

# Contents

	<b>Page</b>
<b>Foreword</b> .....	iv
<b>Brief Information of the Project</b> .....	v
<b>I. INTRODUCTION</b> .....	1
Rationale .....	1
The Objectives and Intended Outputs .....	1
The Subject Matters .....	2
<b>II. THE TRAINING PROCESS</b> .....	2
The Training Method .....	2
The Training Process .....	2
<b>III. THE TRAINING EVALUATION</b> .....	3
The Outputs .....	3
The Planned Subsequent Actions .....	4
<b>APPENDICES</b> .....	6
1. List of Participants.....	6
2. Training Modules.....	7
3. Photos.....	93

## I. INTRODUCTION

### A. Rationale

Agricultural cultivation is not a new thing for farmers or peasants who are involved in ITTO project in TAHURA Sultan Thaha Syaifuddin, District of Batang Hari (or TAHURA Senami). They cultivate paddy, corn, rubber, oil palm, etc. They know how to cultivate crops in monoculture pattern and mixed cropping, as well as agroforestry pattern. They develop local agricultural knowledge. Nevertheless, according to the result of training need assessment, farmers or peasants who will join the ITTO project need knowledge and skills on forest restoration and rehabilitation, agroforestry, seed and seedling, nursery; bulian (*Eusideroxylon zwageri*), jelutung (*Dyospiros costulata*), and rattan cultivation, and plants protection.

Farmers (peasants) also need to develop and strengthen farmer organizations at group level, hamlet level, village level, as well as at wider level. Strong farmer organization is usually characterized by the function of an organization as media of learning together among its members. Through learning together farmer's knowledge will continuously enhanced and shared. Strong farmer organization has the capacity to solve problems that are difficult to be solved by the farmer himself or his family. Farmer usually meets some problems such as lack of capital, their agriculture product marketing is dominated by middle-men etc. These problems could be solved by a strong organization.

Training could be as media of sharing knowledge and experiences among farmers, between farmers, scientists, and agriculture/forestry extension workers. There are various knowledge and experiences that could be shared among them during and after training, so that their knowledge will be enhanced. Training could also be as media to establish mutual understanding among stakeholders of forest restoration, rehabilitation, and agroforestry development activities in TAHURA Sultan Thaha Syaifuddin.

### B. The Objectives and Intended Outputs

The objectives of this training on forest restoration and rehabilitation, and agroforestry development are as followed:

- (1) To enhance participant's knowledge and skills of techniques and management of forest restoration and rehabilitation, and agroforestry development;
- (2) To enhance participant's knowledge and skills of management of farmer organization in the context of ITTO project in the TAHURA ST. Syaifuddin;
- (3) To enhance participant understands on the objectives, activities, outputs, and outcomes of the ITTO project in TAHURA ST. Syaifuddin.

The intended outputs of this training are as followed:

- (1) Enhanced participant's knowledge and skills on techniques and management of forest restoration and rehabilitation, and agroforestry development;
- (2) Enhanced participant's knowledge and skills on management of farmer organization in the context of ITTO project in the TAHURA ST. Syaifuddin;
- (3) Enhanced participant understands on objectives, activities, outputs, and outcomes of the ITTO project in TAHURA ST. Syaifuddin.

## **C. The Subject Matters**

Farmers from villages around the TAHURA Senami want to enhance their knowledge and skills on forest (including TAHURA and protection forest) functions; forest restoration and rehabilitation, agroforestry development in the context of ITTO project in the TAHURA ST. Syaifuddin, seed production, nursery technique, land preparation technique, tree planting and caring, dry field agriculture, preparing high quality rubber and potential indigenous plant species (*Dyospiros costulata*, *durio zibetinus*, pinang); plant pest and diseases; forest protection, fertilizer and land fertile, preparing organic fertilizer.

Farmers want also to enhance their knowledge and skills of farmer organization management. This topic will be organized through two approaches, namely class-room training and "open-room" training or facilitating in their daily life activities and in naturalistic way. The three days training is focused on introduction to village institutions. Through facilitating process in the villages, capacities of village communities including farmer groups' management, village organization management, micro finance management, and others will be enhanced.

## **II. THE TRAINING PROCESS**

### **A. The Training Method**

#### **1). Duration and Venue**

This first training was hold in 4<sup>th</sup> – 6<sup>th</sup> May 2006 in Muara Bulian, downtown Batang Hari.

#### **2). Participants**

Participants of the training are (1) farmers who will be participating in the ITTO project, namely in forest restoration and rehabilitation and agroforestry development activities in Sridadi, Senami Baru, and Bungku villages; and (2) agriculture and forestry extension workers. The total number of participants is 40 , consists of 38 farmers, one agriculture extension worker, and one forestry extension worker. The List of participants was presented in Annexe 1.

#### **3). Method**

The training method was using the method of presentation, discussion, showing techniques, and field visit. Participants shared their knowledge and experiences actively. Facilitator of the training encouraged the participants to relax and enjoy.

### **B. The Training Process**

The process of the training was divided into three steps. Firstly, introduction of the participants and his/her expectation on the training. Secondly, knowledge and experience sharing between resource person and participants, and among participants. Thirdly, evaluation of the training and plan subsequent actions. The training process is managed by a facilitator. The training agenda adopted is presented in Table 1 and The Modules are shown in Annexe 2.

**Table 1. Training Agenda 4 – 6 May 2006**

<b>Time Schedule</b>	<b>Subject matter</b>	<b>Resource person</b>	<b>Facilitator</b>
<b>First Day, 4 May 2006</b>			
08.00 - 08.25	Registration		OC
08.25 -08.30	Introduction	Dr. Didik Suharjito	
08.30 – 08.45	Opening remarks	Head of Forest Rehabilitation Division	OC
08.45 – 09.45	<ul style="list-style-type: none"> <li>• Forest (TAHURA) Function</li> <li>• Forest Restoration and rehabilitation, and Agroforestry development</li> </ul>	Erwandi, S.Hut (Forestry Service, District of Batang Hari) Dr. Nurheni Wijayanto (IPB)	Ir. Budi Setiawan
09.45 – 10.00	Tea/coffee break		
10.00 – 12.00	<ul style="list-style-type: none"> <li>• Tree nursery technique</li> <li>• Land preparation and planting technique</li> </ul>	Dr. Sri Wilarso (IPB) Dr. Ulfah Y. Siregar (IPB)	Ir. Budi Setiawan
13.00 – 15.00	Forest tree maintenance technique	Dr. Sri Wilarso (IPB) Estate Technical Service, Batang Hari	Ir. Budi Setiawan
<b>Second Day, 5 May 2006</b>			
08.00 – 10.00	<ul style="list-style-type: none"> <li>• Dry field agriculture</li> <li>• High quality of seedling (rubber, potential indigenous species (Jelutung, durian and pinang))</li> </ul>	Dr. Hamzah (Univerisity of Jambi)  Agriculture Technical Service, Batang Hari  Estate Technical Service, Batang Hari	Ir. Budi Setiawan
10.15-12.00	<ul style="list-style-type: none"> <li>• Plant insect and diseases</li> <li>• Forest protection</li> </ul>	Dr. Nurfarikhah H. (IPB) Agriculture Technical Service, Batang Hari	Ir. Budi Setiawan
12.00 – 13.00	<b>Lunch</b>		
13.00 – 15.00	<ul style="list-style-type: none"> <li>• Land fertile and fertilizing</li> <li>• Preparing organic fertilizer</li> </ul>	Dr. Ulfah Y. Siregar (IPB) Agriculture Technical Service, Batang Hari	Ir. Budi Setiawan
15.00 – 17.00	<ul style="list-style-type: none"> <li>• Strengthening Village community institution</li> </ul>	Dr. Didik Suharjito	Ir. Budi Setiawan
<b>Third day, 6 May 2006</b>			
08.30-09.30	<ul style="list-style-type: none"> <li>• Preparing field visit</li> </ul>	Dr. Nurheni W	Ir. Budi Setiawan
09.30 – 14.00	<ul style="list-style-type: none"> <li>• Field visit to Senami Baru village and TAHURA</li> </ul>	Dr. Nurheni W, Agriculture Technical Service, Batang Hari Estate Technical Service, Batang Hari	Ir. Budi Setiawan

At the introduction session, Facilitator introduce himself and invite all participants to introduce his/her name and address. This process was intended to encourage

openness, togetherness, trust, and cooperation. During the main session, resource person presented his/her paper using visual display. Participant has the opportunity to ask and comment, and share his/her knowledge and experiences with the resource person as well as with other participants. During the field visit, the participants and resource persons discussed how to solve some problems faced in agriculture practice. The Training documentations were presented in Annexes 3.

### III. THE TRAINING EVALUATION

#### A. The Outputs

The Training participants expectation on forest condition and their role as the outcome of the training, as follows:

- 1). Forest Condition in the future:
  - TAHURA condition will be better;
  - TAHURA will be useful for communities living around the forest;
  - Continuation Forestry Community program;
- 2). Farmer (peasant) life condition:
  - To become successful farmer;
  - Enhanced knowledge and worldview for future;
  - Their needs could be met;
  - To be cooperative and collaborative;
- 3). ITTO project:
  - It will be going well, secure, and success;
  - It will not be rhetorical;
  - To be continuously enhanced rural household economy;
  - Local communities will be involved in the project.
- 4). Infrastructure improvement:
  - Improved road to villages (asphalted road)

At the end of session, the participant has the opportunity to evaluate the training process, on whether the training objectives and participant's expectation were achieved or not. Participants enthusiastically participate in the training; they put up questions, comments, and shared their knowledge and experiences. All participants gave comment by writing down that the training enhanced their knowledge of forestry, estate crops, and agriculture. Participants have also the opportunity to evaluate the training facilitator performance, subject matter, cooperation and class atmosphere, duration, and other facilities. Most participants (58.3 %) felt that the role of facilitator is very good. Apart of participants (36.1 %) felt that the subject matter is highly appropriate and fruitful, while 63.9 % stated that the subject matter is fair. Participants who felt a very good cooperation and class atmosphere are 47.2 %, while 52.8 % felt a good cooperation and class atmosphere. 91.7 % participants felt that the training duration is acceptable, while 8.3 % of participants suggested the training duration is to be longer.

The participants are willing to support forest restoration and rehabilitation, and agroforestry development activities of ITTO project.

## **B. The Planned Subsequent Actions**

The training participants formulated some activities to be carried out later. The participants from Senami Baru formulated the following activities:

- (1) Establish rubber estate with high quality seedling;
- (2) Establish nursery for forest restoration, rehabilitation and agroforestry;
- (3) Participate in training of preparing seedling;

The participants from Bungku formulated the following activities:

- (1) Developing farmers groups to be involved in managing TAHURA Senami;
- (2) Participate in some training such as agroforestry development;
- (3) Manage TAHURA Senami;
- (4) Building cooperation with community facilitator;

The participants from Sridadi formulated the following activities:

- (1) Establish Nursery for forest restoration, rehabilitation and agroforestry;
- (2) Protect TAHURA;
- (3) Report illegal loggers or encroachers to the authority.

## Annexe 1. Training List Participant

### Daftar Peserta Pelatihan Teknik dan Management Restorasi, Rehabilitasi dan Agroforestry

Muara Bulian 4 - 6 Mei 2006

No.	Nama	Asal
1	Joko	Senami
2	Sailin	Senami
3	Saipul	Senami
4	Giyon SH	Senami
5	Asep Saipul	Senami
6	Aan	Senami
7	Aban	Senami
8	M. Sabli	Senami
9	Suryadi	Senami
10	Yulnasri	Bungku
11	Ariyani/Kanang	Bungku
12	Erta/Jhohan	
13	Herlina/Saini	
14	Tini/najam	Bungku
15	Herman	Sridadi
16	A. Fauzi	Sridadi
17	Kolel	
18	Marhun	
19	M. Pranoto. S	Sridadi
20	Trinawan	
21	Nursidin	Bungku
22	M. Ali Sodikin	Bungku
23	Jamsa	Bungku
24	Mustopa	Bungku
25	Yaman	Bungku
26	Riyanto	Bungku
27	Suparno	Bungku
28	M. Saleh	Bungku
29	Bahari	Bungku
30	Zainal Abidin	Bungku
31	Sucipto	Sridadi
32	M. Zainiddin	Sridadi
33	Ponirin	Sridadi
34	Irzan	Dishut Batanghari
35	Mulyono	Penyuluh Perkebunan
36	Abunyani P	Senami baru
37	Trinawan	Sridadi
38	Adi	Sridadi
39	Arna	Bungku
40	Dedi	Bungku



**1**

**MODULE PELATIHAN  
RESTORASI DAN  
REHABILITASI HUTAN**



Oleh : Ulfah J. Siregar



**ITTO PROJECT  
PARTICIPATORY ESTABLISHMENT COLLABORATIVE  
SUSTAINABLE FOREST MANAGEMENT  
IN DUSUN ARO, JAMBI**

**Serial Number : PD 210/03 Rev. 3 (F)  
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## **Module 1. Restorasi dan Rehabilitasi Hutan**

### **Pendahuluan**

Saat ini tingkat kerusakan hutan di Indonesia telah mencapai angka yang sangat tinggi, yaitu sekitar 1,6 juta ha per tahun. Kerusakan ini disebabkan oleh berbagai hal, antara lain, adanya penebangan yang tidak terkontrol baik yang resmi maupun yang liar (*illegal logging*), kebakaran hutan, perambahan hutan, serta upaya untuk mengubah areal hutan menjadi areal pertanian atau pemukiman masyarakat setempat. Kerusakan hutan yang sangat mengkhawatirkan ini, akan menimbulkan masalah yang lebih besar bagi masyarakat jika tidak segera ditangani. Karena korban akibat kerusakan hutan tidak hanya masyarakat yang tinggal di sekitar hutan tetapi juga masyarakat lain, seperti daerah perkotaan, bahkan masyarakat internasional. Musibah yang telah terjadi akibat kerusakan hutan saat ini, diantaranya adalah banyaknya tanah longsor dan banjir bandang yang merenggut banyak jiwa, asap tebal yang mempengaruhi kesehatan manusia, dan iklim yang sangat tidak menentu, seperti musim kemarau yang semakin panjang, kemudian disusul dengan musim hujan yang tiba-tiba.

Hutan mempunyai peranan yang sangat penting bagi manusia dan lingkungan hidup. Hutan mempunyai banyak fungsi atau kegunaan, antara lain fungsi ekologis, fungsi ekonomi, dan fungsi sosial. Fungsi ekologis hutan diantaranya ialah menyimpan air hujan, untuk dialirkan melalui mata air sungai, menjadi tempat hidup dan berkembang berbagai jenis tumbuhan dan hewan. Selain itu memberikan kesejukan dan membersihkan udara dari gas yang merugikan atau polusi lainnya. Fungsi ekonomis hutan diantaranya ialah dapat menghasilkan bermacam jenis hasil hutan, misalnya kayu, rotan, getah serta hasil hutan non kayu lainnya, yang harga jualnya tinggi sehingga dapat menjadikannya sumber devisa negara. Fungsi sosial hutan diantaranya ialah menjadi tempat hidup dan bergantung masyarakat, terutama masyarakat sekitar hutan.

Mengingat pentingnya hutan bagi semua pihak, maka sudah seharusnya diupayakan kegiatan konservasi. Yaitu pelestarian dan pencegahan supaya hutan tidak mengalami kerusakan lebih lanjut, kemudian dilakukan kegiatan restorasi dan rehabilitasi, yaitu usaha untuk memperbaiki kondisi hutan yang telah rusak. Restorasi adalah upaya untuk memulihkan hutan yang telah rusak ke kondisi normal sebelumnya. Sedangkan rehabilitasi ialah upaya mengubah atau memperbaiki kondisi hutan atau lahan yang sudah sangat rusak menjadi lebih baik.

### **Jenis-Jenis Hutan**

Secara garis besar ITTO menggolongkan hutan menjadi 3 jenis, yaitu hutan alam primer atau perawan, hutan alam primer yang telah dimodifikasi atau dimanfaatkan, dan hutan tanaman. Hutan alam primer yaitu hutan yang belum pernah dirambah atau dimanfaatkan oleh manusia. Biasanya diperuntukkan sebagai areal konservasi. Sedangkan hutan alam primer yang telah dimodifikasi adalah Hutan alam primer yang telah dimodifikasi terbagi menjadi 2 macam secara garis besar, yaitu hutan alam yang dikelola (misalnya areal HPH), dan hutan alam yang rusak atau hutan sekunder. Lebih jauh lagi, hutan primer rusak dan hutan sekunder ini dibagi menjadi 3 kelas, yaitu hutan primer rusak, hutan sekunder dan lahan hutan yang sudah rusak. Sementara itu hutan tanaman dapat dibuat dengan jalan melakukan aforestasi, reforestasi, serta penanaman pengayaan.

## **Syarat Keberhasilan Upaya Restorasi dan Rehabilitasi**

Agar usaha restorasi dan rehabilitasi hutan yang rusak berhasil, ada beberapa syarat yang harus dipenuhi, yaitu:

1. Harus mendapatkan dukungan kuat dari seluruh pihak terkait (*stakeholder*), diantaranya ialah pemda, masyarakat lokal, dinas kehutanan, dan departemen kehutanan;
2. Harus berdasarkan proses partisipatif dari seluruh pihak terkait, baik dalam pembuatan rencana, pelaksanaan maupun pengawasan;
3. Hak dan kewajiban seluruh pihak terkait harus secara jelas dibicarakan, diputuskan, dan dilaksanakan.
4. Seluruh pihak terkait harus mendapatkan keuntungan dari hutan yang direstorasi dan direhabilitasi, berupa keuntungan ekologis, keuntungan sosial, dan keuntungan ekonomis;
5. Proses restorasi dan rehabilitasi harus menghasilkan perbaikan, baik perbaikan ekologi/ekosistem, perbaikan taraf hidup, perbaikan kesehatan, perbaikan ekonomi dan sebagainya

## **Prinsip dan Strategi Restorasi dan Rehabilitasi**

Setelah syarat tersebut di atas dipenuhi, maka ada beberapa prinsip dan strategi restorasi dan rehabilitasi lahan yang dapat dilakukan, diantaranya yang terpenting adalah:

1. Sebaiknya dilakukan analisis silvikultur serta ekologi yang tepat pada area yang akan direstorasi dan direhabilitasi sebelum kegiatan dimulai.
2. Upaya restorasi dan rehabilitasi harus mempertimbangkan nilai budaya setempat, kearifan lokal, serta keinginan dan kepentingan ekonomis setempat.
3. Upaya restorasi dan rehabilitasi harus mempertimbangkan untuk kepentingan menjaga serta mengembalikan keanekaragaman hayati yang ada.
4. Upaya restorasi dan rehabilitasi sedapat mungkin mendekati atau menyerupai proses suksesi alamiah dalam hutan, dan menggunakan tindakan silvikultur yang minimal.
5. Harus diidentifikasi jenis-jenis setempat yang merupakan jenis-jenis kunci (penting), dengan mengontrol jenis-jenis yang bersifat invasif dan agresif seperti gulma,.
6. Jenis yang bersifat multi-guna (*multi purpose*) dapat digunakan sebagai katalisator pertumbuhan jenis kunci yang sesuai dan dipilih untuk ditanam.
7. Pengelolaan tegakan hutan yang terbentuk hendaknya memiliki tujuan multi-guna, yaitu selain untuk menjaga keanekaragaman hayati, juga mempertimbangkan keuntungan ekonomis-sosial.
8. Kondisi ekologi, seperti kesuburan tanah haruslah diperbaiki.
9. Beberapa hal yang dapat menyebabkan kerusakan pertanaman atau hutan harus dicegah, seperti kebakaran, adanya hama serta penyakit.

## **Penutup**

Selain usaha penanaman sebagai kegiatan pokok restorasi dan rehabilitasi hutan primer yang rusak ataupun hutan sekunder, maka upaya lanjutan yang tidak kalah pentingnya adalah monitoring dan pemeliharaan. Kemudian disusul dengan pengelolaan yang tepat. Pertanaman haruslah selalu dimonitor dan diawasi. Pemeliharaan sangat penting terutama dalam masa awal pertanaman, karena tanaman muda biasanya masih lemah sehingga mudah mati di lapangan. Selanjutnya

bila tegakan telah tumbuh dan mulai terbentuk hutan yang baru, maka pengelolaan yang telah disepakati haruslah dilaksanakan dengan penuh tanggung jawab. Sistem pengelolaan yang disarankan adalah bersifat adaptif, yaitu selalu dapat menyesuaikan dengan perubahan, baik itu perubahan zaman, ataupun kepentingan dan tren (kecenderungan). Dengan demikian maka upaya restorasi dan rehabilitasi akan berhasil dengan baik.

#### **DAFTAR PUSTAKA**

**ITTO, 2002. ITTO guidelines for the restoration, management and rehabilitation of degraded and secondary tropical forest. ITTO Policy Development Series 13. ITTO Yokohama, Japan.**