designed to hear the explanation of speakers in interactive way is different to workshop which is conducted to create a forum of getting-together to find a obvious direction in solving problems as a whole. In other word, a new participative organizing process toward *good governance* at these reformation/democracy/ decentralization eras, and regional-autonomic need the ability of managing a workshop for handling a specific problem (such as sustainable forest management for the availability of water and welfare increase) in holistic, with the spirit of gathering and equivalent, including qualitative initial study.

This workshop does not bring about a formal decision outcome. However the basic implication of this workshop is to establish a “**consensus**” about what can be done and what can not be done in solving the problem as a collective commitment of stakeholders. In this case, participation of each indigenous community (village or *oho*) in different programs (but) with the same main issues and vision is requested.

Technically, SEMILOKA is carried out to crystallize and centralize the direction of further orientation and put it into a planning strategy for problem solving in the area of OHIFUNWARMANEU. The strategy planned is a priority or overall direction in holistic that accepted by stakeholders, and is chosen as the best tradition to achieve established-vision within 5 years (5 years planning strategy = RENSTRA). Finally, outlining aspects of RENSTRA and recommended it as an official document and as a reflection of OHIFUNWARMANEU’s indigenous community aspiration and needs for sustainable development. Recommendation/formulation document of planning strategy must provide education and assistance, and as guide for related-stakeholders. For a short-term planning strategy, document of RENSTRA may contain 3-8 pages included formulation of mission/vision, summary of basic strategy, list of programs priority, etc.

e. Publication and dissemination of process and results of SEMILOKA

4. RESULTS AND DISCUSSION

4.1. Results of Initial Study

Table 2. Summary of Main Problem Identified, and Key Issues (Problem Aspects)

No.	Key issues (aspects of problem)	Problems/Main Issues
1	Deforestation due to forest cutting, legal and illegal logging, no regulation of managing water resource and catchment area	Ecology and environment
2	The limitation of water supply to meet household and agriculture needs (river) both in quantity and quality (pollution during the rainy season and dry in the dry season)	
3	Soil erosion, landslide (along a given river bank)	
4	Uncontrolled-hunting of Kus-Kus (<i>Medar</i>), Pombo (<i>Tarut-Kamun</i>), Kakatua, Lebah (<i>Wanan</i>), Maleo (<i>Kilwar</i>), and environmental degradation	
5	Burning/firing (Angrat), fire-wood collected, replacement of local trees by jati trees, erosion and biodiversity extinct (source of staple food and traditional medicines), independency and untruthful on authority	
6	Conversion deforestation into short-term monoculture agriculture mainly vegetables, supply to Tual-Langgur traditional market (excluded cassava/ Enbal)	Economic/agroeconomic (agribisnis)
7	Conversion of small-scaled cultivation (crops diversification/ traditional inter-cropping with perennial trees (model <i>Atuvun</i> = traditional agroforestry, naturally in seed and organic) into short-term monoculture with chemically inputs, expensive, hazardous for health, soil and water	
8	Shallow soils, low soil fertility status, low organic matter/humus, low soil water content (humidity), dusty/source of pollution (<i>Tanbul</i>) in dry season, eroded in rainy season	
9	Low production and low selling price of raw materials, low income (and fluctuate), high living cost and production cost	
10	Shifting-cultivation with short-bero time left behind bare land (<i>navibut</i>), and digging calcareous soil left land degradation	
11	The limitation of off-farm prospect activities (subsystem of agribusiness after harvesting), no rural agro-industry or agro-tourism. The existing hand-made of bamboo, basketry, natural swimming pool in Evu, old cemetery in coastal forest of Letvuan, cemetery of Nen Dik Sak Mas in secondary forest of Semawi, have not professionally managed	Economic/agroeconomic (agribisnis)
12	Replacement of local staple-food by subsidize-rice (Raskin), traditional medicines by generic-manufacture medicines, and other products with prescription	
13	Public service sectors that decrease the pressure on carrying capacity of agricultural land are limited to small-scaled stall (kiosk), to meet daily needs of 6 selected villages	
14	Financial institution is limited to <i>Credit Union(CU)</i> and <i>Credit Cooperation (CC)</i> , for example CU AHA di Semawi, Ohoinol and Marfun	
15	Weak economic capacity of community land along with the declining of socio-cultural and traditional spiritual capacity which is in symbolic presenting a specific message used as guidance for all.	Socio-culture
16	Social destruction - decreasing of self-confidence, egoism, community leadership crisis, individualistic, consumerism, alcoholic, short-term and partially way of thinking	
17	The communicating of the existing traditional values and socio-cultural wisdoms by using Kei language tend to be replaced by "daily dialect and slang"; some existing documentations are thematically and inadequate.	

No.	Key issues (aspects of problem)	Problems/Main Issues
18	Decreasing of traditional community participation in community-based organization, cooperation unit	Institution Human resource Education
19	Development planning tends to be <i>top-down</i> policies, lack of integration and coordination, untruthful to bureaucratic and technical agencies	
20	Lack of specific development planning for existing traditional forest land, including land use zoning in each village	
21	Lack of access to financial services, entrepreneur as a partner in small-scaled community business	
22	Village's children (primary, secondary and high school) speak well Kei Language, but do not formally learn at school, in turn they learn Indonesian and English languages at school (educated become foreign = <i>Morvutun</i> in Kei or <i>Amber</i> in Papua)	
23	Lack of facilities to support sustainability of traditional knowledge and culture, and development of human resource of Kei people for example through providing a cultural house, museum, library.	



Figure 3. Field findings (Pra-SEMILOKA)

2. Seminar

4.2.1. Paper Presentation

7 papers were presented, 2 main papers and 5 supporting papers. They were:

Main Papers

- a. TRADITIONAL KNOWLEDGE IN SUSTAINABLE FOREST MANAGEMENT FOR AVAILABILITY OF WATER SUPPLY IN KEI KECIL ISLAND. By Conradus Ufie, Ketarina Esomar, Rafael M.Osok, Joseph A. Ufie, Rhony E.Ririhena, Kosmas Rahado (INLULINS TEAM)

- b. STRATEGY OF FOREST MANAGEMENT IN THE AREA OF OHAINOL TO EVU KEI KECIL ISLAND (Keynote paper by J. Nahusona, Office of Forestry, Plantation and Environment, Southeast Maluku)

Supporting Papers

- c. FRESH WATER PROTECTION BY CONSERVATION BIODIVERSITY, LAND-FOREST AND COASTAL AREA TOWARD SUSTAINABLE SMALL ISLAND MANAGEMENT. By Rafael M. Osok (INLULINS Foundation)
- d. DEVELOPMENT OF AGROFORESTRY AND AGROTOURISM FOR SUSTAINABLE LIFE IN KEI ISLAND. By Kosmas Rahado (INLULINS Foundation)
- e. SUSTAINABLE AGRICULTURE, TRADITIONAL STAPLE-FOOD AND THE CAPABILITY OF KEI ISLAND WITHIN THE ISLAND GROUP. By Rhony E. Ririhena (INLULINS Foundation)
- f. UKM CULTURAL CREATIVE PRODUCT AND COMMUNITY FINANCIAL INSTITUTION - CREDIT UNION. By Conradus Ufie (INLULINS Foundation)
- g. NOTES ON SMALL ISLAND NATURAL RESOURCES (INCLUDING KEI KECIL) AND WELFARE LIFE CHALLENGE. By Johannes Esomar (State University of Manado)

4.2.2. Identify Direction and Priority of Seminar Results

Discussion and dialogue occurred during the seminar have identified a new direction and priority strategy in sustainable area management in the future. The identification results and its summary is as followed:

- Ecological issues (living environment), its aspects are:
 - Forest (flora-fauna), soil and water
 - Agroforestry and organic agriculture
 - Flora-fauna/endemic plants - natural potency of Kei Island
- Economical issues. Its aspects are:
 - Income
 - Pattern of traditional consumption (enbal vs Raskin/subsidize-rice)
 - Staple-food crops and traditional herbal (medicine plants)
 - Agrotourism (tourism)
 - Distribution and market networks
 - Funding (Credit Union, donator, etc)
- Socio-Culture Issues. Its aspects are:
 - Traditional knowledge in natural resources management
 - Village history asset (*Nen Dit Sak Mas, Tebtut, Ngus Mayas*, etc)
 - Traditional custom, dance, ornament, ceremony/ritual
 - Art/cultural studio, Kei cultural garden
- Education Issues. Its aspects are:
 - Local content curriculum
 - Local language (Kei language), wisdom words, legend, historical stories, dictionary
 - Museum Kei
 - Regional library (any collection about Kei)
- Gender issues (included in all issues mentioned above)

4.3. Workshop

4.3.1. Grouping and Discussion Topics (Questions)

Participants was divided into 6 groups based on the number of given topics. Each topic contained some questions that to be discussed and answered in group. Strategy and solving target were then proposed as a result of group discussion. Questions that to be answered in group discussion are:

Group 1.

1. Are there any of your activities reflected knowledge of sustainability of forest function, soil and water?

2. Is there a need to map village territory boundaries and land use system in the area of Ohoinol - Evu?
3. Is this mapping need to be supported by community based-Regional Rule (PERDA)
4. Are there any specific plants which may play an important role in your village?
5. Are there any crop combination (long and short periods) in your village?
6. How far does gender play important roles in protecting (a) forest function, biodiversity, soil and water, and (b) existing traditional knowledge?

Group 2

1. Where does your income come from (besides from forest and agricultural, for example basketry and ornaments)?
2. How big is your income? Does it enough to support your household needs?
3. Could you please list local food and traditional medicines that you and your family consumed?
4. Do you think about these local food and traditional medicines? Do they need to be sustained and developed?
5. How far does gender play important roles in protecting (a) forest function, biodiversity, soil and water, and (b) existing traditional knowledge?

Group 3

1. What do you think//suggest if the subsidize-rice (RASKIN) is stopped?
2. Are there any efforts which have been done to distribute your products?
3. What have you done so far to get any financial helps to support your own-business?
4. How far does gender play important roles in protecting (a) forest function, biodiversity, soil and water, and (b) existing traditional knowledge?

Group 4

1. What have you done in protecting Kei Language and traditional knowledge?
2. Could you please list historical assets and their locations in your village and what have you done to protect them?
3. Could you please list traditional custom, dances, traditional ceremony (ritual), and when do they performed?
4. Is there a need to provide a building/house for protecting traditional tools, customs for dances and traditional ceremony (ritual)?
5. How far does gender play important roles in protecting (a) forest function, biodiversity, soil and water, and (b) existing traditional knowledge?

Group 5

1. Is there a need to protect traditional knowledge by formal education
2. Is it necessarily to teach Kei language at school
3. Is there a need to provide a museum to protect and display historical asset of Kei
4. is there a need to provide a library for collecting all information including research of Kei Island
5. Could you please list potency of tourism objects/destination in your village?
6. How far does gender play important roles in protecting (a) forest function, biodiversity, soil and water, and (b) existing traditional knowledge?

4.3.2. Output of Group Discussion

Group 1

1. Trees planting and forest protection and conservation have to be continually done, and strengthening community based-regulation to protect community's rights is urgent.
2. Mapping of area and land use boundaries is very important to avoid uncontrolled forest cutting, and this map covers all villages
3. Community based-village regulation is important and its implementation needs to be supported by Regional Regulation (PERDA), so this village regulation has strong basis to guarantee the right of community, as well as to control the activities of community.
4. Specific plants which play an important role in your village are:
 - perennial plants: coconut, jackfruit, citrus, mangos

- annual plants : enbal (cassava), dioscorea, beans, vegetables, red-rice (upland rice)
- 5. Yes, In a farm (garden) food crops or vegetables are grown in combination with other plants, either perennial (fruit tress), or annual (maize)
- 6. *The roles of gender in protecting forest, soil and water resource*
Particularly in reforestation program (*program reboisasi*), selecting location for swidden cultivation (*ladang*), and using the product of forest as raw material for home-made products such as basketry, ornament, firewood.
The role of gender in protecting traditional knowledge
According to cultural history of Kei, *Dit Sak mas* is one of the women leader introducing *Hawear* to people of Kei. The sustainability of *Hawear* indicates the position and role of women in society for example in establish traditional rules or norm.

Group 2

1. a. Selling agricultural products (enbal, fruits, vegetables)
- b. From other activities such as fishery (selling fish), Kiosk (small-scale business), selling home-made products such as basketry (kaler), house roof (ravat), ornaments.
2. a. Income come from agricultural activities is not enough because depending on season, soil/land, and the fluctuation of market prices.
- b. Business of home-made products has not run well and its market is very limited. The products are made as a tradition (to sustain a tradition)
- c. No personal business
3. a. Food crops (*wad banau*), enbal (*cassava*), *dioscorea* (*enmav, bo'o & tanvuun = ronan, ronvatu, tua, en, manad*), Fruits (*muu, kustel, fau ayai, nur, wasan, uar, umuun, hujun, mayel, ingyany, kamor*), vegetables planted or from forest (*huk, kalir, sos, af'ut, sukavolvo, ngeng, lavetar*), animals or *wad* (*vav yaat, tarut kamun, medar, kliwar, yabar bubuut, buu, rubai, langar, nguran, aloat, ngar-ngar, kabin*)
- b. Traditional medicine crops consume by
 - Female:
 - during pregnant period : *bida, ful, ngir-ngir, lantiva, waranianit, bakurung*
 - after giving birth : *ngifat, ngungus, kasdat or kasis, kaniv, lakdanan, yat*
 - Male: *yanar* (milk wood), *rahai* (acacia), *rot, envul kadel*
 - Children : *kastad, ai haruf, kamatil vuan*
 - For all : *ingroam* (lengua leaves for fever), *muu lohor* (young babana's leaves for high body temperature/fever), *kabus roan* (kapok leaves for reducing high body temperature), *la'ur* (galoba for reducing high body temperature), *wanan* (bee honey for cough).
4. These traditional medicine crops need to be protected and developed, because they are ancient heritage that needed to be sustained for living. Some of these traditional crops are used as traditional hair shampoo (*veat-warun*), washing (*bakurung*), perfume (*kenanga flower*) and hair care (*kemiri* and *kenari oil*).
5. Women have to be actively involved as
 - *Tutur manoman* - to tell their aspiration related to forest, land and water management
 - *Motivator* - to encourage/support others in exploiting forest, land and water resources with wisdom for sustainable life
 - *Initiator* in forest, land and water management
 - An able to apply *hawear* in protecting the sustainability of forest, land and water resources

Group 3

1. There are 2 points:

- a. Stop RASKIN (subsidized-Rice) - does not influence the availability of food, because there are a number of existing traditional foods being consumed by Kei's people, such as enbal, cassava, sago, *dioscorea*, sweet potatoes.
 - b. Economical impact - RASKIN is easily accessed by community, especially low income community, because its selling price is lower than normal price in market.
 - c. *Group suggestion* - community needs to be encouraged to plant upland rice or *gogo* rice (local term: *red rice*) for household's food stock or village's stock.
2. Market survey is to confirm prices of agricultural products from outside compared to local products. Then, final selling price is decided. For example: green peas, groundnut. Besides local market (Tual, Langgur), efforts have been done to market agricultural products outside Tual, is to Holland. For example enbal is packaging in a attractive package.
 3. - *maren* tradition (*gotong royong*)
- loan (return with interest), for example: Cooperate unit
 4. a. Forest, land and water resources - initiate formation of a women empowerment group which concern about degradation of forest, land and water resources
b. Traditional knowledge - expansion of the existing home-made products - quality, market (For example variety of basketry (raw materials are taken from protected forest they concern with)).

Group 4

1. conservation actions
 - started from family
 - construct a relationship to "specialist" in Kei language by young generation
 - encourage young generation for to be familiar with local songs and catching the message from them
 - introducing to education institution
 - dictionary of Kei language
 - Letter of permission by head of village for those who (both local and overseas) want doing research on socio-culture of Kei's community.
2. Historical asset
 - Levuan village
 - Cemetery of King Ohoivur
 - Sculpture of King and queen Kasdew
 - Gold-dragon "*Mas Nang*" belongs to Tawurutubun family
 - *Luv Mol* is stored by Inuhan family
 - *Mas Aweman* is given to Rumlus family
 - Evu village
 - Location of "Wearden" ($\pm 2500m$ to upstream), the place where Soa Wol met Nen Mas II and they transformed into water. This place is belief as a head of Evu water at downstream.
 - Semawi Village
 - Cemetery of *Nen Sak Mas*
 - Marvun Village
 - Cemetery of *Balyang* who died on rock and his bones is still exist
 - Warvut village
 - The place of *Nen Mas Kaun*
 - Ohoinol village
 - *Ngus Mayas* (a unique mushroom which come out (called) by a specific song
 - *Wear Lian* - it is belief as a place of "eel" (*Aloaf*) and linking to *Tanebar Evav* and *Rubilus*, and *Tutrean* in Kei Besar Island.
 - Conservation effort by villagers is needed to protect theses villages assets
3. Traditional custom (clothing)
 - Traditional clothing
For women - kamum and Sbo Lib-Lib and Ravit Seting
For Man - Kamun pendek with head ties (*Rik-rik*)

- Traditional dance
 - Sosoi
 - War dance (Temar-Rubil, Katar-Sbad) is accompanied by varsukat
 - Sawat (Tifa Sawat)
 - Sul is accompanied by tiva Nam
 - Ngel-Ngel, baut atnanit

Traditional ceremony

- *Rinin* ("welcome ceremony" for important guests, for village's young man after finishing their study at a certain level, also when they come back with wife from other region).
 - Voryav
 - Functioning
 - In line with a certain event, situation and condition
 - Cultural studio
 - It is needed to improve cultural and customary protection for the future
5. a. Forest, land and water resources - women is expression of glorious values and is respected in relation to ownership.
- b. Traditional knowledge - women has more ability and sensibility in traditional music, dancing and become a trainer; producing hand-made products such basketry and ornaments; cooking traditional food (enbal, bejab sir-sir, bakasang, Es U Mas)

Group 5

1. traditional knowledge is needed to protect by promoting their products, such as:
 - traditional dances (sawat, saryaat, yerik, farsukat) is accompanied by tifa and suling
 - traditional songs (utuk wawar, ngel-ngel, baut atnanit
 - Kei language (Iarvul Ngabal)
 - Customary (bel/pela, maren)
 - Traditional food (enbal, etc), traditional medicine
 - Children playing's tools (been kadit, been ul, been kambushere, been tasbuun hov kubkubat, been temar swar, been uar-amuun
2. Kei language is needed to teach at school and used it in communication
3. Museum is needed to build for collecting all historical assets and values of traditional-wisdom cultures
4. Library is also needed to build as a place for collecting all information about Kei, including research reports and publication.
5. Tourism objects such as:
 - o Wearlian hawang and cemetery of Rat Ohoivur-Letvuan
 - o Mgus Mayas - Ohoinol
 - o Wear Masil-Evu (toward Wearden)
 - o Dit Sak Mas, Wuar Lair- Semawi/Wain
 - o Baranfit/balyang-Marvun
6. There is a need of women's institute to trainee them about protection and exploitation forest products for increasing their income. For example *karin* is made of *daar* (tikar and bakul, bis, luv, kabulin, kuva, ngel), development organic-oriented products (table cover, hat, bag, tissue box, sandal, etc) .
Da is made of *Yavar* (Karaan, Ngov, Ngunit, Sifat, Sahat, Kaler, Karaan, Woban, Lavan, etc)
U (rattan) is used to create basket, desks, chairs, vas, and bookshelf

4.4. The Framework of Area Management Strategy

4.4.1. Vision

Within 25 years period, traditional society of Ohoinol, Marfun, Warwut, Semawi, Letvuan, and Evu have successfully applied traditional rich-cultural for sustainable forest management and available water supply for sustainability of living in Kei Kecil Island.

4.4.2 Main Issues

General issues were identified and then summarized into 4 main issues (related to problems), as follows:

General issues (aspects of problem)	Main issues (related to problems)
Deforestation, soil erosion, limited water supply (quantity and quality), limited information and regulation	Ecology/agroeconomy
Shallow soils, infertile soil and limited water, low production and limited market for raw material, fluctuate market's price, limited off-farm activities, tourism, and public services	Economy/agroeconomy
Weakness of carrying-capacity of cultural deposit and traditional spiritual as a basis for unity, as well as area of creative-economy of community	Socio-culture
Kei language and variety of culture, traditional knowledge have not fully applied in school curriculum	Education, institution, and human resource
Notes: problems were positively formulated, and were solved by creatively intervention	

4.4.3. Strategy

To achieve accepted-vision, four strategies/mains were established, they are:

Main issues	Strategy planning	Achievement
ECOLOGY	NATIONAL REGULATION (UU), REGIONAL REGULATION (PERDA) - AGREEMENT	CLEAR AREAS BOUNDARIES, RECHARGES AREAS IS A PROTECTED AREA/FOREST
ECONOMIC	IMPLEMENTATION AGROFORESTRY, AGROINDUSTRY, AGROTOURISM, SUSTAINABILITY AND MANAGEMENT ALL CULTURAL-WEALTHY OF KEI	INDEPENDENCY ON FOOD AND IMPROVEMENT OF WELFARE CONSTRUCTION OF CULTURAL STUDI, MUSEUM AND LIBRARY
EDUCATION	KEI LANGUAGE AND TRADITIONAL KNOWLEDGE BECOME A PART OF SCHOOL CURRICULUM IN SOUTHEAST MALUKU	IMPROVE UNDERSTANDING OF LOCAL CULTURE AND ABILITY TO SPEAK KEI LANGUAGE

Main issues, strategy planning and outcomes (target of achievement) are summarized as follow:

Encouraging and empowering traditional communities to have responsibilities in forest and water resource conservation based on related National Regulations (UU), Regional Regulation (PERDA), and agreements between *Ohoi*. Target achievement is clear areas boundaries and recharge areas is protected as protected areas.

Persuading and empowering traditional communities - genders to develop a creative economic-based agroforestry (including organic agroculture), agrotourims, and agroindustry. Target to be achieved is independency in food and increasing of welfare
Initiating a close dialogue and collaboration with all potential relating to socio-culture for conservation and exploitation natural resource of Kei Island. Target to be achieved by this basic strategy is the construction of cultural studio, museum and library.

Building up a collaboration and multi-stakeholders partnership for institutional and human resources development in attempting to bring Kei Language and Traditional Knowledge into school curriculum in region of Maluku Tenggara. Target to be achieved is improving understanding about local culture and ability to speak kei.

4.4.4. Program

In implementing strategy toward an achievement of expected-target and vision, so each strategy is divided into programs and activities. Proposed programs may be compiled and elaborated based on field findings at initial study and in SEMILOKA, and are formulated according to strategy and target to be achieved. For example:

Program from strategy no.1

Basic Law (UU)

Collecting relevant documents about sustainable forest management, water availability, general natural resources (UU, PP, KEPRES, SK MENTERI, PERDA)

Studying the documents and producing critical review, exclusive summary, and clarifying jobs and responsibilities at village level and traditional community

Distributing documents (information and comments)

Regional Regulation (PERDA)

- Collecting Regional Regulation documents (document PERDA) about sustainable forest management, availability of water, natural resources

- Studying the documents and producing critical review, exclusive summary, and clarifying jobs and responsibilities at village level and traditional community

- If relevant document is not available, or is a product of top-down and centralistic policies, there is a need to produce a new Regional Regulation (PERDA) based participative, which is pro-environment and pro-traditional community.

Agreement

a consensus at level village or between villages in implementation of sustainable area management

producing an agreement - based local knowledge, such as in implementing the existing regulation at level village

Monitoring and evaluating participative activities outcomes, including sanction for those cross the regulation at village level.



Figure 4. The situation of Seminar



Picture 5. The situation on Workshop

5. Recommendation

Problems of fresh water and sustainable forest management in Kei Kecil Island are very complex and multi dimensional, involving local human resources development in collective. Problems of traditional community with paternalism in target villages are caused by sectoral/linier approach from outsider especially government agencies which pay no attention on endorsement of local wisdom toward a *good governance*. As consequent, democratization and autonomization which are expected to be positive in supporting *good governance* is still weak or perhaps at the initial process.

The NFP-FAO program conducted by INLULINS is considered as an "entry point" to perform renew in holistic and convergence for the establishment of *good governance* at village level, satisfactory. Therefore, it is recommended that NFP may provide an appropriate fund to support the next stage as the improvement of the first stage. It is hoped that the next stage will be conducting as a pilot project of implementing good governance in forest sector based on adaptive-local knowledge and wisdom. Collaboration Triple Helix between community - Government and NFP-FAO

3. Strengthening the role of the community in the sustainable forest management in Nusalaut Island by Yayasan Hualopu.

I. INTRODUCTION

I.1. Background Issues

The development paradigm which was tend to exploitative in natural resources exploiting need to be emphasized with more sustainability approach.

Meanwhile, the local community as the owner of the natural resources often was neglected in exploiting.

In another side, the top-down approach take the government as a determinant policy maker in development strategies without considering critical aspiration which was existence among the local people in order to purposed their better life.

As cause of ecological condition of isle is very gristle of ruining action in exploiting of natural resources were include, thereby for the purposes of development it's require to be agreed by each stakeholders to emphasis on an integrated and sustainability management.

One of the problems is even though most of the residents were lives nearby the coastal area yet their livelihood activities were depended on exploiting of land resources which was in scarcity condition.

In the mean time, the extent growth of population gave a space for imposition of new values meanwhile their local wisdom in exploiting of natural resources has been ignored.

Sasi (a temporarily prohibition on harvesting based on customary law) as an occupied values of traditionally natural resources conservation by the Moluccan ought to be a main frame of concept of natural resources management, and it has been recognized by the international society as well.

Moreover, the system of *Sasi* was not only arranging how to exploiting the natural resources wisely, yet it's also arranging about human behavior.

As an isle were residing on water territorial of Banda Sea, the broad of Nusalaut was approximately 32, 5 square kilo meters, and it was inhabited by residents from seven villages.

Based on an observation were conducted, shows that Nasality was categorized gristle ecologically, moreover, degradation of ecosystems has been appear such as ashore abrasion, crisis of clean water that was happened in several villages, etc.

As reason that Nusalaut Island was decided as venue of the program, because it was categorized as an isle, as well as the villagers from those seven villages have a similar tradition.

When the Local Government of District of Central Maluku implementing the Local Governmental Regulation Number 1, about *Negeri* (Traditional Villages), gives an opportunity for the local peoples to revive their traditional institution as well as their customary law which has been ignored.

In the meantime, that Governmental Regulation becomes a social capital for the local peoples to entitle their natural resources.

Kewang (an environmental guardian corps based on customary law) have to enforcing to play an important role especially watched and control on exploiting of natural resources by the local peoples.

Thereby, the most important things is to build-up the institutional capacity of Corps of *Kewang* as well as to strengthening and to extending their roles and functions on environmental issues not merely on each villages, yet environmental management issues of the island as whole.

According to isle characteristics, hence the management of forest have to refer on the capacities and the susceptance of farmland, thereby the closed canopy were able be maintained

Forest protection surround the spring which was conducted by the local residents were living on the isle as prove that critical awareness among them have emerged especially to protect the catchments areas.

However that critical awareness has to support with common understanding and knowledge's of forests management on isles.

I.2. Aims of Activity

- To remain the naturally system of conservation of isle forest by annual cash crop cultivation.
- To raising an agreement of spatial conservation intended among the local peoples.
- To empowering the local institution in management of forest and conservation.

I.3. Target Outputs

Short run outputs :

- Existing community agreement on forest protection and conservation areas intended in each villages
- *Sasi* (temporarily prohibition of harvesting based on customary law) were implemented by Corps of *Kewang* in exploiting system of natural resources.
- Establishing a network of *Kewang* were involved the respectively Corps of *Kewang* from each villages

Long-term outputs :

- The system of *Sasi* were implemented by Corps of *Kewang* been improved traditionally as well as methodologically in order to recover the degradation of environment that was happened.
- Catchment areas in Nusalaut Island been protected

II. PROGRAM LOCATION IN GENERAL

II.1. Geographically Position

Nusalaut Island as a part of Lease Archipelagos on the northern side was bordered to Ceram and Saparua Islands, to the southern as well as eastern and western side was bordered to Banda Sea. Geographically Nusalaut Island lies on 03°37'00'' - 03°42'00'' Southern Latitude and 128°44'00'' - 128°48'00'' Eastern Longitude.

II.2. Resident

There is seven traditional villages were residing on Nusalaut island, i.e. Ameth, Nalahia, Sila, Leinitu, Titawaai, Abubu, Akoon.

The number of population of that seven villages reach to 5.954 peoples approximately consists of 2.928 males and 3.026 females. The number of population if it compare with the broad of the island, i.e.: 32.50 kilo meters square approximately hence the density ratio reach to 183 peoples per - kilo meters square. Tables below describing remarks of residents refer to four villages were the program has been implemented.

Table 1.a. Resident Data of Akoon Village Based on Age Classification

AGE	TOTAL	PERCENT
0 - 5 year	74	12%
6 - 11 year	88	14%
12 - 16 year	67	11%
17 - 45 year	208	33%
46 year more	197	31%
T O T A L	634	100%

Source : Official Office of Akoon Village.

Table 1.b. Resident Data of Abubu Village Based on Age Classification

AGE	TOTAL	PERCENT
0 - 5 year	95	15%
6 - 11 year	88	14%
12 - 16 year	43	7%
17 - 45 year	281	45%
46 year more	122	19%
T O T A L	629	100%

Source : Official Office of Church in Abubu Village.

Table 1.c. Resident Data of Ameth Village Based on Age Classification

AGE	TOTAL	PERCENT
0 - 5 year	161	11%
6 - 11 year	218	15%
12 - 16 year	149	10%
17 - 45 year	563	38%
46 year more	405	27%
T O T A L	1496	100%

Source : Official Office of Ameth Village.

Table 1.d. Resident Data of Nalahia Village Based on Age Classification

AGE	TOTAL	PERCENT
0 - 5 year	73	14%
6 - 11 year	63	12%
12 - 16 year	34	7%
17 - 45 year	188	37%
46 year more	150	30%
T O T A L	508	100%

Source : Official Office of Nalahia Village.

Table 2.a. Resident Data of Akoon Village Based on Respectively Livelihood

LIVELIHOOD	TOTAL	PERCENT
Farmer	151	77%
Fishermen	20	10%
Poultry Breeder	0	0%
Handcrafting	0	0%
Small Scale Seller	7	4%
Civil Servant	10	5%
Pensioner	6	3%
Private Sector	2	1%
T O T A L	196	100%

Source : Official Office of Akoon Village.

Table 2.b. Resident Data of Abubu Village Based on Respectively Livelihood

LIVELIHOOD	TOTAL	PERCENT
Farmer	142	74%
Fishermen	28	15%
Poultry Breeder	21	11%
Handcrafting	0	0%
Small Scale Seller	0	0%
Civil Servant	0	0%
Pensioner	0	0%
Private Sector	0	0%
T O T A L	191	100%

Source : Official Office of Church in Abubu Village.

Table 2.c. Resident Data of Ameth Village Based on Respectively Livelihood

LIVELIHOOD	TOTAL	PERCENT
Farmer	153	36%
Fishermen	130	30%
Poultry Breeder	6	1%
Handcrafting	0	0%
Small Scale Seller	5	1%
Civil Servant	126	30%
Pensioner	7	2%
Private Sector	0	0%
T O T A L	427	100%

Source : Official Office of Ameth Village.

Table 2.d. Resident Data of Nalahia Village Based on Respectively Livelihood

LIVELIHOOD	TOTAL	PERCENT
Farmer	144	60%
Fishermen	29	12%
Poultry Breeder	12	5%
Handcrafting	9	4%
Small Scale Seller	0	0%
Civil Servant	33	14%
Pensioner	12	5%
Private Sector	0	0%
T O T A L	239	100%

Source : Official Office of Nalahia Village.

Table 3.a. Resident Data of Akoon Village Based on Education Background

EDUCATION BACKGROUND	TOTAL	PERCENT
Under Age School*	0	0%
Kindergarten	0	0%
Elementary School	348	55%
Middle School	79	12%
High School	115	18%
Bachelor Degrees (One Year)	48	8%
Bachelor Degrees (Two Years)	10	2%
Bachelor Degrees (Three Years)	25	4%
University Graduates	9	1%
Post Graduates	0	0%
T O T A L	634	100%

Source : Official Office of Akoon Village.

*Data Not Available

Table 3.b. Resident Data of Abubu Village Based on Education Background

EDUCATION BACKGROUND	TOTAL	PERCENT
Under Age School*	0	0%
Kindergarten	0	0%
Elementary School	211	56%
Middle School	59	16%
Middle School	100	26%
Bachelor Degrees (One Year)	0	0%
Bachelor Degrees (Two Years)	6	2%
Bachelor Degrees (Three Years)	1	0%
University Graduates	1	0%
Post Graduates	0	0%
T O T A L	378	100%

Source : Official Office of Church in Abubu Village.

*Data Not Available

Table 3.c. Resident Data of Ameth Village Based on Education Background

EDUCATION BACKGROUND	TOTAL	PERCENT
Under Age School	174	12%
Kindergarten	20	1%
Elementary School	302	20%
Middle School	647	44%
Middle School	309	21%
Bachelor Degrees (One Year)	4	0%
Bachelor Degrees (Two Years)	15	1%
Bachelor Degrees (Three Years)	1	0%
University Graduates	13	1%
Post Graduates	2	0%
T O T A L	1.487	100%

Source: Official Office of Ameth Village.

Table 3.d. Resident Data of Nalahia Village Based on Education Background

EDUCATION BACKGROUND	TOTAL	PERCENT
Under Age School	73	42%
Kindergarten	10	6%
Elementary School	67	38%
Middle School	15	9%
Middle School	10	6%
Bachelor Degrees (One Year)	0	0%
Bachelor Degrees (Two Years)	0	0%
Bachelor Degrees (Three Years)	0	0%
University Graduates	0	0%
Post Graduates	0	0%
T O T A L	175	100%

Source: Official Office of Nalahia Village.

II.3. Accessibility

As cause of the main road surround the island has not adequate yet hence the public transportation has not available thereby from one village for instance to neighbors village have to reach by out board engine boat.

Public transportation were available merely from Nusalaut Island to the Capital of Ambon City through Sea Port of Tulehu which can be reach by inboard engine boat for more or less 3 hours or by speedboat for 30 minutes approximately.

III. IMPLEMENTATION METHOD

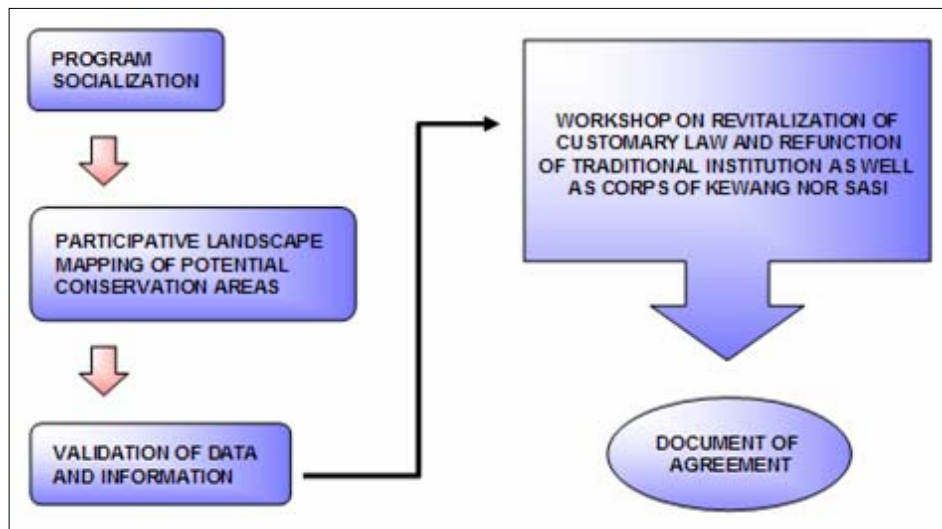
III.1. Agenda of Implementation

The overall program will be implementing on April till September 2008, at four villages as the venue, i.e. Nalahia, Ameth, Akoon, and Abubu.

1. The activities that will be conducting at each four villages, consist of:
 - Socialization to the local authority of village as the venue of the program
 - Landscape mapping of potential conservation areas
2. Workshop on Revitalization of Customary Law and Refunction of Traditional Institution as well as Corps of *Kewang* nor *Sasi*.

The workshop will be conducting at Ameth village and it will be involve the local authorities from each seven villages in Nusalaut Island.

(Scheme of Flow of Activities sees below)



III.2. Procedure of Implementation

- Socialization meeting
Socialization meeting was conducting for two days at each village in order to build up an interaction relationship among the stakeholders and in the mean time to gain common perspectives of the overall program. The local authorities and the traditional leaders were attended this meeting.
- Mapping
In order to gathering data, the methodology were used to data exploring, i.e. Participatory Rural Appraisal Method/ PRA.
Tools of PRA were implemented, such as :
 - a. Sketch Map
This appliance is used to gain a general condition of the village as well as the natural resources were include nor how the local people exploiting their resources.
 - b. Diagram Venn
This appliance is used to analyzing the interrelationships among the local institutions were existed in the village.
 - c. Season Calendar
This appliance is used to gain the information about livelihood activities refer to season.
 - d. Trend Analysis

This technique is used to observe all changes that was happened periodically especially on natural resources availability were gave an impact to the intensity of livelihood activities.

III.3. Participative Landscape Mapping

Participative landscape mapping as a method were used to gain properly information about the spatial.

In data collecting process a Globally Possession System/ GPS were used to plotting the spots of observation.

Observation was focused on sparseness of vegetation and the canopy.

In order to obtain additional data, an interview to the local authority as well as traditional leader nor land owner has been conducted.

When data has been prepared properly the process will be continuing with map drawing.

III.4. Validation of Data and Informations

Mechanism to validating data and information has been done through meeting with every stakeholder in the village. It was conducted in order to gets inputs as well as some clarification etc, so makes the validity of data and information can be justified.

Thereby methods were used during the meeting, i.e. focus group discussion, brainstorming, etc.

III.5. Workshop

Methodology which was used during the workshop is "andragogy" an adult education method, in which the process were expected would be:

- Participants actively in participation
- Refer to participant's experiences
- Sharing of experiences and lesson learned
- Cooperation between participants and facilitator
- Group discussion and brainstorming
- etc.

IV. RESULT AND DESCRIPTION

IV.1. Socialization

a. Activity remarks

Meeting on socialization of community-based forest management and conservation program was conducted by Hualopu Foundation as the implementer at each four vilagges and it has involved representatives persons of the villager, i.e. local authorities, traditional leaders, community leaders, youth leaders and the women.

Targets of the meeting are to submitting the objectives, benefit as well as the direction of program and in the meantime to gather an agreement of program acceptance by the villager.

b. Local Community Responses

The local peoples consider that Nusalaut is an isle and was very gristle on forest exploitation. Thereby, in order to protect the springs and catchment areas, the local people were agreed to support the program.

c. Agreement

- The local community of each villages gave support the program implementation plan.
- It is need to establishing a local team on each villages to assist the team from Hualopu Foundation

- The corps of *Kewang* have to be revitalize in order to establishing a network which involve the corps of *Kewang* from seven villages in Nusalaut Island.

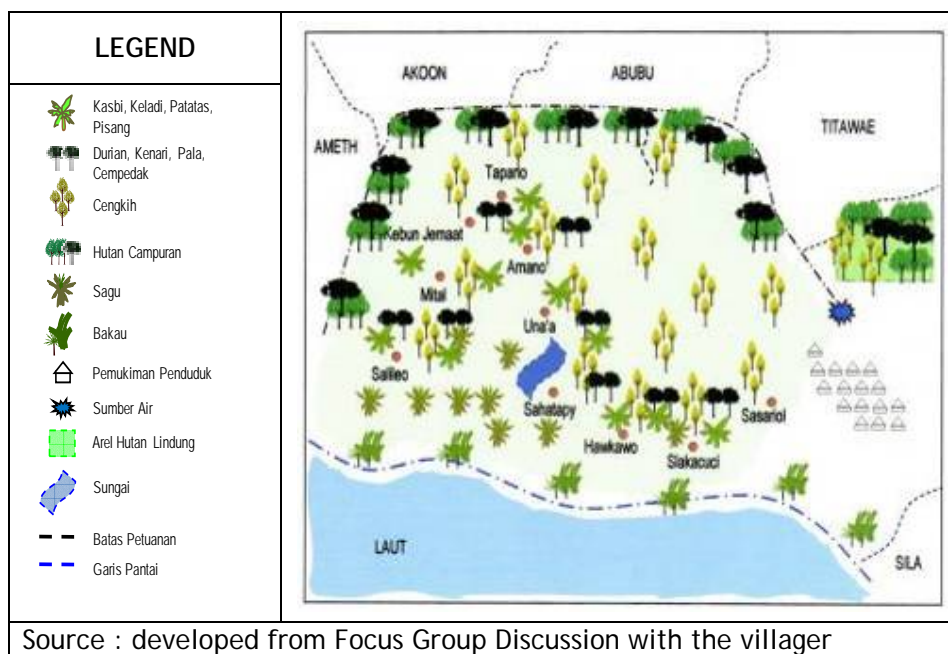
IV.2. Mapping of Forest and Conservation Area

A. Nalahia Village

a. Land Resources

Land resources refer to exploiting activities of the local peoples may be categorizing as :

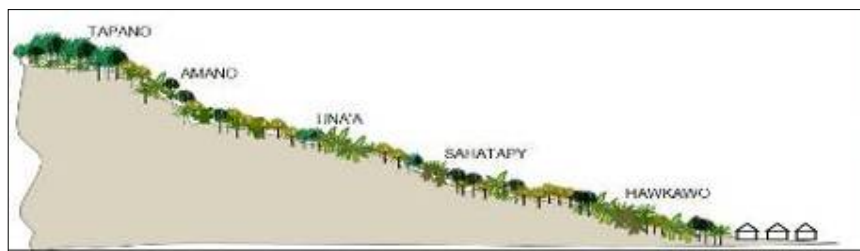
Figure 1. Sketch Map of Land Resources (sees from above)



- Forest
Resources were existing at the forest area consist of various species of wood were generally used for house construction and *perahu* (small boat), bamboos and source of traditional herbal medicine, i.e. Leaves and roots, etc. as well as various species of orchid.
In the meantime, the woods was lay on the highland area of the island hence there's lack of exploiting activities were done by the local peoples.
- Cultivation Crops
Area of cultivation crops represent an area with high intensity of community activities, because of that area were cultivated with various cash crops, such as cloves, nutmegs and coconuts trees.
Cultivation crops area represent a wide spread area of community farmland, as cause of that cultivation crops may be a source of income to the community as whole.
- Short run crops
Cultivation of short run crops or seasonal crops such as cassava, yam, sweet potatos, etc. little more than cash crops. Those seasonal crops were cultivated rather to house hold consumption

b. Condition of Vegetation

Figure 2. Sketch Map of Land Resources (seen from periphery)



Resources	- Cloves - Durian - Nutmegs - Mixture Crops	- Cloves - Durian - Nutmegs - Bamboos - Mixture Crops	- Cloves - Durian - Nutmegs - Sago - Mixture Crops	- Cloves - Bamboos - Nutmegs - Sago - Mixture Crops	- Cloves - Bamboos - Nutmegs - Sago - Mixture Crops, i.e. cassava, yam, sweet potato, bananas, coconut,
Soil condition	- dark color and stony	- dark color and stony	- dark color and stony - <i>Taisil</i> soil stony and sandy	- dark color and stony - <i>Taisil</i> soil stony and sandy	- dark color and stony - <i>Taisil</i> soil stony and sandy
Technology inputs	Manual -sword -axe	Manual -sword -axe	Manual -sword -hoe -axe	Manual -sword -hoe -axe	Manual - sword - hoe - axe
Rules	-	-	-	Conservation of Forest to protect the catchment area	Conservation of Forest to protect the catchment area
Source : Developed from Focus Group Discussion with the Villagers					

The vegetation of forest on hilly land may be categorized in three condition, such as :

- Density :

High rate of density of forest vegetation can be found at the area were lack of community activities, i.e. *Tapano, Amano, Mital, Una'a*, etc. The area were mentioned has been identified as an area which have a high varieties of species

1. Ordinary closeness of vegetation; such as woods of eucalyptus
2. Sparseness of vegetation; such as some of woods of eucalyptus area and farmland area were the local community cultivated it with short run crops.

- Canopy

Canopy may be categorized in two condition, i.e.

1. Closed canopy; in Nalahia village, the coverage of forest were in good condition especially on catchment area.
2. Open canopy; can be found at woods of eucalyptus area, etc.

c. Pattern of Farmland Exploiting

- Pattern of ownership

Exploiting of farmland was commonly referred on the ownership statute of the land or territory somehow.

In Nalahia Village, pattern of ownership on land and territory was commonly in form of communal ownership, such as ;

1. *Tanah Dati* ; (*tanah* literary means land or territory) *Tanah Dati* represent a piece of land were endowed by the ancestor to straight lineages clan.

In Nalahia village, there were identified that clans which occupied *Tanah Dati*, i.e.

- Lewerissa
- Leiwakabessy
- Simaela
- Haurissa
- Saamena
- Rikumahu
- Tapilatu
- Seila
- Berhitu
- Syaranamual

2. *Tanah Pusaka* ; patrimony right on a piece of land by several clans which have a bloody relationship.

Three extended clans were occupied *Tanah Pusaka*, i.e.

- Lewerissa
- Leiwakabessy
- Haurissa

3. *Dati Negeri* ; (*negeri* means village or hamlet based on local terms) *Dati Negeri* represent an ownership on a piece of land by *Negeri*. *Dati Negeri* was commonly stemming from unclearly of the ownership on a piece of land as well as the owner were live outside the village nor the owner was totally disappear.

In Nalahia village for instance, when the owner of *Dati Saamena* and *Dati Syaranamual* were identified totally disappear, the council of village have a right to manage the land.

- Clean Water Management.

It has been identified that spring of Waikoko were merely the source for the villager to fulfilled the needs of clean water.

Thereby the villager were agreed to protect the surrounding area of the spring about 700 metre square, and were agreed to applying rules, such as;

- Prohibition to cut trees at the protected area
- Prohibition to prepare a farmland for cultivation short run crops/ seasonal crops on the protected area
- Prohibition to gain stones or rocks for construction from the protection area.

In the meantime, the local authority has been establishing a team in order to distribute clean water to the villager as well as to maintaining the water instalation.

Meanwhlie the rate of contribution were agreed, i.e.

- 5.000 IDR monthly for each Households were used clean water from public sanitation of clean water
- 10.000 IDR monthly for each Households were the water instalation intranced directly to their houses

- Farmland intended

Pattern of farmland intended refer to exploiting systems that has been done by the local peoples, as below:

Table 4. Farmland Intended Based on Comunity Custom

Type of Soil *	Color	Texture	Contour	Commodities
<i>Taisil</i>	Light color	stony and sandy	sloping	Bananas, Coconuts, Sago
<i>Tanah hitam</i>	dark	stony	sloping	Cassava, Yam
<i>Tanah Liat</i>	Mixture color dark and red	solidity	sloping	Cloves, Nutmegs, Durian

* Local terms

Source: developed from Focus Group Discussion with the villagers

d. Spatial Intended for Conservation and Forest Protection

The local authority of village has determine some the forest been a conservation area and were protected.

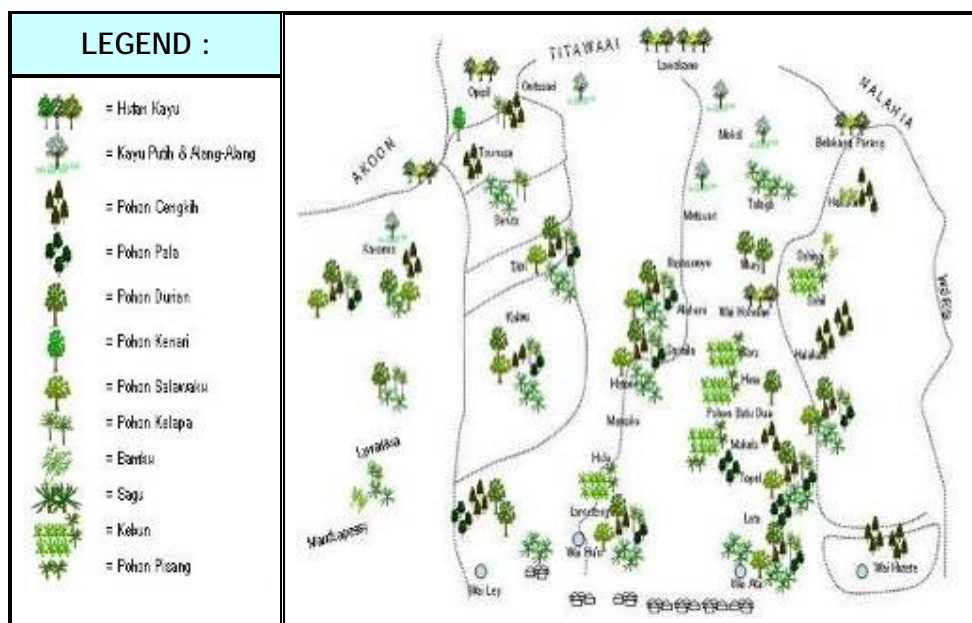
Conservation area was specified is about 700.000 square meters included area of sago and mangrove forest, and it was based on some considerations, i.e. Map of conservation area can be seen on appendix 1

1. There is merely one spring as the source of clean water
2. Farmland unloading was happened everywhere
3. Lots of the villager were cut down the trees to be used for house construction
4. Use chain-saw was easier for the local community to exploit woods

B. Ameth Village

a. Land Resources

Figure 3. Sketch Map of Land Resources (sees from from above)



Source: developing from Focus Group Discussion with the local peoples

Land resources refer to exploiting activities of the local peoples may be categorizing as :

- Forest

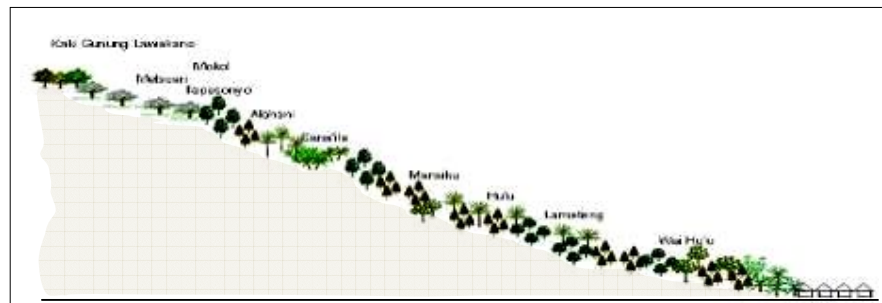
Resources were existing at the forest area especially at the hillside of Lawakano, consist of various species of wood were generally used for house construction.

In the meantime, the woods were lain on the highland area of the island hence there is the local peoples did lack of exploiting activities.

- Cultivation Crops
Area of cultivation crops represent an area with high intensity of community activities, because of that area were cultivated with various cash crops, such as cloves, nutmegs and coconuts trees. Generally, cultivation crops area represent a wide spread area of *petuanan* (communal land), and that cultivation crops may be a source of income to the community as whole.
- Short run crops
Cultivation of short run crops or seasonal crops such as cassava, yam, sweet potatoes, etc. little more than cash crops. Those seasonal crops were cultivated rather to house hold consumption

b. Condition of Vegetation

Figure 4. Sketch Map of Land Resources (seen from periphery.)



Source : developing from Focus Group Discussion with the local peoples

The vegetation of forest on hilly land may be categorizing in three conditions, such as :

- Density :
High rate of density of forest vegetation can be found at the area were lack of community activities, i.e. hillside of *Lawakano*, *Opipil*, *Belakang Parang*, *Wai Honolai*, etc. The area were mentioned has been identified as an area which have a high varieties of species
- Closeness
Closeness of vegetation may be categorized in three conditions, i.e.
 1. Density; such as woods at the hillside of *Lawakano*, clove orchard at *Hu'u*.
 2. Ordinary closeness of vegetation; such as sago orchard at *Waihu'u* spring, clove orchard at *Lameteng* and *Mansiku*.
 3. Sparseness of vegetation; such as woods of euca lyptus at *Ilapasonyo* and *Metsuari*, mixture trees, i.e. durian and coconut trees at *Hatoni*, farmland area at *Sana'ila* and clove orchard at *Alahani*.
- Canopy
Canopy may be categorized in two conditions, i.e.
 1. Closed canopy; such as woods at the hillside of *Lawakano* .
 2. Open canopy; such as woods of euca lyptus at *Ilapasonyo* and *Metsuari*.

c. Pattern of Farmland Exploiting

- Pattern of ownership
Exploiting of farmland was commonly refer on the ownership statute of the land or territory somehow.
In Ameth Village, patern of ownership on land and territory was commonly in form of communal ownership, such as;

1. *Tanah Dati* ; (*tanah* literary means land or teritiry) *Tanah Dati* represent a piece of land were endowed by the ancestor to straight lineages clan.
 2. *Tanah Pusaka* ; patrimony right on a piece of land by several clans which have a bloody relationship.
 3. *Pusaka Dati* ; patrimony right on piece of land by a clan which was origin from several lineages.
 4. *Dati Negeri* ; (*negeri* means village or hamlet based on local terms) *Dati Negeri* represent an ownership on a piece of land by *Negeri*. *Dati Negeri* was commonly stemming from unclearly of the ownership on a piece of land, nor the owner of land was totally disappear.
- Clean Water Management
- It has been identified that in Ameth village there's four springs were existing as a source may be used to fulfilled the needs on clean water by the villagers

Table 5. Data of Clean Water Management

Source of Clean Water	Maintenance		Rules	Observation	
	How	Who		How	Who
<i>Wai Ley</i>	Cleasning the spring area periodically	Villager were living surround the spring	Decree of Village Council - Keep clean - Bath and Washing at places that has been determined	- Annual visiting to the spring area - Approaches to the land owner	Council of the village
<i>Wai Hu'u</i>					
<i>Wai Ata</i>					
<i>Wai Hutete</i>					

According to information that has got from Focus Group Discussion with the villager, that the policy of the local authority actually to protect every existing source of clean water were existing represent a wisdom decision. In general from observation result when mapping to the sources of clean water, its shows that condition still good and was well maintained.

Meanwhile the unloading of land for developing public infrastructures will emerge a negative impact to source of clean water which existing.

According to landscape mapping process, the villager has agreed that the area of source of clean water will be specified as protected area.

- Farmland intended

Pattern of farmland intended refer to exploiting systems that has been done by the local peoples, as seen on table below :

Table 6. Farmland Intended Based on Community Custom

Type of Soil *	Color	Texture	Contour	Type of Crops
<i>Tanah Merah</i>	Dark brown	Harsh and stony	Sloping	euca lyptus
<i>Tanah Hitam</i>	dark	Soft and stony	Sloping	Mixtue crops: Cloves, Nutmeg, Coconuts, Durian, etc.
<i>Tanah Abu-Abu</i>	grey	Sandy and stony	Sloping	Mixture crops: Cloves, Nutmegs, Coconuts, Durian, etc.
<i>Tanah Uba Pasang</i>	bras	fine	Sloping	Cassava, Yam, Sweet Potatoes, Bananas, etc.
<i>Tanah Bapeci</i>	bras	muddy	Sloping	Sago
* Local terms Source: developed from Focus Group Discussion with the villagers				

d. Spatial Intended for Conservation and Forest Protection

Area which was specified as conservation area is sago, mangroves and area of source of clean water. Nevertheless this agreement must be arranged as a village's regulation and be legally recognized by the local community as a whole. Map of conservation area can be seen on appendix 2

C. Akoon Village

a. Land Resources

Land resources refer to exploiting activities of the local peoples may be categorized as:

- Forest.

Even though the forest area in Akoon village is not so wide, however the resources existing at the forest consist of various species of trees such as *kayu besi*, *salawaku*, bamboos, eucalyptus, etc. and various crops, such as durian, cloves, nutmegs, coconuts, etc.

The area dominated by eucalyptus represents a barren area because of the soil conditions were dry and stony and also lack of topsoils, yet it was common at the highland area. At year 2002 the local peoples ever used the leaves of eucalyptus leaves as a raw material to produce eucalyptus oil, yet nowadays

- Cultivation Crops

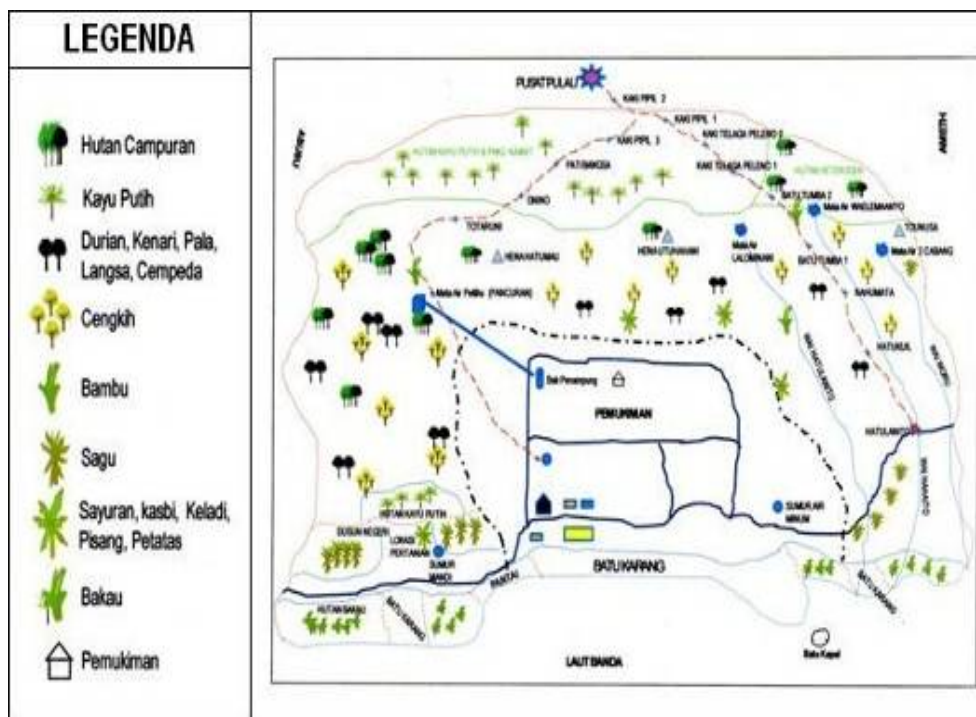
Area of cultivation crops represents an area with high intensity of community activities, because of that area was cultivated with various cash crops, such as cloves, nutmegs and coconuts trees.

Cultivation crops area represent a wide spread area of community farmland, because of that cultivation crops may be a source of income to the community as a whole. This area was commonly dominated by cloves and nutmegs as commodities which have a high economic value.

- Short run crops

Cultivation of short run crops or seasonal crops such as cassava, yam, sweet potatoes, were cultivated on the area were close by the residential area, because of they were rather for household consumption.

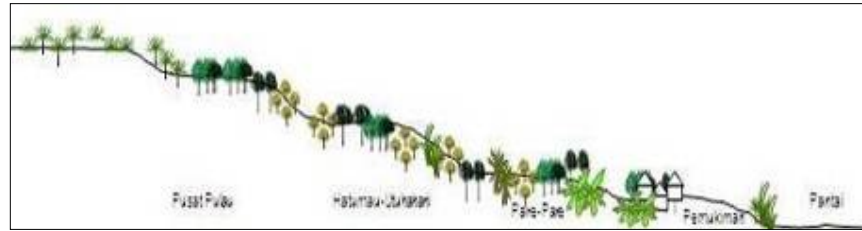
Figure 5. Sketch Map of Land Resources (sees from above)



Source : developed from Focus Group Discussion with the villager

Kinds of land resources were commonly exploiting by the local peoples, consist of certainly trees were produced wood for house construction as well as to produce *perahu* (small boat) for fishing, euca lyptus leaves for produce euca lyptus oil, bamboos to produce raft as the floating material for *Rumpon* (floating trap). *Mayang* (other species of palm tree) the fluid as a raw material for produce *sopi* (local wine).

Figure 6. Sketch Map of Land Resources (seen from periphery)



resources	<i>paku kawa</i> mushroom <i>kantung semar</i> bamboos <i>kayu merah</i> <i>kayu tawang</i> <i>kayu salawaku</i> <i>kayu pule</i> <i>kayu sapar</i> pineapple <i>mayang</i> wild swine birds polecat	cloves <i>kayu salawaku</i> <i>kayu merah</i> <i>kayu sapar</i> <i>kelapa</i> pineapples <i>mayang</i> <i>bambu</i> <i>kayu pule</i> <i>kayu tawang</i> <i>cempedak</i> euca lyptus durian wild swine polecat birds	sago cloves nutmegs durian <i>kenari</i> <i>kayu suring</i> <i>mayang</i> <i>gayang</i> coconuts <i>langsa</i> <i>pete</i> <i>kenari</i>	breadfruit mango jackfruit <i>kedondong</i> bananas <i>kuini</i> <i>langsa</i> papayas chicken pig ox
substract	light color of soil, florid, stony and sandy	dark color of soil, florid and stony	dark color of soil, florid and gravel	dark color of soil, florid and stony
technology	chain saw, sword, spear, axe	chain saw, sword, spear, axe	chain saw, sword, spear, axe	chain saw, sword, spear, axe
rules	has not prepare yet	has not prepare yet	has not prepare yet	has not prepare yet
issues	- forest fire at dry season 2006 - land dispute 1980 - landslide 1980	- forest fire at dry season 2006 - land dispute 1980	- land dispute 2006	- land dispute 2006

Source: developed from Focus Group Discussion with the villager

b. Condition of Vegetation

The vegetation of forest on hilly land may be categorized in three condition, such as:

1. Density: High rate of density of forest vegetation can be found at the area were lack of community activities, i.e. *Hatusuil*, *Nahumata*, *Hina*, etc. The area were mentioned has been identified as an area which have a high varities of species, such as woods, cloves, nutmegs, *mayang*, durian, bananas, coconuts, *petai*, etc.
2. Ordinary closeness of vegetation; such as woods of euca lyptus at *Batu Tumbak*, etc.
3. Sparseness of vegetation; such as some of woods of euca lyptus area and farmland area were the local community cultivated it with short run crops, such as at *Telaga Peleno* and *Batu Pipil*, etc.

c. Pattern of Farmland Exploiting

- Pattern of ownership

Exploiting of farmland was commonly refer on the ownership statute of the land or territory somehow.

In Akoon Village, pattern of ownership on land and territory was commonly in form of communal ownership, such as;

5. *Dati* ; a piece of land were endowed by the ancestor to straight lineages clan.
 6. *Pusaka Dati* ; patrimony right on a piece of land by several clans which have a bloody relationship.
 7. *Dati Pusaka* ; patrimony right on piece of land by a clan which was origin from several lineages.
 8. *Dati Negeri* ; (*negeri* means village or hamlet based on local terms) *Dati Negeri* represent an ownership on a piece of land by *Negeri*. *Dati Negeri* was commonly stemming from unclearly of the ownership on a piece of land as well as the owner were live outside the village nor the owner was totally disappear. In Akoon village the local authority usually rent the *Dati Negeri* to the villager with an agreement to share the incomes.
- Clean Water Management
It has been identified that in Akoon village the source of springs were existing at *Hina* as a source may be used to fulfilled the needs on clean water by the villagers
Hina as an area of source of clean water was cultivated with lots of trees such as Durian, Nutmeg, Mango Bambu, etc. The canopy of this area reached to 90 % approximately, hence this area was specified good for catchment area
 - Farmland intended
Pattern of farmland intended refer to exploiting systems that has been done by the local peoples, as seen table 16. below:

Table 7. Farmland Intended Based on Comunity Custom

Type of Soil *	Color	Texture	Contour	Type of Crops
<i>Taisil</i>	Light color	stony and sandy	sloping	Bananas, Coconuts, Sago
<i>Tanah hitam</i>	Dark	stony	sloping	Cassava, Yam
<i>Tanah Liat</i>	florid	solidity	sloping	Cloves, Nutmegs, Durian

* Local terms

Source: developed from Focus Group Discussion with the villagers

d. Spatial Intended for Conservation and Forest Protection

It was urgently needed to specified area for conservation and protected forest, to lessen shifting cultivation system where the local community cut down much trees for preparation of farmland.

Protected Area is entered also mangroves and sago forest at the area of source of clean water. Map of conservation area can be seen on appendix 3.

D. Abubu Village

a. Land Resources

Land resources refer to exploiting activities of the local peoples may be categorizing as:

- Forest

Resources were existing at the forest area especially at the hillside, were consist of various species of wood were generally used for house construction.

In the meantime, the woods were lain on the highland area of the island hence there is the local peoples did lack of exploiting activities.

The area were dominated by euca lyptus represent a barren area as cause of the soil condition were dry and stony and also lack of topsoils, yet it was commonly at the highland area.

- Cultivation Crops

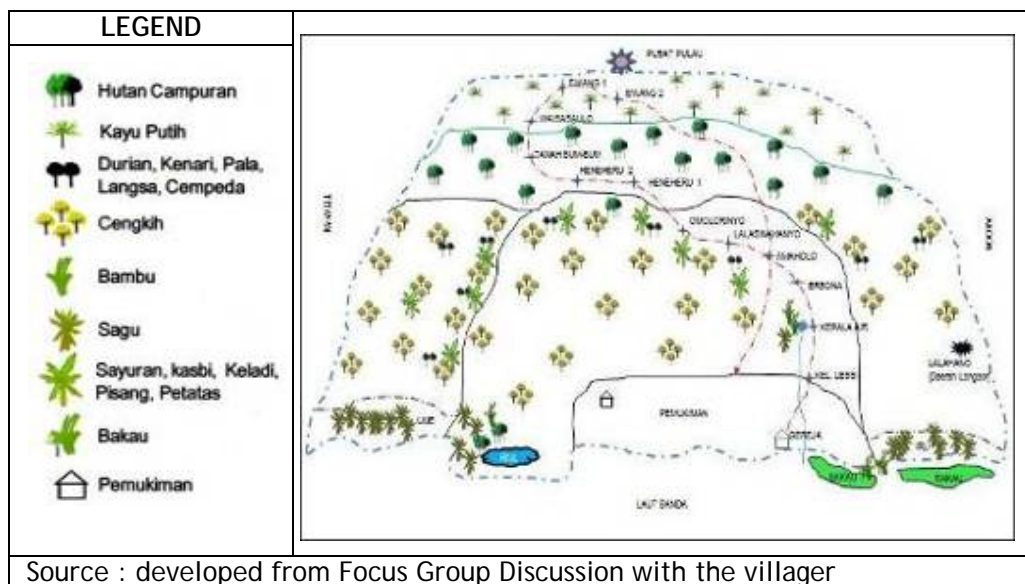
Area of cultivation crops represent an area with high intensity of community activities, because of that area were cultivated with various cash crops, such as cloves, nutmegs and coconuts trees.

Cultivation crops area represent a wide spread area of community farmland, as cause of that cultivation crops may be a source of income to the community as whole. This area was commonly dominated by cloves and nutmegs as a commodities were have a high of economic values.

- Short run crops

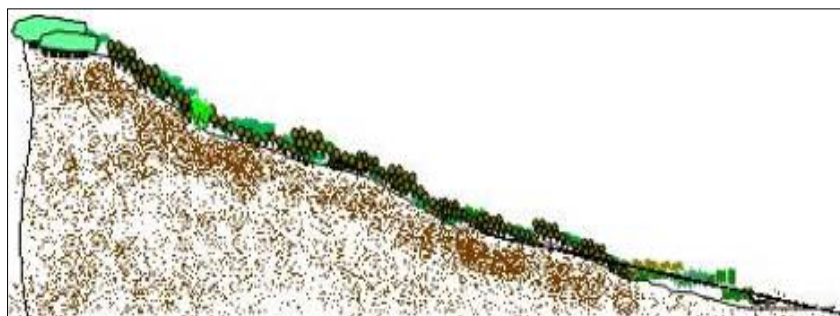
Cultivation of short run crops or seasonal crops such as cassava, yam, sweet potatoes, were cultivated on the area were closed by the residential area, as cause of the crops were rather for house hold consumption, yet, sometimes they sold rest of it at *Saparua* (the front island)

Figure 7. Sketch Map of Land Resources (sees from above)



Kinds of land resources were commonly exploiting by the local peoples, consist of nutmegs, cloves, coconuts, durian, *cempedak*, *langsak*, *gandaria*, as well as a certainly trees were produced wood for house construction as well as to produce *perahu* (small boat) for fishing, euca lyptus leaves for produce euca lyptus oil, bamboos to produce raft as the floating material for *Rumpon* (floating trap).

Figure 8. Sketch Map of Land Resources (seen from periphery.)



resources	euca lyptus <i>paku kawa</i> mixture crops wild swine birds polecat	cloves <i>kayu salawaku</i> <i>kayu merah</i> <i>kayu sapar</i> <i>kelapa</i> pineapples <i>mayang</i> <i>bambu</i> <i>kayu pule</i> <i>kayu tawang</i> <i>cempedak</i> euca lyptus durian cacao mixture crops wild swine polecat birds	sago cloves nutmegs durian <i>kenari</i> <i>kayu suring</i> <i>mayang</i> <i>gayang</i> coconuts <i>langsa</i> <i>pete</i> <i>kenari</i> cassava yam	breadfruit mango jackfruit <i>kedondong</i> bananas <i>kuini</i> <i>langsa</i> papaya cassava yam chicken pigs ox
subtrat	light color of soil, florid, stony and sandy	dark color of soil, florid and stony	dark color of soil, florid and gravel	dark color of soil, florid and stony
technology	chain saw, sword, spear, axe	chain saw, sword, spear, axe	chain saw, sword, spear, axe	chain saw, sword, spear, axe
rules	has not prepare yet	has not prepare yet	has not prepare yet	has not prepare yet
issues	- forest fire at dry season 2006 - land dispute 1980 - landslide 1980	- forest fire at dry season 2006 - land dispute 1980	- land dispute 2006	- land dispute 2006

Source : developed from Focus Group Discussion with the villager

b. Condition of Vegetation

The vegetation of forest on hilly land may be categorized in three condition, such as:

1. Density: High rate of density of forest vegetation can be found at the area were lack of community activities, i.e. *ewang dati aunalal*, *dati lesil*, *Erssona* and *Amahalo*, etc. The area were mentioned has been identified as an area which have a high varieties of species, such as woods, cloves, nutmegs, *mayang*, durian, bananas, coconuts, *petai*, etc.

2. Ordinary closeness of vegetation; such as woods of eucalyptus at *Lalasinahaya* etc.
 3. Sparseness of vegetation; such as some of woods of eucalyptus area nearby *bandar lounusa* (center of the island) as well as farmland area were the local community cultivated it with short run crops, such as *Dati Picanusa*, etc.
- c. Pattern of Farmland Exploiting
- Pattern of ownership
Somehow, exploiting of farmland was commonly refer on the ownership statute of the land or territory.
In Abubu Village, pattern of ownership on land nor territory was commonly based on ancestral right
In general there is a land which was owned by the Council of Village besides itstate there were also area which was owned by the local community based on lineages, that was recognized *Dati*
 - Clean Water Management
There are a several springs were existing in Abubu village which was used by the villagers to fulfilled the needs on clean water.
Meanwhile, the source of clean water that was mentioned were residing at *Dati Picanussa* were privately owned by straight lineages.
Formerly the vegetation condition were density with lots of trees, yet, nowadays the owner prepare the area for to cultivating seasonal crops and in the mean time emerge a negative impact to the catchmen area.
So far the Council of Abubu village has been approaching yet to the land owner, yet, until now there has not any agreement yet to protect the area.
 - Farmland intended
In Abubu village, the local community has been divided clearly the area were intended to cash crops cultivation as well as area were intended to seasonal crops cultivation.
Especially for cloves, nutmegs durian, etc. they used the widespread area.
Pattern of farmland intended refer to exploiting systems that has been done by the local peoples, as seen on table 6 below:

Table 8. Farmland Intended Based on Community Custom

Type of Soil *	Color	Texture	Contour	Type of Crops
<i>Taisil</i>	Light color and sandy	stony and sandy	sloping	Bananas, Coconuts, Sago
<i>Tanah hitam</i>	Dark	stony	sloping	Cassava, Yam
<i>Tanah Liat</i>	florid	solidity	sloping	Cloves, Nutmegs, Durian

* Local terms

Source: developed from Focus Group Discussion with the villagers

d. Spatial Intended for Conservation and Forest Protection

In Abubu village there are sago, mangroves forest and woods surround the source of clean water were need to be protected. Map of conservation area can be seen on appendix 4.

IV.3. Validation of Data and Informations

▪ Implemented Process

Mechanism to validating data and information has been done through meeting with every stakeholder at four respectively villages. And it was conducted for one day at each villages.

The meeting was conducted in order to present the results of mapping activities and in the meantime to get inputs as well as some clarification nor cross checking, etc, so makes the validity of data and information can be justified. Besides it, to emerge any agreement on specified area of conservation

▪ Agreement

No	Villages	Points of Agreement
1	NALAHIA	<ol style="list-style-type: none"> 1. Conservation of spring about 700.000 squares metres approximately, and will be conducted by the Village Council. 2. Conservation of Mangroves 3. Conservation of Sago 4. Conservation management will be the duties of the local community as whole 5. It have to emerge an agreement on clean water management. 6. Agreement on Capacity empowerment of Corps of <i>Kewang</i>
2	AMETH	<ol style="list-style-type: none"> 1. Forests Protection intended of 100 to 200 squares metres of spring area were existing. 2. Follow up the agreement through approaches to the land owners in which the springs were existing. 3. Conservation of Mangroves 4. Conservation of Sago 5. Agreement on Capacity Empowerment of Corps of <i>Kewang</i>
3	AKOON	<ol style="list-style-type: none"> 1. Forests Protection intended of 500 squares metres of each spring area were existing. 2. Follow up the agreement thorough approaches to the land owners in which the springs were existing. 3. Conservation of Mangroves 4. Conservation of Sago 5. Agreement on Capacity empowerment of Corps of <i>Kewang</i>
4	ABUBU	<ol style="list-style-type: none"> 1. Forests Protection intended of 500 squares metres of each spring area were existing. 2. Follow up the agreement thorough approaches to the land owners in which the springs were existing. 3. Conservation of Mangroves 4. Conservation of Sago

IV.4. Workshop on Revitalization and Refunction of Corps of *Kewang* and *Sasi*

- a. Identification the components of *Sasi*
- b. Identification the Customary Law
- c. Identification the Corps of *Kewang* from each villages
- d. Identification Issues Environmental Management of Small Island
- e. Agreements

Points of Agreement by the representatives from seven Villages during the Workshop on Revitalization and Refunction of Corps of *Kewang* and *Sasi*. Forum of Corps of *Kewang* of Nusalaut Island.

Organ :

Network of Corps of *Kewang* in terms?

- Set of programs, group of activists from each villages which have wishful to increase the community wealth, through implementing of *Sasi*.
- Members of the network consist of;
 - Ordinary villagers
 - Staffs of Corps of *Kewang*/ Environmental Guardian

- Traditional Leaders
- Researches/ Academician
- Funding Agency
- Some of Decission Makers

Note : the membership of the network depends on decision by each villages

Form of Institution of Corps of *Kewang* Nusalaut Island

Institution of Corps of *Kewang* Nusalaut Island is a network which was focused on networking

Background

1. There is strong desire from the local community from each villages in collaboration with Corps *Kewang* to use *Sasi* in natural resources (land and marine) management in Nusalaut Island
2. It has been realized that to reach a successfullness, needed a well cooperation as well as a similiar approaches nor similiar program of each corps of *Kewang* from the seven villages in Nusalaut Island

The program were designed by each Corps of *Kewang* were unsimiliar by each other. For that there is effort to establishing a network were facilitate by Hualopu Foundation, thereby, in the meantime, the participants were agreed Para establishing the network were involve the corps of *Kewang* from each villages.

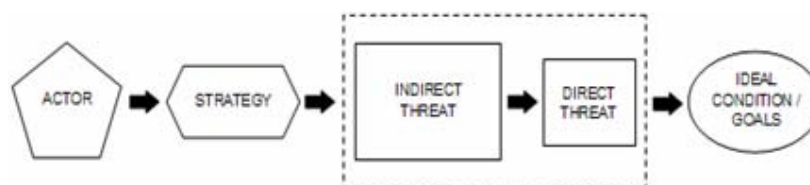
Intention

- The network will assist in planning, monitoring, evaluation and implmentation of natural resources (land and marine)management in Nusalaut Island
- To assist the Corps of *Kewang* in each villages to reach their main purposes

Main purpose :

- Program implementation activities be effectively;
- To studying sistematically of strategy and program implementation
- Cappacity empowerment of network members to conduct an environmental management in which was refered to the local condition
- Cappacity empowerment of members consist of Program Planning, Observation, Analysis and communication.

Konseptual model, as shows on the diagram below.



- Target or Ideal Condition; an expectance factors to be reach through the program
- Directly Threat represent factors were impact the ideal condition directly
- Indirectly Threat represent factors were impact the ideal condition indirectly
- Strategy as an action were conducted to response the directly and indirectly factors in order to reach the ideal condition.
- Actors: represent an individual and/ or organization were capability to implementing the strategies.





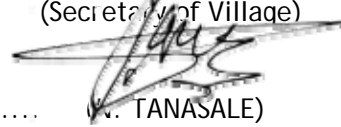


General Agreement and Appendix :

- To forming a group of activist were consist of individu, organization, Corps of *Kewang*, observer, etc.
- Committed to well-manage natural resources (land and marine) in Nusalaut Island
- Committed to enforce *Sasi*
- Committed to used the concetual model to manage the enviromental issues in Nusalaut Island Pendekatan yang disepakati dalam menanganisu dan masalah adalah menggunakan model konseptual
- The period of effect of this agreement were temporarily for one year, and will be revision for extent years at the future.

3. Representatives from the Villages in Nusalaut Island

AMETH, SEPTEMBER, 30th 2008

SIGNATURES

AMETH.....	 (W. D. PARINJSSA) (Head of Village)
AKOON.....	 (J. T. WATTIMENA) (Head of Village)
ABUBU.....	 (C. AUNALAL) (Secretary of Village)
TITAWAI.....	 (A. SIMHAY) (Secretary of Village)
LEINITU.....	 (W. TANASALE) (Secretary of Village)
SILA.....	 (A. SOSELISSA) (Head of Village)
NALAHIA.....	 (I. FELIHARIE) (Head of Village)

V. POINTS OF RECOMENDATION

- Local Community
 - Nevertheless the agreement have to arranged as a village's regulation
 - Corps of *Kewang* of Nusalaut Island represent a cooperation network were invole the peoples of nusalaut island, and in the meantime have to be recognized.
 - Conservation and Forest Protected area have to comprehended most important of sustainability management of isle forest.
- Local Government
 - In considering of Nusalaut is an isle, thereby establishing of physically public infrastructures do not merely focused on the capital of subdistrict
 - Development activities should be planned participatively as well as refer on the mapping were conducted by the local community
 - Government policies refer to protection of traditional property right as well as traditional rights of land or territory
 - The Local Government have to recognized the existence of Corps of *Kewang* of Nusalaut Island
- NFP Facility
 - It was needed for NFP-FAO to support the follow up program
 - NFP-FAO, were expected to outreach their program on Traditional Community Empowerment and Management of Isle ecosystems

4. Improvement of Forest Area Utilization According to Land Zone Approach in Horale by Yayasan Toma Lestari

I. INTRODUCTION

1.1. Activity Implementation Background

Currently the forest utilization by various parties is not yet according to the region's land characteristics. This is happening in areas/ regions of which the data on land suitability already exists. Seram Island is the largest Island in Maluku province, and actually has information on the land suitability zone in this region, such as RePPPProT map (Transmigration Dept., 1988) and the Indonesian Agro Ecology Zone Atlas (PPPTA-Agriculture Dept., 2003). The land use according to the land suitability zone is currently a must due to the importance of ecological preservation and sustainability of the land use.

The community land use in numerous places on Seram Island is on those places they like and find fit to cultivate; several major rivers on Seram Island is starting to get threatened due to in-appropriate land use implemented by the communities. The selection of plants/ crops which are not suitable to the land/ soil characteristics shortens the period of land use. This threatens the income sustainability of the communities themselves in the long run. The utilization system such as this will increase forest clearings and increases soil damage and quality degradation of the soil fertility.

The strategy used in this activity is "Social Forestry"; the management technique used is the "Management Regime (MR)" (*Simon, 1994*). The Management Regime is a forest land use which varies from plot to plot, this is to maximize the productivity of each spot in the forest area as according to the soil/ land's physical condition and economic factor which goes with increase of the community's income.

The Social Forestry will of course need the community's participation from the start of planning to monitoring and evaluation, the community becomes the subject in the implementation of each work phase.

The Horale village is chosen for this activity based on the following consideration:

- Horale is located in the central part of the Saleman Bay, which is very essential to the conservation of the Saleman Bay; 3 rivers which are the sub-DAS *takalasia* which runs through and in the village and can potentially develop sedimentation if and when the river's spring is damaged due to land clearings.
- The Horale village is very suitable as a pilot site, the form and relief variation of the region/ area from coastal lowland to mountainous highlands will provide opportunities for the development of various plant commodities.
- With the presence of the Lintas Seram the location of the Horale village became very strategic. This is due to its exact position at the cross road to North Seram leading to North-East and North-West. Therefore the Horale village's location can become the entry point for implementation.
- Based on a recent research result showed that there is a strong longing in the community to manage their forest through a better method. But, no opportunity has arisen from any organization to facilitate this in Horale (*Tjoa, 2005*).

1.2. Activity Implementation Objective

To study the community's land use based on local knowledge and guide them to a more appropriate land management based on land zoning approach in the effort to conserve forest land and other ecological aspects. Including development of other forest product potentials in order to increase the community's economy.

1.3.Expected Output

1.3.1. Short Term

1. To upgrade community's skills and knowledge in forest land management.
2. To increase the community's organizational capacity and work skills.
3. To enlighten the community that they will increase their income through the land management method and at the same time maintain the ecological balance in their surroundings.
4. The community will be more aware on the potentials that they have in their village region and will be aware of the potentials of it. Such as: ecotourism, cultural tourism and non-timber forest product potentials.

1.3.2. Long Term

1. To upgrade and maintain the forest ecosystem's quality, specifically the activity implementation location.
2. To stimulate the community to adopt the activity implemented on their fields, especially at locations on the hills. This will support the achievement of rehabilitating and preserving efforts of the water catchments areas in a long term.
3. Utilizing the non-timber forest products in a sustainable environment friendly manner.
4. Developing the eco- and culture tourism potentials towards the forest community and traditional forest (Adat/ ulayat).
5. Increase and upgrade community's living standards.

2. GENERAL VIEW ON THE ACTIVITY LOCATION

2.1. Geographical - and Area location

Horale village's region is geographically located between 02°54'00" - 03°04'30" LS and 129°02'00" - 129°07'30" BT (*Map JOG interpretation result, 196 and Atlas Zona Agroekologi Indonesia PPPTA- Agriculture Dept., 2003*). Administratively the Horale village is under North-West Seram Sub-District, Central Maluku District, and its location is in the Center of the Saleman Inner Bay.

The borders of Horale village is marked by the river Wai Tali at Tanjung Tale Tetui (in the west bordering the sub-village Wailulu, Karlutu village) to the River Wai Tolai (in the East bordering the village Saleman) from the mountains Lumute (in the South-West bordering the village Waraka), to the mountains of Sopenia (in the South-East bordering the village Nuaulu) and the river Wai Korule (in the East bordering the Masihulan village), and the mountain Hatu Saka (East-North bordering the village Sawai). (*Horale Nakane Village Region map, 1930; 2007*).

Picture 1. Location Map of Horale Village



2.2. Accessibility

Horale village can be reached from Ambon (Capital of Maluku Province) through land transportation by vehicle and crossing over by Ferry Pond at Hunimua, Liang village, Ambon Island to Waipirit village, Seram island and from there the distance is 245 km or approx. 7 - 8 hours by vehicle to reach Horale village. Alternative transportation route will be from Tulehu village, Ambon Island to the local harbor at Amahai, Seram Island, which will continue by land transportation/ vehicle. The distance is about 150 km or 5 hours travel. The road to Horale village is only partially asphalt to Saka sub-village (Saka is a speedboat harbor to transport passengers to village located on the coast of Saleman Bay) and to reach Horale village is to follow a pathway approx. 2 km or by using sea transportation a small katintin (small boat with outboard motor) which will take 15 minutes to reach Horale.

2.3. Biophysics Condition

2.3.1. Topography

The topography of the Horale village area has mostly a hilly to mountainous landscape with an average elevation of 750 m. fsl. with a > 40% slope and is only a small part of the wavy and slightly steep area with an elevation of <100 m.fsl and a slope of < 8%, which is generally at the coastal area (*Atlas Zona Agroekologi Indonesia PPPTA-Agriculture Dept., 2003*). The major mountains in the Horale village region is in the hinterland which is the Mt. Lumute in the West to the Mt. Sopia in the East; Mt. Sopia and the mountain called the Pos Lawai are the highest peaks in the Horale village region, where the Mt. Sopia has a height of 1,250 m dpl and Mt. Pos Lawai a height of 1,342 m.fsl. (*JOG map interpretation result, 1976*).

The slightly sloping area of Horale village falls in the "flood risk" category, while its hilly to mountainous landscape falls in the category "landslide risk" category (*Monk, 2000*). Meaning that the land use in the Horale village region has to be done with extreme care through a proper land use management.

2.3.2. Climate

As in the other parts of Maluku the climate on Seram Island is also influenced by the monsoon wind determining the wet and dry months. West Seram falls generally in the region of a rainfall of 3,000 mm/ year; the rain season starts between December up to May where the peak of rain is between January up to March; the dry season is from June up to November, where the peak is between August up to October (*Monk, 2000*). Based on the Regime in the Zona Agroecology the Horale region has a high and humid temperature (*Atlas Zona Agroekologi Indonesia PPPTA - Agriculture Dept., 2003*).

2.3.3. Soil

The soil in Horale Village is dominated by the subordo Rendolls soil type, which is a part of the soil ordo Mollisols. The Mollisols soil ordo is a soil type that has experienced a horizon development. The Mollisols soil in Horale is spread out starting from the slightly sloping lowland at the coast to the mountainous area in the highland reaching even the Mt. Lumute and Mt. Sopenia in the hinterlands. Another soil type found in the Horale region is the Dysropepts of the subordo Tropepts and Inceptisols Ordo. This type of soil has an acid characteristic. In the Horale region this soil type spreads out from the coast to the mountains, specifically in the West (*Monk, 2000*).

The Rendolls soil type has experienced a mild corrosion, its drainage is good with its smooth texture; the Rendolls is a type of soil that is relatively fertile, but this type of soil has a shallow horizon depth, mixed with rocks and a base ground consisting of lime. The Rendolls soil surface is easily erodable by water and erosion especially when its vegetation cover is cleared, due to this its existence should be maintained by a vegetation cover suitable to the mentioned soil type.

The Dysropepts soil type is slightly corrosion, its texture is fine to medium, drainage is good, its soil is rich in quartz and acid rock sand, it has a shallow to deep horizon depth, Dysropepts soil type has a risk of damage when and if its vegetation cover is cleared away (*Monk, 2000*).

The soil erosion rate in the Horale region as mentioned in the topography segment as high risk for landslides if and when the land is cleared. Due to this the land management must be done with great care and according to the soil characteristics and type.

2.3.4. Hydrology

According to the Indonesia region hydrology map Horale village and its surroundings has a medium ground water supply (*Environment Planning Directorate, 1981*); the ground water supply is fed and stored in rock gaps which are consolidated as having a good aquifer/ waterproof ground base in the mountain and hilly areas; the alluvium sediment is found in the sloping lowland area (*Monk, 2000*). According to the Indonesia Agro ecology Zone (*PPPTA- Agriculture Dept. 2003*) the drainage in the Horale village region and surrounding falls in the category good.

That is why the mountains and hills vegetation coverage (forests) are well preserved, whilst the coastal area 's vegetation cover should also be preserved to prevent seawater intrusion; this is very essential in order to guarantee and sustain ground water supply for the development of agriculture and daily water supply to the Horale community.

2.3.5. Land Coverage

The Horale village vegetation coverage is dominated by natural evergreen rain forests, approximately 90% of the Horale village region is covered by a rain forest vegetation type and approximately 5% is covered by *non-evergreen* rainforest and savannah fields in a

mosaic pattern, while 5% of the land is covered with cultivated farm plots and abandoned farm plots (*Monk, 2000; field study result interpretation TOMA Lestari, 2008*).

The Horale village region consists of 3 forest land classification, as follows: 1). Forest conversion product (HPK), 2). Forest reserve (HL), 3). Limited Forest Production (HPT). Approximately 60% of the Horale village region is in the HPK classification which is spread out from the coast to the mountains in the hinterland (*Interpretation of the forest region and waters of Island Seram location map, 1998*).

2.4. Community and Education

The population Horale village according to the village monography date 2007 is 111 HH / 570 souls. Currently there are 3 settlements of which 2 are the main settlement namely Horale Village as the main village and Saka sub village, and 1 resettlement location at Cape Tali Tetui, the total amount in the resettlement location counts 13 HH/ 30 souls. The distance between Horale village and Saka sub-village is approx. 2.5 km, and the distance between Saka sub-village and the resettlement location is approx. 2 km.

The Horale community consists of a population of:

- Productive age - > 30 yrs
- Children - < 12 yrs
- Old age

Children of education age (SMP, SMU and University) - 12 to 25 years are in the capitals of the Sub District, District/ Municipality and only go back to Horale during holidays or for family matters. The productive aged of > 45 yrs have a last education of SD/ SR (elementary level education), while the productive aged of < 45 yrs have a last education of SMP and SMA (junior high and high school level education). The Horale village has one elementary school and accommodates a total 87 students/ pupils.



Picture 2. Horale Village

2.5. Livelihood and Income

Almost all the people in Horale village are farmers and a part of them are fishermen (subsistence); a few HH have small kiosks and carpenter workshops as their main source of income, but nonetheless they also have farm plots and hire people to work, maintain, and

harvest it. The kiosk owners often act as collectors of harvest crops, specifically annual crops such as cocoa, copra and clove. The villagers often sell their annual crops and short term crops to traders from the district/ sub-district capital that come to the village.

Most of the population fulfill their daily needs from their nearby forest farm plots or vegetal garden in their yard. So off and on a trader from the transmigration location SP Karlutu visits Horale to sell vegetables or other products. In general the Horale villagers have a low living standard; the average annual income of the population is Rp. 6,084,613 or approx. Rp. 500,000/ month. Nonetheless, most of the population owns a relatively good house - semi permanent and permanent house (*Tjoa, 2005*).

3. ACTIVITY IMPLEMENTATION METHOD

3.1. Activity location and implementation time schedule

The activity is implemented in the village Horale, North West Seram Subdistrict, Central Maluku District. Duration of activity is 8 months (March 2008 - October 2008), activity details can be seen in Attachment 1.

3.2. Activity Forms

Activities done:

1. Study on the Land Use by the Community based on Local Knowledge.
2. Workshop: Forest Land Management Techniques through Regime Management Method
3. Implementation of Regime Management Criteria at Pilot Site
4. Identify Non-Timber Forest Product and Ecotourism Potentials.

In the activity implementation on the work location it was revealed that the form and work volume has increased in excess of the original work plan in the Initial Report. This is due to other activities as a result of field work enhancement, and a force majeure situation experienced by the community of Horale which is an open conflict from the neighboring village towards Horale destroying their houses and village infrastructure.

3.3. Activity Implementation Procedures

3.3.1. Activity Socialization

The socialization is done through a Focus Group Discussion (FGD) method held with the community leaders to obtain an agreement on the planned activity which involves the community. Interviews were held with several community members to know their traditional land use system implemented, and based on this to find its positive effect and direct the activity comprehension on forest land management through the Regime Management method.

Then the Horale village government did participant identification - selecting those who have sufficient capacity to follow the various activities specifically in workshops and land management implementation with the Regime Management; the selected community members should have experience in land management, and the identification result showed 30 community members who have the capacity.

The socialization is followed by a field visit with several community members and village government staff to identify the most suitable location to implement the land management method. The location should also be approved of by the community and Horale village government.



Picture 3. Socialization meeting with Horale Village government and their Saniri counsel.



3.3.2. Activity Implementation

3.3.2.1. Community Based Local Knowledge Land Use Study

Implementation Procedure:

1. Questionnaire material preparation
2. Respondent Identification
3. Study implementation on location

3.3.2.2. Workshop on Forest Land Management Technique through the Regime Management Method and Training on Producing Virgin Coconut Oil (VCO)

The workshop was given in the form of a lecture and discussions, accompanied by field practice based on the module given. The procedure is as follows:

- 1) Preparing workshop material/ modules
- 2) Identify participants and stakeholders
- 3) Provide workshop facilities and supporting facilities
- 4) Interview for and on Workshop precondition**
- 5) Workshop implementation
- 6) VCO product training**

3.3.2.3. Group Establishment

The work group establishment is done at the end of the workshop. The objective is that these groups are involved in the activity implementation at the pilot site. The discussion result at the end of the workshop an agreement has been taken that all workshop participants (30 person.) will all be members in the Work Groups (3 work groups, each group consist of 10 members). Each group has 1 coordinator whose job is to motivate their members and supervise the work group accordingly.

3.3.2.4. Regime Management Method Implementation

The Regime Management Method implementation** is done by using a demo plot (pilot site). The implementation procedure is as follows:

1. Location selection
2. Preparation for planting and seed bedding

3. Crop procurement (annual, perennial and forest crops)
4. Prepare the land and planting
5. Nursing 1**
6. Nursing 2, replace dead seedlings and crop types *enrichment***

3.3.2.5. Identify Non-Timber Forest Products and Ecotourism Potentials

The implementation procedure is as follows:

1. Identify locations with Ecotourism and Non-Timber Forest products.
2. Potential location mapping

3.3.2.6. Post Tragedy Aid (Force Majeure)**

The implementation procedure is as follows:

1. Emergency support**
2. Mental recovery **

Note:

** = Additional Activity

4. RESULT AND DISCUSSION

4.1. Project Start-up

The activity was initiated through a project start-up consisting of work team consolidation activity and work method standardization; the project start-up is done in the first week of March 2008.



Picture 4. Activity schedule arrangement and material/ module preparation.



4.2. Study on the Land Use by the Community based on Local Knowledge

In the 2nd week of March 2008 preparation for the Community land use based on Local knowledge study is done, the activity covered: procurement of stationary, supporting equipment and work maps, respondent identification, Questionnaire preparations. The 3rd week of March 2008 a field visit to Horale was implemented in preparation of the Community Land Use Based on Local Knowledge Study and at the same time a preliminary socialization of the activity to the village government and its Saniri Council ; the duration is 4 days.



Picture 5. Land clearing sample by community and a Land Use Study field trip



Activity 3.2 for more details – see Final Report Volume 3. ***A study on the community's landuse based on Local Knowledge in Horale Village, North-West***

4.3. Workshop on Forest Land Management Technique through the Regime Management Criteria and Training on Producing Virgin Coconut Oil (VCO)

Together with the Land Use Study activity in the 3rd week of March 2008, preparations are made for the Workshop on Forest Land Management Technique through the Regime Management Method and Training on Producing Virgin Coconut Oil (VCO) in Ambon by the remaining team work members. The preparations for the workshop are as follows: procuring stationeries and support equipment, identification of participants and stakeholders, and arranging workshop material/ modules and training modules for the VCO production training.

The 4th week of March on the 26th March 2008 a field visit was done by the whole team (8 pers.), the field visit was implemented as a preparatory visit for the planned workshop - the visit took 7 days. It started off with a meeting with the Horale village government and Saniri Council. The next morning it was continued with identifying participants and interviewing several community leaders who are thought to be the most successful in farming activities; this is needed to stress the importance of the workshop, other activities have been done on the same day such as arranging the village government office as the workshop venue and providing supporting facilities needed for the workshop. Workshop venue preparation was assisted by several workshop participants who were selected.

On the 28th March 2008 the Workshop on Land Management using the Regime Management Criteria Approach is implemented. The theme of this workshop is "Forest Management Techniques", 2-day workshop (28 - 29 March 2008). 1st Day WS - consist of presentation of material and discussions, materials/ modules presented are:

1. Land Use through the Management Regime System *by M. Tjoa, S.Hut., MP*
2. The Forest as an Environmental Service Provider *by J.Putuhena S.Hut MSI*
3. A Practical Guide to Select the Forest Plant/ Vegetation Breed Tree *by Ir.L.L.Riupasa*
4. Seedlings and Germination Techniques *by Ir.L.L.Riupasa*
5. A Practical Guide of Forest Plant Seedling Cultivation *by M.Loiwattu S.Hut MP*
6. Planting and Nursing Techniques *by H.Lellotery S.Hut MP*

Picture 6. Workshop implementation in the Horale Community Hall.



Picture 7. Day 1 – Workshop activity and photograph together with participants & team.



2nd day of Workshop: field trip to several farm plots of the participants a distance of upto 3 km from the village. Interesting was that the field practice was observed by other community members who did not participate in the workshop. They were either there to listen and/ or to participate in providing seeds and farm plots as training supporting facilities.

Picture 8. Field practice at the participants' plantations/ farm plots.



The workshop started at 08:30 - 17:00 wit, participated by 30 persons consisting of men, and 6 invitees (Head of Horale village and secretary, Head of the Saniri Council, Principal of the Horale village Elementary School, and 2 reverends of GPM Horale congregation). Overall the workshop went well and had a good participation of all participants and invitees who showed strong interest.

On the 30th March - 1st April 2008 the training on Virgin Coconut Oil (VCO) was implemented. The objective of the training is to stress the essentiality of the activity and at the same time to share new technology in the benefits of the coconut to the community.

The 1st day of the training covered material on what the VCO is and its benefits to cure 47 diseases, internal diseases and external, which was followed by a practicum on how to produce the VCO. The 2nd day covered techniques to obtain the VCO. The result of the VCO is then given to each participant although the supply was limited.

The training on producing VCO participated by 25 persons consisting women and girls. The training is done after the women and girls had done their chores. Therefore the training started from 12.00 wit to 16.00 wit, the training went very well and the participants were very much interested.



Picture 9. Presentation of material and field practice on how to make VCO to the women and girls.



For more details on activity 3.3. See Final Report Volume 2: **Workshop on Forest Management Technique through the Regime Management Criteria Approach and Training on Producing Virgin Coconut Oil (VCO)** Horale Village, North West Seram

4.4. Regime Management Criteria Implementation at Pilot Site.

The Regime Management criteria implementation starts with determining a sample location as the practicum site for forest land utilization as according to the land suitability zone. From the meeting since the team's arrival for the workshop suggestions and directions have been given by the village head and Saniri council of Horale village to use the GPM Horale congregation's farm plots or the village's farm plots.

After the field monitoring it is decided to use the congregation's farm plots. To be able to use this plot approaches and discussions have taken place with the Head of the GPM

Horale congregation. The discussions resulted in an agreement that collaboration between the program of the congregation and the land utilization activity implementation according to the land suitability zone by the TOMA Lestari foundation on the GMP Horale congregation. The duration of this collaboration is 6 months and the expectation of the congregation, if possible, is that this collaboration will continue for a longer period of time in order to obtain good to better results.

To obtain an effective collaboration in the congregation's land utilization a work group is needed. The workgroups are established at the end of the workshop and consist of workshop participants who will be assisted by other congregation members. It is agreed that the 30 participants will be divided into 3 workgroups, and each workgroup consist of 10 members. Each workgroup has 1 coordinator who is in charge to motivate its members and supervise field work.

After the establishment of workgroups a discussion took place on what kinds/ types of crop plants to be planted in the farm plots. The types of crop plants chosen are a joint agreement between workgroup, head of the congregation and the work team.

4.4.1. Planting Location Preparation (Pilot Site); Phase 1

The location preparation for seedbeds is arranged by the work group and head of congregation. It is agreed that the seedbeds location is in Saka sub-village, this location is selected because of the following reasons: near to the planting location; distance is 1.2 km which makes transportation easy, and the nursing and monitoring activity of the seedlings can be maximally done because it is near the settlement.

Land preparation for planting is done by the workgroup assisted by several congregation members. It was started with land clearing. The land clearing is done 2 times; on the 3rd April 2008 and on the 17th April 2008. The land clearing is a fast and enthusiastic response from the work group and GPM Horale Congregation Chairperson (Rev. Ms. M. Latuperissa). The land clearing is the phase 1 in land preparation of which the result is still not maximal.



Picture 10. The planting location being prepared Phase 1; the farm plot is steep.

The congregation's farm plot is located on the slope of a lowland hill at the back of Tanjung Tali Tetui. Formerly the mentioned plot is planted with clove trees owned by the congregation in 1986 and during the dry season fire broke out caused by one of the farmers who wanted to clear the land; result is that the fire burnt out all clove trees and now only shrubs and bamboo plants are the dominant vegetation cover on this plot.

The width of the farm plot is approx. 2.5 ha, the physiographic of the location is relatively good for a pilot site using the Management Regime criteria, where the landscape is sloping and the steep land is located on 1 location. Therefore the utilization pattern can be done simultaneously. Due to the conditions, time and money which limited the activity of Upgrading the Land Utilization according to the Land Zone with the Regime Management Criteria Approach, this can only be used and done on/in a 1 ha land plot.

4.4.2. Provide Tree seedlings and Cultivation Location

The crop plants chosen to plant in the farm plot are 3 seedling forms as follows:

1. Pull out seedlings: especially for local forest crop types
2. Cultivated seedlings brought in or bought externally, especially fruit plant types.
3. Seedlings originating from cultivation beds/ seeds from the workgroups and congregation, specifically season crops and several plantation crop types.

Forest crops chosen by the workgroup are: *Intsia sp.* and *Octomeles sp.* Plantation crops chosen are various fruit types: duku, durian, nephelium tree bearing fruit, jackfruit, and Avocado. Seasonal crops are: chilies, corn, Taro, cassava and vegetables.

Phase 1: provide/ procure tree seedlings was done end of April 2008, types of tree seedlings provided in phase 1 are fruit trees: duku, avocado, durian and jackfruit - a total of 110 tree seedlings. The tree seedlings are bought from a cultivation location in Ambon and are prime tree seedlings.

The tree seedlings are brought specially to the planting location in Horale to give a mixture of prime fruit crops commodity, and the expectation and hopes are that it will bring good results.



Picture 11. Types of tree seedlings prepared at the cultivation location, Saka sub-village.



4.5. Force Majeure

On the 2nd May 2008 the Horale village was attacked by their neighboring village Saleman and the impact of this was tragic. Horale was left in destruction and loss of 4 lives.

Physically the attack did not have an impact nor influence on the activity implementation further on, but it did have an impact psychological and due to this the activity schedule experienced a delay from the original schedule. For the time being the Horale villagers

are occupied with emergency activities and recovery from the attack which has destroyed their settlements and public services; the emergency condition and recovery needs all the attention of the Horale community. In this condition the Regime management Approach implementation can not be done; the work team and TOMA Lestari are for the time being involved in giving emergency aid to the Horale community.

As according to the commitment agreed upon, 2 weeks after the attack incident, which is monitoring, the Horale village government staff, congregation chairperson and Horale community members involved in the work group are committed to continue the phase and activity plan, as per the objective agreed upon.

Furthermore, TOMA Lestari has adjusted the work activity schedule including to modify the activity form according to the condition experienced by the Horale community, and at the same the activity is supporting the lives of the community.



Picture 12. The mental recovery activity for the children (trauma counseling) of Horale village and Saka sub-village, and distributing of gifts.



4.6. Activity Consolidation

On the 7th June 2008 a team work consolidation discussion was implemented to discuss the activity's continuation in Horale, after receiving the 2nd Phase fund transfer. In the discussion it was agreed that the activity forms planned will not change; only the time or schedule of implementation will be adjusted. The activity implementation on the location will be done on intensive work system, meaning each group member working at the pilot site will be given a daily fee and the objective hereof is to support them (the impact of the attack incident they have lost most of their belongings).

From the 12th to 14th June 2008 a field visit has been undertaken to Horale to consolidate activities with the Horale village government, congregation chairperson and work groups. The meeting was participated by 90% of the workgroups and an agreement was met to continue the activities although the community is still recovering.

The first activity agreed in the consolidation meeting for the phase 2 tree seedlings is to provide: type of tree is forest trees, and the tree seedling is obtained through taking out the seedling and made into a stump which then is cultivated by each of the workgroup members. The second activity is to clear the planting location which has been neglected for 2 months. The amount of tree seedlings agreed upon to be collected is 150 to 200 seedling consisting of several types of trees agreed. The procurement of forest tree seedling and the clearing of the planting location is done in 4 weeks time.

Picture 13. Consolidation meeting with workgroups, and data collecting on the condition and position of the planting location.



During this visit data has been collected on the position and width of the congregation's farm plot as the pilot site - a map will be made of location's situation in order to be able to design the planting.

4.7. Planting

The first week of July 2008 the 3rd phase tree seedlings have been procured; fruit trees such as nephelium tree bearing fruit, durian and lemon cina - total tree seedlings 300. The tree seedlings have been bought from cultivation locations in the surroundings of Masohi city and Wai Pia village on Seram island.

The 18 - 20 July discussion were held and preparation work undertaken for the planting activity; such as procuring material and supporting material, the important part in the preparatory work is to finalize the planting design as according to Regime Management criteria which has been adjusted to the planting location in the congregation's land plot - based on the land zoning. (see *Appendix 1. Planting Realization Map*).

A field visit was done on the 21st July 2008 on the occasion of the main activity Planting in the Regime management criteria implementation on the Pilot Site. Overall the planting activity took 3 days starting at 08.30 - 16.00. The first day started with clearing the location and arranging the planting area which is located on a slope, the second day planting is done on that location and while the flat area is being cleared and arranged; third day planting is done on the flat area.

One thing that is interesting in the planting activity is that a direct discussion started between the work team and the work group at the planting location. The issue discussed is the amount of forest plant types when they saw the distribution pattern and the amount of forest tree seedling types in the planting design. The work group suggested that the amount of tree seedling should be decreased because they prefer the area to be dominated by fruit trees and palawija (crops planted as 2d crop in dry season), and according to them the fruit trees planted are also forest plants such as durian; and the planting location is surrounded by forest where of course are many forest plants. The argumentation of the workgroup is very rational, that is why their suggestion is approved

for follow-up, the amount of forest tree seedlings are decreased to half and the distribution patter in the planting design has been slightly changed.



Picture 14. Planting design discussion with the workgroup at the planting location.

In the planting activity all workgroup members (30 pers.) were involved. They were assisted by several people living in the resettlement Tanjung Tali Tetui. They were purposely called by the work team to be involved and assist in the planting activity, this in order for them to also feel ownership in the abovementioned plot. Other than this the GPM congregation chairperson of Horale, Rev. Ms. M. Latuperissa, and several women of the GPM Horale Women Church Association are also directly involved in the planting activity.

The planting took 3 days and has become the major attention of the Horale community and surrounding village communities. Why?? Because the activity was very visible to each person passing the planting location and many people were involved in the mentioned activity.



Picture 15. Clearing and arrangement of the Planting location.



Other than long term tree seedling of various forest and plantation plants (fruit trees), short term fruit plants/ trees have also been planted and several kinds of seasonal plants. The composition types and the amount of plants are described in Table 1.

Table 1. Composition type and amount of plants in the planting area (pilot site) in the farm plot of the Horale Village congregation.

Long Term Crops	Amount of Seedlings	Agriculture plants	Amount of Seedlings
Forest Plant/ Tree types		Short Term Crops	
<i>Intsia sp.</i>	30	Lemon cina	100
<i>Octomeles sp.</i>	10	Papaya	100
<i>Terminalia sp</i>	10		
Plantation Plant Types (fruit)		Seasonal Crops/ Plants	
Duku fruit tree	100	Corn	100
Nephelium tree bearing fruit	150	Taro	100
Durian	100	Chili	100
Jackfruit	5	Cassava	50
Avocado	5		
Total Long Term Crop/ plant	410	Total Agriculture Crop/ Plants	550

The long term and short term plants/ crops are planted during the planting field work, while the seasonal plants/ crops are planted by the work groups during the following days. During the planting activity the weather was good, it was not too hot and rain fell and watered the plants almost every afternoon or night. This condition increased the tree seedlings endurance and capacity to survive.



Picture 16. Seed transportation and Tree Seedling Planting



During the field visit a nursery bed was made for the short term crops consisting of Bangkok Papaya and large chili. The amount of poly bags are as follows: 150 Bangkok Papaya and 100 big chili. The nursery bed will afterwards be used to enrich the crop variety in the congregation’s farm plot.

4.8. Plant Maintenance

On the 25th September 2008 a 4-day field visit was done for crop/ plant nursing, the activity done is as follows: clearing of planting area from weeds and tall/ coarse grass, then data collection took place on the growth rate of each tree seedling type.

Overall after 2 months (since 24th August 2008) the growth of the tree seedling planted has gone well, all the long term tree seedlings are doing very good; the short term agriculture crops/ plants, forestry and plantation crops/ plants reached 89%, while the seasonal agriculture crops/ plants reached 95%.

The best growth rate of the forest tree seedlings is the *Intsia sp.* tree type, while for the plantation tree crops/ plants the best growth is the duku fruit tree, short term crops is the china lime tree, while for the seasonal agriculture crop/ plant is the corn. The details are specified in the below Table 2.

Tabel 2. Growth rate of the Tree Seedlings in the farm plot of Horale Congregation

Long Term Crops	Growth Rate	Agriculture plants	Growth Rate
Forest Plant/ Tree types		Short Term Tree Crops	
<i>Intsia sp.</i>	90 %	Leimon cina	98 %
<i>Octomeles sp.</i>	90 %	Papaya	80 %
<i>Terminalia sp</i>	100 %		
Plantation Plant Types (fruit)		Seasonal crops	
Duku fruit tree	91 %	Corn	90 %
Nephelium tree bearing	90 %	Taro	100 %
Durian	56 %	Chili	90 %
Jackfruit	100 %	Cassava	100 %
Avocado	100 %		



Picture 17. Clearing the land and crops from bushes and tall/ coarse grass





Picture 18. Tree seedlings and seasonal crop plants are growing well at the planting location.

4.9. Identify Ecotourism and Non-Timber Forest Product Potentials

The preparation work to identify the ecotourism and non-timber forest product potentials is a time consuming activity, because the important part of the preparation work is to map the Horale Village region based on several references. To finalize the map the team needed several discussions with the community during the field visits and needed to wait for a copy of the Horale Village region map of 1930 which was with the Humane NGO. The discussion with the community on the map is very important to identify the nature resources within the boundaries of Horale village and the spread of these potentials.

Identify the ecotourism and non-timber forest product potentials is done simultaneously with the nursing of the plants. The identification activity is done using Focus Group Discussions with community leaders using the prepared village region map. Afterwards visits were undertaken to the various potential locations which are accessible and interesting to visit. The identification result is not elaborated into amount and volume of each existing nature resource potential due to limited time and money. Therefore the identification result is in the form of a Ecotourism and Non-Timber Forest Product Potential Spread in Horala Village Region Map. (See *Appendix 2 Ecotourism and Non-Timber Forest Product Potential Spread in Horala Nakane Village Region Map*)

Picture 19. Discussions with and information collecting from community leaders on ecotourism and non-timber forest product potentials.



Picture 20. Viewing the coast location and the beautiful nature landscape, this is a strong ecotourism potential in Horale village.



4.10. Closing Activity

After all activity steps have been done by TOMA Lestari, as the implementing organization of the Upgrading the Land Use According to the Land Zoning through the Regime Management Criteria Approach in Horale Village, it has finalized all its responsibility as according to the agreement stipulated in the Work Plan attached to the Internal Report at the beginning of the activity implementation, and the other additional work plans as according to the challenges and needs in order to strengthen the benefits of the target groups in Horale village.

On the 3rd November 2008 the activity closing was done in the form of a meeting with the Chairperson of the Horale GPM Congregation, Rev. Ms. M. Latupeirissa; as the person responsible over the congregation's farm plot (used as the Pilot Site) as the implementation location for the Regime Management Criteria; during that meeting the implementation location is handed over to the chairperson of the Horale GMP Congregation who will together with the congregation continue in managing and nursing the tree seedlings and other crops which have already been planted. The handover of responsibility is done symbolically by handing over several vegetable seeds and spices to the Congregation's chairperson of Horale. Also Final Activity Report (4 volumes) has been given including all maps made during the activity as a form of the responsibility of TOMA Lestari to the Horale GPM congregation's chairperson and the village government of Horale.

Following that the Horale GMP Congregation Chairperson will hand over the reports to the Head of the GPM Klassis North Seram, because the activities done in the congregations' farm plot have been entered into the 2008 Work Plan of the Horale GPM Congregation.

According to the Rev. Ms. M. Latupeirissa the tree seedlings' management will become a routine activity in the congregation's annual work plan. The result/ harvest will in the future be used to empower the congregation as one of the Horale GPM Congregation, Klasis North Seram income generating activity.

The Horale GPM congregation chairperson and the village government are very grateful on the implementation of the Upgrading the Land Use According to the Land Zoning through the Regime Management Criteria Approach in Horale Village. They hope that in the future there will be a follow-up/ continuation of the mentioned activity with more farm plots so that more community members can be involved.

5. RECOMMENDATIONS

5.1. To the Provincial Government, cq related government bodies

- Forest land use policy should be done wisely and taking the land suitability zone in careful consideration, based on land suitability maps such as Atlas Zona Agro Ecology of Indonesia (PPTA-Agriculture Dept., 2003)
- Investment policies at forest lands in the surroundings of Horale village and North Seram should be carefully monitored, specifically attention should be put on diversity of plant types which should be according to the land characteristics and not only focusing investments.

5.2. To NFP/FAO

- As a follow up on the activity is the Regime Management application on larger and critical land; the former activity focuses on comprehending the Regime Management Criteria and a demo plot; while the follow up activity will give the community more opportunity to maximal feel the benefit, and the government and other organizations can see the benefit of the Regime Management criteria application.

5.3. To the Community

- Land use should consider land suitability and ecological aspects in the surrounding specifically related to the water resources and the presence of important micro climate to maintain the soil humidity and fertility. Meaning that land clearing through felling of trees and planting only for own consumption should not be done, it has to provide multi benefits; for food, short term and long term commodities marketing, and to maintain the land ecological aspects and its environment.
- The plant/ crop selection should be according to the land characteristic in order for the land to be optimal used for a long period of time. Then the harvest sustainability can be maintained, and the daily needs of family can be fulfilled, and the income of the harvests can provide for a long period of time.

5. Participatory Rehabilitation Model of Marginal Land by Agroforestry in Sukawati Village by Yayasan Titamae

I. BACKGROUND

Dusun Sukawati is under Hunitetu Village government, Subdistrict Kairatu, District Western Ceram Region (Seram Bagian Barat, in the Maluku Province, Indonesia). The village is surrounded by forests, utilized agricultural lands and abandoned critical lands. The main problem faced in the village is the presence of a large portion of the village that has developed into critical lands during the last several decades.

The critical lands are the results of shifting cultivation cycles which have been practiced with mismanagement by the villagers for a long time in the past, so that most of their top-soils have lost and the lands become infertile. At present, all of the critical lands are abandoned because the villagers are incapable of utilizing them with the technology level that they have. Previous efforts to make use of the critical lands have been generally unsuccessful because of land infertility, even though many of the critical

lands have low slopes and suitable for agriculture with an agroforestry scheme. Meanwhile, most of villagers in Sukawati are poor that they are unable to purchase agricultural production inputs to utilize the critical lands. The village community tends to utilize non-critical lands in the village, either by shifting or permanent agricultural practices; however, the production inputs given are usually minimal.

The lands could be utilized for conservation and increasing income of the community if they are reforested with an agroforestry scheme. Efforts to rehabilitate the critical lands in the village of Sukawati can not be carried out feasibly without external assistance in the forms of technology and production inputs. Therefore, the Titamae Foundation has initiated to rehabilitate the critical lands with an agroforestry scheme as a model for development. The activities could happen through the funding assistance from NFP-FAO in collaboration with the Faculty of Agriculture, Pattimura University.

The objectives of the activities are:

- a. Improving the knowledge of the community about the utilization of lands with an agroforestry scheme, and to practice it in a demplot field.
- b. The utilization of the lands could give yields, both agriculture and forestry products to improve life of the community
- c. It is expected that in the long term with the formation of forests, they can have a double functions, i.e. the function in wood production and the function in erosion prevention and ground water improvement.

Outputs from the activities are:

- a. The rehabilitation scheme of the critical lands in Sokowati Village can become a model to be applied in surrounding villages
- b. The community of Sokowati and the surrounding villages are able to rehabilitate their critical lands and prevent other lands from becoming critical through an agroforestry scheme.
- c. In the long term it can improve the economic conditions and wellbeing of the village community.
- d. The ground water supply system can be improved and land erosion can be prevented.

II. GENERAL DESCRIPTION OF THE LOCATION

2.1. Population

The population of Dusun Sokowati is 88 families or 435 people, detailed as follows:

- Age group 0 - 5 year old 89 people
- Age group 6 - 16 year old 125 people
- Age group 15 year old or older 221 people.

The population based on gender consists of 232 males and 203 females, with a ratio 1,14:1.

2.2. Occupation

The occupation of the family heads in Dusun Sokowati are mostly farmers and a smaller number of them as livestock keeper, with details as follows:

- Farmer 59 people
- Livestock keeper 12 people
- Merchant 5 people

2.3. Education

In Dusun Sokowati there are one elementary school and one secondary school. The number of elementary school students is 146 children, detailed as follows:

- Grade I 31 children consisting of 15 boys and 16 girls
- Grade II 36 children consisting of 27 boys and 9 girls
- Grade III 19 children consisting of 9 boys and 10 girls
- Grade IV 17 children consisting of 11 boys and 6 girls
- Grade V 22 children consisting of 13 boys and 9 girls

- Grade VI 21 children consisting of 6 boys and 15 girls

The population number is 435 people with a detail based on the education level as follows:

- Completed elementary school level 383 people
- Completed secondary school level 20 people
- Completed high school level 30 people
- Completed higher education 2 people.

2.4. Income

The majority of the occupation of the Dusun Sokowati community are farmers, and only small portions are merchants and government civil servants. The income levels range from Rp 250.000,- and Rp 2.000.000,- per month.

III. METHODS/SCHEMES OF ACTIVITY IMPLEMENTATIONS

3.1. Location and Time of implementation

The location selected for demplot field was a field owned by the local church, located approximately 700 m from residential area (The Church building as the triangulation point). The implementation of the activities occurred from March 2008 to present.

3.2. Procedure of Activity Implementation

The activities conducted were:

- Socialization/introduction of the program and formation of working group
- Training/workshop
- Activity implementation .

IV. TRAINNING OF WORKING GROUP FARMERS ON PLANNING, IMPLEMENTATION AND MANAGEMENT OF PERMANENT AGRICULTURE SYSTEM WITH AN AGROFORESTRY SCHEME

Management of agriculture system with an agroforestry scheme was carried out through the activities: formation of participatory working group, workshop, and application/implementation and management of permanent agriculture system with an agroforestry scheme.

2.1. Formation of Participatory Working Group

A participatory working group was formed on April 5, 2008 (Annex 1a and 1b) with a composition as follows:

- Coordinators :
 - H. Iyai (Head of Dusun)
 - Pdt. Ny. Ch Patty/Tita (Head of Congregation Assembly)
- Group Leader : John Parakate
- Members:
 - M Simson Parakate
 - Yeheskel Iyai
 - Rolly Lattu
 - Nimbrot Neite
 - Yusup Laine
 - Risat Yawate
 - Yunus Iyai
 - Yosepus Kaihena
 - Ruben Urasana/Herman Urasana
 - Nani Urasana

- d. Field Supervisors (Titamae):
 - Arnold I. Kewilaa, SPt
 - Petra Kastanya, SE

2.2. Workshop

2.2.1 Preparation of Training Materials

The training materials prepared:

- 4.1.1.1.1. The Concept of Agroforestry and the Application,
- 4.1.1.1.2. Community Empowerment in Agroforestry Development in Critical Lands .
- 4.1.1.1.3. Selection Methods of Planting Sources of Forest and Plantation Trees
- 4.1.1.1.4. Plant Propagation in an Agroforestry System
- 4.1.1.1.5. Seedling Nursery Techniques of Forest and Plantation Plants
- 4.1.1.1.6. Planting and Plant Maintenance in an Agroforestry System

2.2.2. Preparation of Training Tools and Facilities

Training tools and facilities prepared included: writing tools, Power Point presentations, polybags, Rootone F (rooting stimulant), pruning scissors, paint brushes, seedlings, soil, LCD projector, robes, a room (the house of village head) for carrying out the workshop activities.

2.2.3. Training Implementation

The training involved 12 participants and was held for two days (the training schedule in Annex 2a and and the photos of the Project Leader and the Village Head during Workshop Opening. The activities included theory presentation and practical activities. The theory presentation activities were given by:

- a. Ir. B. Kewilaa, Ms on The Concept of Agroforestry and the Application.
- b. M. Tjoa, SHut, MP on Community Empowerment in Agroforestry Development in Critical Lands,.
- c. Ir. L.L. Riupassa on Selection Methods of Planting Sources of Forest and Plantation Trees ; and Seedling Nursery Techniques of Forest and Plantation Plants.
- d. M. Loiwatu, SHut, MP on Plant Propagation in an Agroforestry System.
- e. H. Lelloitery, SHut, MP on Planting and Plant Maintenance in an Agroforestry System .

In the practical activities, these were taught:

- a. Technique of Rootone F application on :
 - o Under-tree seedlings
 - o Stem cuttings
- b. Technique of budding
- c. Technique of air-layering
- d. Technique of selecting superior seedlings
- e. Technique of planting

V. IMPLEMENTATION OF AGROFORESTRY SCHEME

3.1. Site Selection and Mapping

Dusun Sokowati is under Hunitetu Village government, Subdistrict Kairatu, District Western Ceram Region (Seram Bagian Barat), in the Maluku Province. The dusun is located in the hinterland, approximately 12 km from Kairatu town. The area that was used as the demplot field is the land owned by the local church congregation that was unproductive, located approximately 1000 m from the church building as the triangulation point.

3.2 Land Clearing

Land clearing consisted of tree cutting and clearing of planting area. This activity consisted of two phases.

3.3. Procurement of Planting Materials

Seedling procured included seedlings of forestry plants, plantation plants, agricultural plants and vegetables (durian, rambutan, mango, canary nut, mahogany, jackfruit, avocado, agathis, lenggua, coconut, banana, cassava, cocoyam, corn, pumpkin, mustard, cucumber, green pea, and long pea).

3.4 Planting Plan and Mapping

Planting was planned for an area of 1 ha.

3.5. Planting Realization in the Agroforestry Scheme and Mapping

Planting realization in the agroforestry scheme were:

- Planting coconut
Coconut planted were 58 seedlings with a spacing of 10 m x 10 m.
- Planting banana
Banana planted were 47 suckers with a spacing of 5 m x 5 m
- Planting corn
Corn was planted in an area of 50 m x 25 m
- Lanting long pea
Long pea was planted in an area of 5 m x 20 m
- Planting green pea
Green pea was planted in an area of 5 m x 25 m
- Planting cassava
Cassava was planted in an area of 25 m x 20 m
- Planting cocoyam
Cocoyam pea was planted in an area of 10 m x 10 m
- Planting pumpkin
Pumpkin was planted in an area of 25 m x 20 m
- Planting mustard
Mustard was laned on beds of 15 m x 15 m
- Planting durian seedlings
Durian planted were 29 seedlings
- Planting rambutan
Rambutan planted were 56 seedlings
- Maintenance (construction of fences).

3.6. Replacement of Dead Plants and Phase II Planting

Dead lant replacement I also involved weeding in the phase I planting area and repairing the fences. The phase II planting included the planting in the location II with an area size of 50 m x 50 m. The plants species that were included cacao, coconut, durian, rambutan, mango, lenggua, jackfruit aand mohagony.

3.7. Replacement of Phase II Forestry Plants and Planting Phase II Agricultural Plants

The planting activity of the phase II agricultural plants included land clearing/weeding and planting in the phase I planting area with a land size of 50 m x 25 m. Phase II replacement of dead plants included planting activity in the location I and location II with a land size of 100 m x 50 m. The agricultural plants that were planted included corn, pea, and the forestry perennial plants includeed durian, rambutan, and mango.

VI. FINANCIAL REPORT

Table 1. Recapitulation of Costs of Activity Implementation of Critical Land Rehabilitation

No.	Activity	Cost Amount (Rp) x 1000	Total (Rp) x 1000
1	Assessment		
	A. Transportations		799,-
	- Ambon-Liang (two-ways)	300,-	
	- Angkutan Ferry (two-ways)	99,-	
	- Waepirit-Sokowati (two-ways)	400,-	
	B. Foods, drinks and cigarettes	348,5	348,5
	C. Accommodations	150,0	150,0
	D. Honorariums		2.200,0
	- Team	1.600,0	
	- Working group	600,0	
	E. Equipment		1.099,-
	- Hand phone	1.055,0	
	- Writing equipment	44,0	
	F. Medicines	25,0	25,-
	G. Documentation		
2	Workshop		
	A. Transportations		771,-
	- Ambon-Liang (two-ways)	300,-	
	- Angkutan Ferry (two-ways)	171,-	
	- Waepirit-Sokowati (two-ways)	300,-	
	B. Foods and drinks	1.575,25,-	1.575,25
	C. Accommodation	370,-	370,-
	D. Honorariums		9.320,-
	- Team	6.600,-	
	- Working group	2.500,-	
	- Cooking workers	220,-	
	E. Equipment and supplies		2.084,-
	- Writing equipment	1.250,-	
	- Flash disks	90,-	
	- LCD projector (rent)	200,-	
	- Rootone F and polybag	33,-	
	- Electricity	20,-	
	- Camera battery	27,-	
	- Hues and scoops	375,-	
- Documentation	89,-		
	F. Medicines	25,-	25,-
No.	Activity	Cost Amount (Rp) x 1000	Total (Rp) x 1000
3	Phase I Land Clearing and Planting		
	a. Transportations		710,-
	- Ambon-Liang (two-ways)	300,-	
	- Angkutan Ferry (two-ways)	110,-	
	- Waepirit-Sokowati (two-ways)	300,-	
	B. Foods and drinks	2.714,5	2.714,5
	C. Akomodasi	350,-	350,-
	D. Honorariums		7.450,-
	- Team	4.750,-	
	- Working group	2.200,-	
	- Cooking workers	500,-	

	E. Procurement of plant materials: - Coconut and agricultural plants - Forestry plants	131,- -	131,-
	E. Construction of fences	1.100,-	1.100,-
4.	Report (Interim report) - Photocopy and binding - Honorarium - Flashmemory and CD	54,65 400,- 97,50	552,15
5.	Maintenance, Phase II Land Clearing and Planting: a. Transportations - Ambon-Liang (two-ways) - Angkutan Ferry (two-ways) - Waepirit-Sokowati (two-ways)	 370,- 160,- 300,-	 830,-
	B. Foods and drinks	3.105,-	3.105,-
	C. Accommodation	550,-	550,-
	D. Honorariums - Team - Working group - Cooking workers	7.500,- 2.550,- 500,-	10.550,-
	E. Procurement of plant materials - Coconut - Forest plants - Agricultural plants	- 1.650,- 130,5	1.780,5
	F. Medicines	25,-	25,-
6.	Monitoring	700,-	700,-
7.	Final Report Draft		

VII. REKOMENDATIONS

After completing the activities of critical land rehabilitation with an agroforestry scheme in Dusun Sokowati, with the results as previously described, several recommendations are given.

1. To the Community:
 - a. The demplot of critical land rehabilitation with an agroforestry scheme in Dusun Sokowati can become a model that can be developed in the surrounding villages..
 - b. The critical land rehabilitation with an agroforestry scheme can improve life of the community and in the long term can prevent floods that often occur.
2. To the Government:
 - a. It is necessary to plan and determine critical land size to be managed with an agroforestry scheme stepwisely and continually to prevent expansion of critical lands.
 - b. Critical land rehabilitation should be conducted by the agriculture, forestry and animal husbandry agencies with the agroforestry scheme.
 - c. Critical land rehabilitation projects should involve the community as the land owners.
 - d. Critical land rehabilitation should use tree species belonging to the multiple purpose tree species.
3. To FAO
 - a. The duration for completion of critical land rehabilitation of seven months and the limited funding could not achieve a perfect result with the application of an agroforestry scheme because it requires rotations of the agricultural plants.

- b. The short duration for the project completion with limited funding have resulted that the forestry plants have not achieve the normal growth and have not reached the peak of the growth.

6. Strengthening of Proprietary Right of Native Community in the Forest Resource Management in Taniwel

I. INTRODUCTION

1.1. Background

To day the management of forest in Indonesia has not shown the clarity regarding property rights on forest land area and this issue has raised a complicated implication. In various areas which appear in the form of problems regarding reductant claims on a single forest land area. Further, the problem has produced verticals conflict between the community and Forest Entrepreneurs who have management rights on certain forest area, and this situation has also triggered inter-community conflict caused by problems on forest management rights.

In reality, forestry conflict has become a barrier to the sustainable forest management process since the conflict has made an uncertain economic situation which leads to uncertain opportunity in conducting forestry business in the conflicted areas. From the community social aspect, the conflict has caused redundant claims on certain areas by individuals and also by various group of community. In the ecological aspect, related to the social aspect, the problems has threat the supporting capacity of forest area that leads to the destruction of forests.

The existing facts have proven that redundant claims on forest land area conducted by forestry entrepreneurs (HPH) which positioned as the partner of Government and the surroundings community has happened for a long time. Property rights conflicts have almost existed in the HPH areas in Indonesia and these problems also exists in Taniwel Sub District, District of Western Seram. The situation has directed various parties involved in forest management turn their focus only in getting maximum long term benefits without considering security and sustainable aspects of managed forests.

Forest area conflict between forest entrepreneur and the community arises because the property rights / forest area ownerships rules of the community are referred to native cultural law and native proprietary law which based on historical and cultural aspects. In other hand, forest entrepreneurs (HPH) or Government business agents have used the formal and legal law issued by the Government. In the conflict, each party has argued and claimed that the law used has the strongest legacy.

Currently, a new paradigm for management of forest resources has directed toward a system which used community based forest management, in which the community is positioned as the **primary agent** in the process future forest development process. The new concept has to become a strategic key in solving related problems of **village poverty, forest degradation and a democratic Government.**

In supporting the above idea, then it is needed to conduct a research and community empowerment on "*Proprietary Rights and Cultural Law Community*" in relation to the management of forest resources in Taniwel sub-district, Western Seram District.

Proprietary rights is the right of a community in a whole (life alliance of native cultural law community) on occupied land, on the flora and on the fauna, and on all things resides on the land surface and in the land it self as stated by Vollenhoven as "*beschikkingsrecht*"

(Wiradi, 1999). While, the **Cultural Law Community** is a group of people which bounds by their cultural law structure as a community as a law alliance based on the similarity of residence and ancestors or family/blood relations.

1.2. Objective

The objective of the project is to obtain information about regarding Proprietary Rights and Cultural Community Law of the Uwen village in Taniwel Sub-district. The information comprises of the following aspects :

- a. Structure and formation of cultural/traditional community
- b. Cultural/traditional institutions
- c. Regulation and agent of cultural/traditional law especially traditional court
- d. Boundary of traditional / cultural law area
- e. Interaction pattern and dependency of the community on natural resource
- f. Contribution of natural resources on family income rate

1.3. Out Put

Out put expected from this activity is :

- a. Custom Public has rights to resource forest residing in in their sir region, so that they are entangled partisipatively in management of resource forest.
- b. Gives big opportunity to institution of custom and customary law peripheral to arrange exploiting and management of resource forest.
- c. Each Custom Public has sir region boundarys that is real and clear in field.
- d. Realized it continuity ground of forest and improvement of prosperity of public.

II. GENERAL OVERVIEW OF LOCATION

2.1. Position and Space

The research activity and community empowerment regarding Proprietary rights of Cultural Law Community was implemented at Taniwel sub-district. The region of sub-district is located at Seram Island and it is a part of Western Seram district, Maluku Province, Indonesia. Geographically, the region of Taniwel sub-district is located at the latitude position from 2°54'24" S to 3°10'25" E.

The administrative borders of the sub district are as follows:

- South side is bordered with Seram Sea
- North side is bordered with Kairatu and Amahai sub-districts
- East side is bordered with Wahai sub-district
- West side is bordered with Piru sub-district

Based on 2005 statistical data of Western Seram district, the space of Taniwel sub-district is 1,496.2 km² or 36.51% of 4,099 km² total area of Western Seram district. The sub-district contains 34 villages, in which 28 villages located at coastal area and 6 villages in the hill side.

2. 2. TOPOGRAPHY

The villages in the hill side have hill side topography. The mountains have average altitude of 800 m from sea surface. The coastal villages have topographic characteristic

with high land area from 0 to 450 m height. Village community housing is usually built on the plain area. The back side of the village is usually used for agricultural activities. It is usually used to plant coconut trees, clove, nutmeg, coffee, and cacao. Unplanted areas in the surroundings village usually comprise of forest areas.

The topography contains many small hills and valleys. There are many small rivers run in between the hill and valley. The small rivers produce many river bank areas, such as *Sapalewa* riverbank area, *Kaputih* riverbank area, *Makina* riverbank area, *Uli* riverbank area, *Wee* riverbank area, etc.

2. 3. CLIMATE

Climate condition of the sub-district is evaluated based on the data from Kairatu weather station. Based on the data, it is found that the highest rate of monthly rainfall during the last decade (1995-2005) exists in February (377.29 mm) and the lowest one exists in August with 48.71 mm. The average annual rainfall is 2322.83 mm. Number of highest rainy day is on January with average of 21 days/month. The lowest rainy day is September with 3 days/month.

According to the climate classification by Schmidt and Ferguson, Taniwel sub-district is categorized into type A which has a high rate of rainfall (very damp) and has tropical vegetations. Air temperature is around 20.32 - 34.84° C., The coolest month with average temperature at 24.85°C is in February and the hottest month with average temperature at 27.10° C is in August. Air humidity percentage is around 77.6% (in October) up to 85% (in February).

2. 4. DEMOGRAPHY AND INCOME SOURCES

Based on statistical data of Taniwel sub district in 2007, the number of inhabitants up until October 20067 is 18,174 inhabitants which comprises of 4,056 households hence in average there are 4.48 inhabitants in a household. Number male resident is 8,869 life and female resident is 9,305. The annual rate of resident growth is 2.21%.

The sub district area space is 149,620 Ha or 1,496.2 km², hence average residents for each km² is 12 persons. Based on age classification from Simon (2000) then inhabitants in the research area is divided into children category (age from 1 - 14 years) with 1,033 children (39.65%), young category (15 - 24 years) with 952 persons (39,65%), adult (25-49 years) numbered 491 persons (17,12%), and old people (above 50 years) numbered 223 (6.54%).

Farming system used is a temporary system with period of farming in a location in average is from 8 to 10 years if the location is not planted with annual long life plants. In general, after harvest period, the farming land is planted with long life plants and the farming area then become a permanent plantation (*dusun*) owned by the person / family who manages the plantation area. Most of the community is used to grow horticulture plants such banana, orange, mango, durian, *langsat* and *salak*. Variety of long life plants which are grown by the community consists of clove, nutmeg, coconut, coffee, and cacao. Farming production is used for family consumption and the surplus is sold. Fruits products and long life plants products are sold as the income source to fund educational needs of children, buying clothes, housing needs and saved for funding an unpredictable but has a high importance needs.

Instead of farming, the community also works to collect wooden and non-wooden products from the forest. The non-wooden forest product are *Agathis L.* resin, rattan and hunting, also the community works to process sago tree to obtain sago flour which is the staple food for most Mollucans.

2. 5. LEVEL OF EDUCATION, CULTURE AND HEALTH

Level of formal education of sub-district's residents is categorized as in a low level since in majority the highest education level obtained is only at elementary school level. Further, there are numbers of people who are not able to read and write, commonly, these are old people who live in the remote hillside area.

Education facilities which available in Taniwel sub-district consists of 7 pre-school, 29 elementary school, 6 junior high school and 2 senior high school which are located in Taniwel and Sukaraja. There is almost one elementary school provided at each village, there is one elementary school provided for each two villages which have small numbers of residents.

In general, the community in Taniwel sub-district consists of *Alune* tribe and *Wemale* tribe. They also associated with social groups of community whether they are attributed as *Patasiwa* and *Patalima*.

Level of health of the community is categorized as low, number deceases are high. The most common deceases which exist among the community are malaria, and various skin deceases and breaths related deceases. In average, health facilities and nurses are available in Taniwel city and others villages. Distribution of maternity nurses in the villages and remote as part of Government program is carried well, however, the problem arises from the scarcely of medicine stocks at village health centers.

2. 6. ACCESSIBILITY

Villages can be accessed using land and sea means of transportation. Medium size boat is available twice a week, while land transportation using buses (via ferries) have daily regular schedules. Transportation from Taniwel to surroundings coastal villages are by means of land and sea transportations. Hillside villages are reached by using land transportation only (using car and motorcycle), however the availability of access road and vehicles are limited to several villages. Other villages must be reached by means of walking via narrow road.

Quality of access roads are varies, there are several kilometers of road have been coated with asphalt, while mostly of the access roads have only hardened soil surfaces. These road conditions have raised many mechanical problems to the vehicles used in route to Taniwel. The bad road and high cost of vehicle maintenance have resulted in high cost of transportation.

III. ACTIVITY EXECUTION METHOD

3.1. Location and Execution Time

Activity about " Reinforcement of Custom Public Rights in Pengelolaan Resource Hutan" this executed in countryside Uwen by entangling some countrysides is around it (countryside Tounusa, Solea, Musihuwey and Waraloin) District Taniwel Region Seram Bagian Barat. Execution of This activity taken place during 8 month of since March up to November 2008.

3.2. Execution Procedure of Activity

According to execution guide of activity of based on Letter Of Agreement (LOA) from NFP Facility (No. 37773). Date of 17 Septembers 2007, hence activity done in district Taniwel (countryside Uwen and its surroundings) be as follows :

- 1). Does Study about relationship between custom publics with forest and exploiting of forest pickings.
- 2). Does Workshop to submit result of study at point 1).
- 3). Does Settlement of mapping at boundary between custom publics.

Third execution procedure of activity is upper arranged as follows :

A. Preparation

This activity started by doing preparation in so many thing in the form :

Management of Permission ; management of execution permission of activity in done in level of district and countryside.

Preparation of Human resource ; SDM involving as fasilitator in this activity supplied with practical knowledge related to activity done.

Preparation of facilities and basic facilities required by usage execution fluency of activity in field.

B. Socialization

Activity of socialization is done through forwarding of information about activity "*Reinforcement of Public Rights in Resource Forest Management*" by entangling various custom public components in each villages. This socialization meant that public can know and comprehends about the importance of activity which will be done so that they can participate is active in the execution.

C. Identification

To obtain accurate data to relate Activity about "*Reinforcement of Public Rights in Resource Forest Management*" hence retrieval of data or inside information of this more activity majored to responder or informan understanding correctness about customary right for land rights problem and mores at each the country. Responder or informan is intended is strippers Custom, leader village, and other elite figure. While data or information about interaction of public with forest and exploiting of forest pickings and the contribution for earnings of family is obtained through stocktaking and identification of usual forest result types exploited by public and through interview or admission filling kuisioneer from some family heads. Activity of stocktaking and identification is done by entangling group of public the always having activity to forest. Thereby Method applied in execution of this activity is method PRA (Partisipatory Rural Appraisal) what enables involvement of public in activity is intended.

D. Workshop

Activity of Workshop about "*Reinforcement of Public Rights in Resource Forest Management*" executed during one day on 7 June 2008 by entangling 45 participant coming from 7 countryside and consisted of Staf village, Custom Figure, Elite figure and young man figure. In activity of this workshop submitted 4 Handing out that is 2 main handing out and 2 supporter handing out.

3.3. Realization of Activity

Realization to 3 program from activity of Reinforcement of Public Rights in Resource Forest Management in Uwen village and its surroundings is done step by step, where activity of phase I that is study about Interaksi people with forest and using of forest result has been executed in April up to May 2008. Execution of program this I phase

realization 100 % (42 % from all activity) by using first termin fund coming from NFP facility. While activity of phase that is Workshop for presentation result of Interaction study of public with forest and using forest result is executed at June 2008. Execution of program phase II (Workshop) realization 100 % by using second termin fund from NFP-Facility, activity phase III that is Measurement and Mapping of Farm Proprietary Rights Boundary between Marga in countryside Uwen is executed in September and October 2008. Execution of activity/program this III phase realization 100 % by using fund coming from third termin advanced money and loan.

Plan and third realization of activity/progam and the execution time is visible at Table 1.

Table. 1. Plan and Realization Program/Activity Reinforcement of Public Rights in Resource Forest Management in Uwen village and its surroundings, District Taniwel.

No	Program Plan	Activity Plan	Time	Realization
I	Study about interaction of public with forest and exploiting result of forest	1. Preparation and Socialization	21 March - 8 April 2008	100%
		2. Identification and questionnaire Prepares	1 - 8 April 2008	100%
		3. execution of Study	9 -12 April 2008	100%
		4. Report result of study	13 April s/d 31 May 2008	100%
II	Workshop for Presentase Result Of Study and Information of Mapping	1. Preparation workshop	2 - 3 June 2008	100 %
		2. identification of Participant workshop	4 - 5 June 2008	100 %
		3. Preparation of facilities and basic facilities workshop	6 June 2008	100 %
		4. Execution workshop	7 June 2008	100 %
		5. Making of report and Prosiding	July - Octbr 2008	100 %
III	Mapping of Farm Proprietary Rights Boundary between Soa/Marga in Countryside.	1. Identification soa in countryside	6 - 8 Sepbr 2008	100%
		2. Makes boundarys above map based on information of public	8-16Sepbr, 08	100 %
		3. Checks in field	16-24Sepbr, 08	100 %
		4. Makes a map of ownership based on soa/family	3 Octbr - 4 Novbr, 08	100 %

At Tables is upper seen that activity of Interaction Study between Custom Publics with Forest and Exploiting Forest pickings in Uwen village and its surroundings district Taniwel, up to beginning of November 2008 has reached 100 %.

IV. RESULT AND SOLUTION

4.1. Interaction Study between Custom Publics with Forest and Exploiting Forest pickings

A. Dependency of Masyarakat to Resource Forest

Relation between countryside public Uwen and its surroundings with resource forest in relation to their dependency to visible forests at flow diagram following :

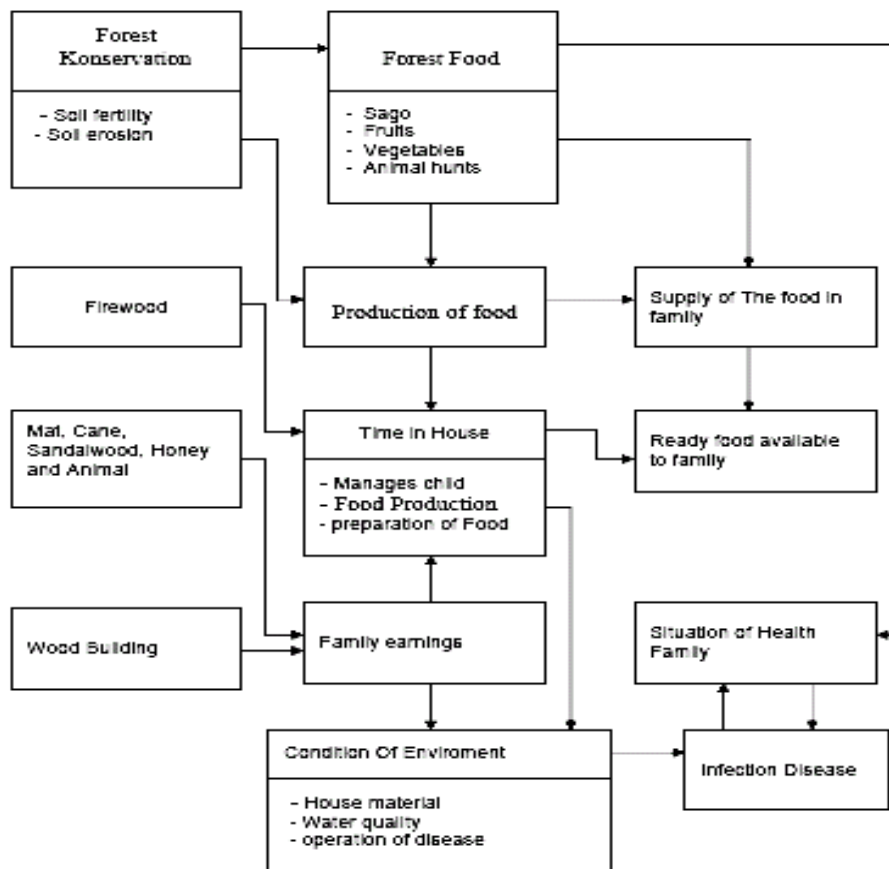


Figure 1 . The Relation Of dependency of countryside public Uwen and its surroundings With forest resource

At picture is upper seen that public has a real tightly relationship with forest, especially at requirement aspect of food, economic and health. Interaction of public in countryside Uwen and its surroundings with forest and area, many related to perceptions comprehended by the public. According to them, forest comprehended as inseparable part from their life. This thing is because forest is source of food material, place is having compatible tanam/berladang and source of firewood producer and worker wood.

The relation of like this of course is their ancestors heritage, beside ecologically forest is their environment. Meanwhile for countryside publics Uwen and its surroundings, continues activity of heritage people tua/nenek great-grandparents is part of their culture.

According to public, the entry of HPH a few last years causes on the wane and increasingly difficult to obtain result of forest is not wood from within forest. The lessen of screw pine mat, sandalwood and cane as result of eksplotasi forest by wood company, altogether this

partakes having an in with their earnings. Animal hunting pickings also on the wane and public feels losing of source of protein that is ordinary they eat.

B. Forest Result Types Exploited by Public.

Forest Result exploited by countryside public Uwen and its surroundings is result of wood forest and non wood. Tightly of countryside public relations Uwen and its surroundings with forest is mirror also in requirement they wood would, both for the firewood, builds house and there is also sells it as one of source of family earnings. The wood comes from nature forest consisted of multifarious kinds of type. Generally public has knowledge either about the wood types and usefulness.

In the effort building or improve; repairs house, public generally applies ligneous firm woods of iron (*Instia bijuga*), gupasa (*Vitex gufasa*), matoa (*Pometia pinnata*) for undercarriage pillar or building and softwood types like meranti (*Shorea spp*), kayu merah (*Eugenia sp*), mersawa (*Anisoptera spp*) and Nyatoh (*Palaquim spp*) for superstructure. While to make jamb and window and article of furniture is applied [by] wood types which included in group of wood respects ligneous of cina (*Podocarpus spp*), lenggua (*Pterocarpus indicus*), buah rao/dahu (*Dracontomelon dao Merr*), lasi (*Adinia fagilofia Val*).

Usage of firewood as energy source by public in countryside Uwen and its surroundings because firewood besides easy go, nor need to release cost to get it. Firewood enough available in forest, way of the retrieval by way of exploiting dry stripper trees and has falled down or collects stick and drought wood branch which has down to the ground and also which still patching at wood fundamental.

From result of observation in countryside, known that requirement of firewood every family head, ranges from 2,5 - 4 tie per week equivalent with 50 - 80 kg/week, so that requirement of firewood in one years ranges from 2600 - 4160 kg/kk. According to Simon (1983) 1 m³ equivalent wood with 600,02 kg, thereby requirement of firewood in one year ranges from 4,33 - 6,93 m³/kk.

While types result of forest is not wood exploited by countryside public Uwen and its surroundings covers food material in the form of sago, vegetables and fruits, like ; nails type, ganemo, rebung, namu-namu, durian and others. Besides there is also result of forest is not other wood exploited by public like screw pine mat, sandalwood, cane, honey, and nira from tree enau/aren.

Some animal types that is often caught by countryside public Uwen and its surroundings is kus-kus (*Phalanger sp*), forest pig (*Sus crova*), deer (*Cervus timorensis*), and some bird types like bird nuri/bayan (*Ecletus roratus*) and kakatua (*Cacatua molucensis*). This animal type generally caught to be consumed and rest in selling.

C. Customary law Public in Countryside Uwen and its surroundings.

Based on UU. No. 41 Th. 1999 about Forestry Law, especially section 5 article 3 is mentioned that : "... and custom forest is specified along the length of according to the customary law public in reality there are still and confessed the existence." Hereinafter at explanation of section 67 article 1 UU. No. 41 The Th. 1999 expressed that : " Customary law public is confessed the existence if according to in reality fulfillls element of internal:

- a). Public still in the form of society (rechtsgemeenschap).
- b). There is institution in the form of domination peripheral of its custom.
- c). There is territory of jurisdiction of custom that is clear.
- d). There is institution and law peripheral, especially jurisdiction of custom, which still be adhered.
- e). Still performing [a] collector result of forest in vicinity forest region for

accomplishment of requirement of everyday life.

There by to know elements to hence done by study related to elements is intended. Study result done in countryside Uwen and its surroundings it can be told as follows :

1. Form and countryside public structure Uwen and its surroundings is unity of group of social which it contains high affinity values or familiarity. The public in keseluruhan has affinity system and structural and form of public or social system having base tradition and is fundamental elements inherited hereditarily. Affinity system or familiarity embraced at location countrysides of research in this area is based on lineage Bapak/Ayah, known as descendant line system patrilineal. Structural and form of public or social system at countryside Uwen and vicinity countrysides has some form of unities of group or familiarity unit and social. Between her all important in order to be known is form of unity or group of so-called : family, house eye (house tau), set of relatives, soa and custom country, and form of affinity or other like pela, gandong, group of patasiwa, patalima, tribe Alune and Wemale.
2. Existence of custom public and various its(the supporter institutions still be confessed, either in de facto and also de yure, but has seldom for dipraktakan in everyday life. Mean the customary law in the existing public doesn't function maximumly. This thing is caused by implementing of UU No. 5 the Th. 1979 about Pemerintahan Desa, so that systems Pemerintahan Adat becoming not grows.
3. Countryside Uwen and its surroundings has various institutions and customary law peripheral especially jurisdiction of custom. Institution and customary law peripheral which there is in countryside Uwen and its surroundings arranges relation between man with resource nature (like sation, orchard, place of keramat etc.) as well as arranging relation between public one otherly.
4. Countryside Uwen and its surroundings has territory of jurisdiction of custom with nature boundarys like river, mount, dale, stone and sea. Every member of public in countryside knows the country sir boundarys as well as family sir boundarys (marga/soa) and also the private ownership sir boundarys.
5. There is contribution of forest resource to average of earnings of family in countryside Uwen and its surroundings. Contribution value resource forest to earnings of family ranges from 21,41 % - 48,89 %. Contribution resource forest is important for supporting continuity of their life. interaction pattern of Public with forest resource in general same because based on by the same understanding that is forest is source of food material (flora and animal), place of cultivation and source of wood producer, so that forest must be taken care of and looked after carefully.

D. Form Of Ownership Of Forest Areas by Custom Public in Desa Uwen and its surroundings.

Tightly relation between countryside public Uwen and its surroundings with resource forest has realized a system or form of ownership of the forest in this region. In general primary forest area (ewang) according to public in countryside Uwen and its surroundings has been mastered by each genera or soa. However every owner of the forest area or sir remain to meekly at orders or custom implemented in the countryside.

Based on this system hence ownership of forest area by a marga/soa will be endowed hereditarily to generation of router from the genera or soa. If there is member of public inside the country which will exploit result of forest in forest area owned by other genera hence the must ask permission beforehand from genera or soa owner of the area.

Collector pattern and exploiting of forest result done by something individually but is also in teams. Pattern teamed done if forest result which diambil/dipungut would of course requires people or amount mystical power that is enough, like hunting, labours sago, opens new garden, etc.

4.2. Execution Workshop

A. Matter Workshop

Submitted handing out in this Workshop is :

- a. Main Handing Out of I : " Reinforcement of Custom Public Rights In Management of Forest in Uwen Village district Taniwel" by Ir. Tho. Silaya, MP
- b. Main Handing Out of II : " Damage of Forest and Land Konservation Effort of Dusung System" by J. Hatulesila, S.Hut.
- c. Supporter Handing Out of I : " Improvement of Farm Productivity with Agroforestri System" by Irwanto, S.Hut, MP.
- d. Supporter Handing Out of II : " Settlement of boundary or Mapping" by Ir. Th. Silaya, MP.

B. Result of Simulation about Damage Problem of Forest and Farm happened the existing.

To get understanding of public about damage of forest and farm hence told question : (1) what is earning we thought (2) what is earning we plan and (3) what is earning we do as saving effort of forest and farm. From 3 this question hence comments given by participant workshop is as follows :

Needs thought of	Need to be planned	Need to be made or done by
1. Why forest can be destroy as soon as that.	1. Starts tree planting now.	1. Construction on an ongoing basis to public about the importance of forest
2. Tree planting need to return forest which husak.	2. Returns farm which has destroyed with middle and long-range crop.	2. Real action by starting tree planting and longevity crop around river Hau.
3. Effect experienced by by forest damage.	3. Best create for the future offspring.	3. Cultivates open farms with tree crop and longevity crop.
4. Returns forest on course initially	4. Plants again tree types and longevity crop.	4. Forms working team to start cultivation
5. Dialogue with masyarakat about exploiting of farm well	5. Makes working team is every [by] countryside	5. Reboisation at DAS
5. Thought of a period of now and future	6. Process farm	6. Tree planting for off spring by future
6. Action of Saving of forest for the future	7. Leads the time planting for every working team.	7. Specifies countryside order (Perdes) about land rehabilitation working team
7. How to return what which tritiated	8. In teams makes crop nursery bed.	8. Does cultivation with crop seed which has been prepared government
8. The Government can assist crop seed to be planted	9. Cultivation of fruits crop	9. Does assorted cultivation of useful crop
9. How movement countryside government officer of public to do cultivation	10. Stops farm culture to go about	10. Plants areal dusung with longevity crop and intercropping crop
10. Stops penebang-an of tree with promiscuously	11. Does cultivation of productive crop	
11. Must start tree planting is around by river		

C. Result of Discussion Matter Workshop :

- a. Needs existence of by law (Perda) about village custom accomodating custom public rights in management of resorce forest.
- b. There must be studys that is further if Perda masyarakat/desa custom is specified along of must be tested to existence essence of custom public especially the villages in district region Taniwel.
- c. Wood growing around countryside must defended and looked after well and is arranged the exploiting by public, this thing relates to increase of the price of the existing BBM.
- d. Forest around drainage basin (times) Hau has is annihilate on that account need to be done reboisation and arranged with by law or regulation of countryside so that countrysides around times later doesn't experience floods every the rains.
- e. Needs existence of regulation of countryside about observation to management of forest that public is not as delicious as of tree felling which can cause damage of forest is more hardly again.
- f. Perda about its secepa custom countryside must in create causing can become legal fundament for countryside in conducting action law to public doing forest ruining.
- g. Needs existence of Regulation of Countryside arranging about retribution to countryside and owner of forest area for company wood doing cropping activity of wood.
- h. Activity effect penebangan/pemanenan by company wood hence condition of forest and forest pickings cane, screw pine mat, etc in public sir Uwen and its surroundings has destroyed.
- i. Needs existence of meeting with between the countryside heads, custom figures and elite figure from countryside Uwen and other neighbour countrysides to discuss collectively/together on the basis of familiarity principle and custom about sir boundarys between countrysides, because initially countrysides is one unities of custom public.
- j. Needs existence of arrangement of rights to result of forest, and this arrangement must be made by countryside.
- k. Needs existence of study about crop types which suited for planted in the effort land rehabilitation, because public has not understood and had an eye for conformity of crop matching with condition of farm.
- l. Follow-up from a kind of this activity needed facility by government on an ongoing basis so that public can be powered through various activities in teams especially to return condition of tritiated forest in countryside Uwen and vicinity countrysides.
- m. Needs existence of kesepahaman between publics related to custom sir boundary in each countryside and or between publics so that not happened conflict.
- n. Company often woods up near by river, so that forest is around by rivers is tritiated, this thing cannot be let is just because can result floods endangering public.
- o. The existing customary law order has discoloured for the purpose need to be seen to be re-arranged referring to the regulation making of villages custom.
- p. Function of kewang as forest police must be strightened so that didn't there are again logging promiscuouslyly by public which can cause damage of forest is more hard.
- q. Exploiting of forest for the sake of countryside public time has come is arranged well by aparatur countryside.
- r. Social institution system in countryside Uwen and its surroundings temporary is experiencing discoloration for the purpose custom orders becoming life norm in present public time has come is re-arranged, especially relating to forest keeping.
- s. Sir boundary Uwen village with other neighbour countrysides need to be arranged collectively/together and according to familiarity principle and by respecting tradition of ancestor ommission.
- t. Prohibition of Present logging has must be implemented for the purpose the importance of regulation of countryside banding all publics so that damage of forest can be limited and stopped.

Result of discussion matter Workshop is upper hereinafter is 4 group aspect sevagi following :

Law Aspect covers :

- a. Needs existence of By law (Perda) about Custom Countryside.
- b. Needs existence of regulation of countryside about observation to management of forest.
- c. Needs existence of arrangement of rights to result of forest.

Conservation Aspect covers :

- a. Pohon/kayu growing around countryside must defended.
- b. Forest around DAS Hau has is annihilate, need to be done reboisation.
- c. Hewing activity by Perusahaan wood hence condition of forest and result of forest (cane, screw pine mat, etc) has destroyed.

Institution Aspect Sosial-Budaya Public , covers :

- a. Needs existence of meeting of custom collectively / together between countrysides Uwen and vicinity countrysides on the basis of familiarity.
- b. Customary law order now starts discolouring for the purpose need to be re-arranged.
- c. Function of kewang as forest police must be stand.

Management Planning Aspect of SDH, covers :

- a. Needs existence of study about crop types which suited for planted.
- b. Continuation bTindak from a kind of this kegiatan/program needed facility by government on an ongoing basis.
- c. Prohibition of Logging around river.

4.3. Settlement Boundary or Mapping Area

From result of discussion in execution of workshop in countryside Uwen, expressed that settlement problem of sir boundary between countrysides in countryside Uwen and other countrysides is around it (countryside Solea, Tounusa, Musihuwey, Waraloin, Walakone and Lumapelu) be a real sensitive problem, and so do boundary between generas in one countrysides. This thing is caused by seventh of the countryside initially is one unities of custom public having one goverment of custom and one the same settlement regions in mountain area. Thereby hence each rights sense of belonging countryside to the sir area, causing needs existence of togetherness between the countrysides in arranging their sir region.

Although condition of countryside public sir region Uwen and its surroundings that way, but through approach to government of countryside, custom figure and elite figure hence in this activity has been done pemetaan/ settlement of limit at area of property (public customary right for land rights).

Activity pemetaan/penataan of boundary in this Uwen countryside done by 2 kelompok/tim mapping. Each group consisted of 7 people (1 people fasilitator and 6 people countryside public) and each group equiped with equipments in the form : 1 fruit of GPS, 1 fruit of compass, 1 metre roll (long 50 m), measure string and stationery. Expected that countryside public involving in this mapping activity gets the picture and applies the equipments especially compass and metre roll so that they can continue this activity hereinafter.

Boundarys ownership of area or sir between marga/soa or between families in countryside Uwen and its surroundings is marked with nature boundarys like river, mount, and artificial dale and also boundarys like crop types in the form " gadihu, gamal, durian, etc. Besides there are also boundarys which is made in the form of fence kayu/bambu and concrete ratch.

V. RECOMMENDATION

5.1. For Public

- a. Social Customary Law and institution system in countryside Uwen and its surroundings temporary is experiencing discoloration for the purpose custom orders becoming life norm in present public time has come is re-arranged, especially relating to forest keeping.
- b. For the agenda of settlement of sir region boundary between countrysides in countryside Uwen and countrysides is around by it hence needing existence of meeting with between the countryside heads, custom figures and elite figure from the countrysides to discuss collectively/together on the basis of familiarity principle and tradition endowed from the their ancestors. This thing need to be done to prevent conflict is then by day.
- c. Condition of forest around drainage basin most of has destroyed as result of hewing activity done by wood company, on that account needing active participation of public in doing reboisation or tree crop replanting around open river stream and places to overcome danger of floods and erosion in the rains and dryness in dry season.
- d. Role and function of kewang as forest police must be strightened so that prevents the happening of logging promiscuouslyly by public which can cause damage of forest is more hard.
- e. Remembers height of dependency of public in countryside Uwen and its surroundings to resource forest, hence needing existence of awareness of public in exploiting and takes care of forest continuity.

5.2. For The Government

- a. Problems about sir region boundary between each countryside in district Taniwel, especially in countryside Uwen and its surroundings is conflict potency, for the purpose local government of sub-province Seram Bagian Barat is expected facility able to solving of the problem.
- b. According to Undang-Undang No.41 Tahun 1999 jo.Undang-undang No. 19 the year 2004 about Forest law, hence needing existence of By law stipulating (Perda) about Village custom causing enables custom public to have customary right for land rights to forest area staying in the sir region. Besides Perda must soon in create causing can become legal fundament for countryside in conducting action law to public doing forest ruining.
- c. Needs existence of regulation of countryside about observation to management of forest to can prevent the happening of hewing of tree redundantly by public which can cause damage of forest is more hardly again.
- d. Activity effect cropping or hewing by company wood hence condition of forest and forest pickings (cane, screw pine mat, etc) in public sir Uwen and its surroundings has destroyed. For the purpose needs governmental attention in observing and makes policy related to effort for exploiting result of wood forest in Uwen village and its surroundings.
- e. Needs existence of governmental attention in doing study about crop types which suited for planted in the effort land rehabilitation, because public has not understood and had an eye for conformity of crop matching with condition of farm in countryside Uwen and its surroundings.

5.3. For NFP FACILITY

Follow-up from this activity in the form of rehabilitation of forest area around DAS and area of open or zero in Uwen village and countrysides is around it is and cultivation effort of types crops matching with the area needs facility by NFP Facility on an ongoing basis so that public can be powered through various the activities in teams especially to return condition of tritiated forest.

C. EXPERIENCES AND LESSONS LEARNT ON NFP FACILITY PROCESS IN MALUKU AND NORTH MALUKU

Based on the interview to the local communities who involved in the program of NFP Facility projects in Maluku and North Maluku indicated that all the participated people are very interest to the all activities of the NFP Facility Programs. The Agriculture Faculty of Pattimura University has interviewed some people as samples, and the results are showed in the next table.

NO.	INVOLVED VILLAGE	LESSONS LEARNT	COMMENTS
1.	Sukawati	<ul style="list-style-type: none"> • How to prepare best quality of seeds for agroforestry model. • How to prepare nursery and to maintain seedlings. • How to construct a model of agroforestry and select of crops. • How to planting and maintaining crops in agroforestry model. 	<ul style="list-style-type: none"> • Continuing the NFP Facility Program in large scale. • Taking priority program to the sifting cultivator and marginal lands.
2.	Uwen	<ul style="list-style-type: none"> • How to record wood and non wood forest product. • How to mapping the border area between forest owners. • How to reduce conflict between the forest owners. 	<ul style="list-style-type: none"> • Extending the program to other forest owner of neighbor villages. • The program should be first to prior the conflict area
3.	Horale	<ul style="list-style-type: none"> • How to select and prepare land for the land regime model • How to prepare seeds and select crops • How to planting and maintaining the crops • How to record the ecotourism potential of the village 	<ul style="list-style-type: none"> • Extend the program to other farmers. • Slope and marginal lands have to be in priority of program.
4.	Haruku	<ul style="list-style-type: none"> • How to conserve water and endemic species (Maleo bird) • How to prepare seedlings and planting forest 	<ul style="list-style-type: none"> • Extending the program in large scale • Village regulation on the conservation of forest resources and environmental should be the main attention for the next program.
5.	Ameth, Akoon, Nalahia, Abubu	<ul style="list-style-type: none"> • How to record the potential of forest • How to measure the promoted conservation area • How to prepare map of the land use system. • How to conserve forest and environmental through the local custom. 	<ul style="list-style-type: none"> • Continuing the program to neighbor village
6.	Evu	<ul style="list-style-type: none"> • How to conserve water and the local custom in conservation • How to record the important tree species for water conservation. • Increase local knowledge in conservation of water 	<ul style="list-style-type: none"> • Extending the program to the action as a result of workshop.

The experiences of NGO/CBO as the executor program of NFP Facility in regional Maluku and North Maluku (period of year 2007-2008) are presented bellows.

NO.	INVOLVED NGO/CBO	EXPERIENCE	COMMENTS
1.	Titamae	<ul style="list-style-type: none"> • It was very hard to change the mind of farmer to the new innovation. • It was needed a patience in teaching the farmer to apply new technology. • Some disadvantage cultures are considered as restricted factors in the process of innovation. 	<ul style="list-style-type: none"> • NFP Facility must be continued the same program in a large scale. • Applied of agroforestry needs much cost and time, therefore the time period of program implementation and project costs should be increased.
2.	Uwen Study Group	<ul style="list-style-type: none"> • The village communities was interested to the help of the NFP program. • Through the NFP Facility, some programs of the village can be developed. • The program of NFP Facility was worked very well under the sub contract letter. 	<ul style="list-style-type: none"> • The NFP Facility should be extended their program to help the indigenous community in and surround the forest.
3.	Hualopu	<ul style="list-style-type: none"> • NFP Facility had solved some environmental problems of the villages in Nusalaut island. • The awareness and knowledge of the people on the forest conservation are improved. 	<ul style="list-style-type: none"> • The continuity of the NFP Facility programs on forest conservation is very important to the small island ecosystems.
4.	Toma Lestari	<ul style="list-style-type: none"> • The program was completed in paying under the sub contract letter. • The involved communities had learned the new method to planting the slope areas. • The farmers had learned how to solve problems and work in group. 	<ul style="list-style-type: none"> • The duration of the project activities must be considered more than a year especially for forest planting.
5.	Kewang Haruku	<ul style="list-style-type: none"> • Increasing the awareness of people on the environmental and forest conservation. • People learned on how to planting forest and to conserve their local endemic species. • The local custom on forest conservation had gradually improved in Haruku. 	<ul style="list-style-type: none"> • Forest conservation is the main issue for small islands, such as: Maluku and North Maluku.
6.	Inlulins	<ul style="list-style-type: none"> • It had been occurred a best sharing ideas between modern academic knowledge and local traditional knowledge on how to conserve forest for water supply in small islands. 	<ul style="list-style-type: none"> • The action plan of the workshop must be conducted. • The next program of NFP Facility must be considered the rehabilitation and conservation of small islands ecosystem.

