


***Lampiran-1***  
***Lingkup Kerja Studi (S/W)***  
***dan***  
***Notulen Rapat mengenai Lingkup Kerja***

SCOPE OF WORK  
FOR  
THE STUDY  
ON  
CRITICAL LAND AND PROTECTION FOREST REHABILITATION  
AT TONDANO WATERSHED  
IN  
THE REPUBLIC OF INDONESIA

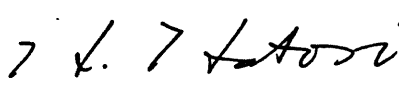
AGREED UPON BETWEEN  
DIRECTORATE GENERAL OF LAND REHABILITATION AND SOCIAL FORESTRY,  
MINISTRY OF FORESTRY AND ESTATE CROPS  
AND  
JAPAN INTERNATIONAL COOPERATION AGENCY

Jakarta, September 20, 1999



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Mr. Ir. Hoesodo Sudarisman  
Secretary,  
Directorate General of Land Rehabilitation  
and Social Forestry,  
Ministry of Forestry and Estate Crops,  
the Republic of INDONESIA



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Mr. Hiroyuki HATORI  
Leader,  
Preparatory Study Team  
Japan International Cooperation  
Agency,  
JAPAN

## **I. INTRODUCTION**

In response to the request of the Government of the Republic of Indonesia (hereinafter referred to as "the Government of Indonesia"), the Government of Japan has decided to conduct the Study on Critical Land and Protection Forest Rehabilitation at Tondano Watershed in the Republic of Indonesia (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of the Government of Indonesia.

The present document sets forth the scope of work with regard to the Study.

## **II. OBJECTIVES OF THE STUDY**

The objectives of the Study are :

1. To develop a land-use plan in the Study Area;
2. To develop a critical land and protection forest rehabilitation plan in the Intensive Area; and
3. To transfer relevant technology to the counterpart personnel through on the job training in the course of the Study.

## **III. SCOPE OF THE STUDY**

### **1. Study Area**

The Study area shall cover the Tondano Watershed, North Sulawesi Province, with a total area of approximately 54,000 hectares as reflected in Annex I.

### **2. Intensive Area**

The Intensive Area will be decided based on the premised criteria and the result of Phase I.

### **3. Outline of the Study**

The Study will consist of the following two phases and will cover the following items.

#### Phase I

- (1) To take monochromatic aerial photograph at scale 1/20,000 of the Study Area with an area of approximately 54,000 hectares.
- (2) To digitize existing topographic map at scale 1/50,000 of the Study Area.
- (3) To carry out topographic survey for Tondano Lake Catchment Area.

- (4) To prepare a topographic map for Tondano Lake Catchment Area (scale : 1/10,000).
- (5) To collect and analyze the relevant existing data and information through field survey in the Study Area on the followings;
- a) natural conditions, including;
    - topography;
    - climate and hydrology;
    - soil and geology;
    - land-use and vegetation;
    - sedimentation;
    - flood; and
    - others
  - b) forestry and agriculture conditions, including;
    - protection forest management;
    - reforestation / greening;
    - agroforestry; and
    - others
- (6) To collect and analyze the relevant existing data and information in the Study Area on socio-economic conditions, including;
- traditional social structure;
  - customary law;
  - decentralization and local governmental administration;
  - role of Tondano Lake; and
  - others
- (7) To prepare a land-use plan for the Study Area which includes the following;
- assessment of existing spatial and land-use plan for North Sulawesi Province;
  - guideline of land-use management by zone;
  - recommendation for existing spatial plan for North Sulawesi Province; and
  - others
- (8) To prepare a land-use plan map at scale of 1/50,000 for the Study Area.
- (9) To determine the Intensive Area for the Study in Phase II.

## Phase II

- (1) To collect and analyze the relevant data and information through field survey on the following items in the Intensive Area.
- (a) watershed management, including;
    - erosion control
  - (b) forestry and agricultural conditions, including;
    - protection forest management;
    - reforestation;
    - agroforestry;
    - farming system;

- forestry / agricultural marketing;
- Non Timber Forest Products (NTFPs); and
- others

- (2) To conduct detailed socio-economic survey on the relevant communities and analyze the results of survey, including;
- community participation;
  - local farmer groups;
  - land tenure;
  - gender issue; and
  - others
- (3) To prepare a critical land and protection forest rehabilitation plan for the Intensive Area which includes the followings;
- (a) erosion control (check dam, terracing, etc.);
  - (b) protection forest management;
  - (c) reforestation / greening;
  - (d) agroforestry system;
  - (e) forestry / agricultural marketing;
  - (f) infrastructure;
  - (g) extension and training;
  - (h) community participation;
  - (i) institutional development;
  - (j) implementation plan; and
  - (k) others
- (4) To assess the critical land and protection forest rehabilitation plan for the Intensive Area;
- (a) environmental impact assessment (AMDAL);
  - (b) socio-economic analysis;
  - (c) financial analysis; and
  - (d) institutional analysis
- (5) To prepare a critical land and protection forest rehabilitation plan map at scale of 1/10,000 for the Intensive Area.

#### **IV. WORK SCHEDULE**

The Study will be carried out in accordance with the attached tentative work schedule. (Annex II).

#### **V. REPORTS**

JICA shall prepare and submit the following reports in English to the Government of Indonesia.

##### **1. Inception report**

Forty (40) copies at the beginning of the first field work.

2. Progress report  
Forty (40) copies at the end of the second field work.
3. Interim report  
Forty (40) copies at the beginning of the third field work.
4. Draft final report  
Forty (40) copies at the later stage of phase II of the Study. The Government of Indonesia will provide JICA with its comments on the draft final report within one (1) month after receipt of the draft final report.
5. Final report  
Fifty (50) copies within two (2) months after receipt of the comments from the Government of Indonesia on the draft final report.

In addition to the above reports, the followings are to be submitted to the Government of Indonesia with relevant reports.

- (1) Monochromatic aerial photographs in the Study Area (scale : 1/20,000, 3 sets)
  - (a) negative films; and
  - (b) contact prints
- (2) 3 sets of digital data of existing topographic map for the Study Area (scale : 1/50,000)
- (3) Maps in the form of original (1 set), second original (3 sets), blue print (3 sets) and digital data (3 sets);
  - (a) Study Area
    - a) land-use and vegetation map (scale : 1/50,000); and
    - b) land-use plan map (scale : 1/50,000)
  - (b) Tondano Lake Catchment Area
    - a) topographic map (scale : 1/10,000)
  - (c) Intensive Area
    - a) critical land and protection forest rehabilitation plan map (scale : 1/10,000)

## **VI. UNDERTAKING OF THE GOVERNMENT OF INDONESIA**

1. In order to facilitate the smooth conduct of the Study, the Government of Indonesia shall take necessary measures;
  - (1) To secure the safety of the Japanese Study Team,
  - (2) To permit the members of the Japanese Study Team to enter, leave and sojourn in Indonesia for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees,
  - (3) To exempt the members of the Japanese Study Team from taxes, duties and other charges on equipment, machinery and other materials brought into Indonesia for the conduct of the Study,

- (4) To exempt the members of the Japanese Study Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese Study Team for their services in connection with the implementation of the Study,
  - (5) To provide necessary facilities to the Japanese Study Team for remittance as well as utilization of the funds introduced into Indonesia from Japan in connection with the implementation of the Study,
  - (6) To secure permission for entry into private properties or restricted areas for the implementation of the Study,
  - (7) To secure permission for the Japanese Study Team to take all data and documents ( including photographs and maps ) related to the Study out of Indonesia to Japan; and
  - (8) To provide medical services as needed. Its expenses will be chargeable on the members of the Japanese Study Team.
2. The Government of Indonesia shall bear claims, if any arise, against members of the Japanese Study Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese Study Team.
  3. Directorate General of Land Rehabilitation and Social Forestry shall act as counterpart agency to the Japanese Study Team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.
  4. Directorate General of Land Rehabilitation and Social Forestry shall, at its own expense, provide the Japanese Study Team with the following, in cooperation with other organizations concerned;
    - (1) available data and information related to the Study;
    - (2) counterpart personnel;
    - (3) suitable office spaces with necessary equipment in Manado and Minahasa; and
    - (4) credentials or identification cards.

## **VII. UNDERTAKING OF JICA**

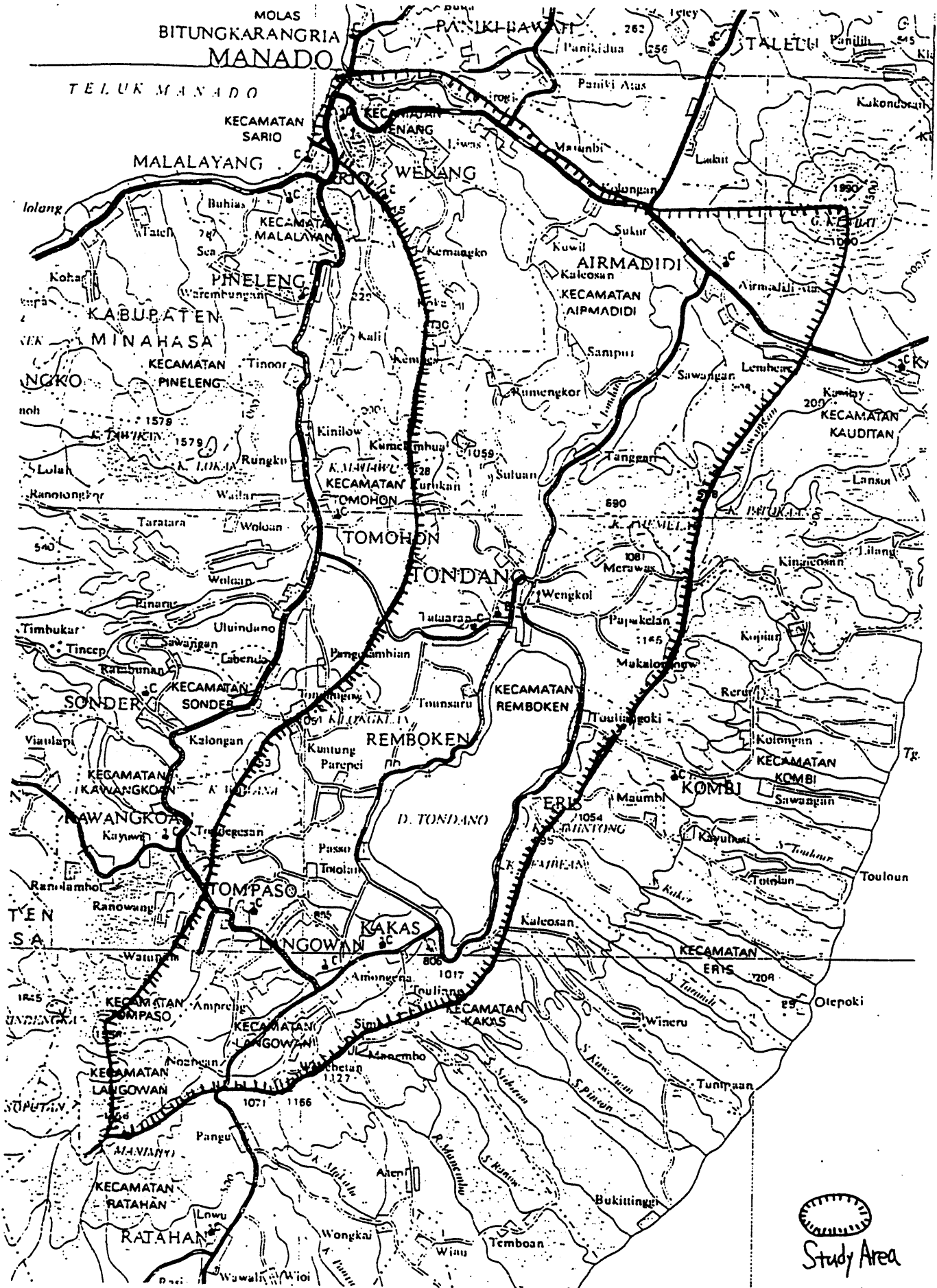
For the implementation of the Study, JICA shall take the following measures;

- (1) To dispatch, at its own expense, the Japanese Study Teams to Indonesia, and
- (2) To pursue technology transfer to the Indonesian counterpart personnel in the course of the Study.

## VIII. CONSULTATION

JICA and Directorate General of Land Rehabilitation and Social Forestry shall consult with each other in respect of any matter that may arise from or in connection with the Study.





### TENTATIVE SCHEDULE

	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	
Months	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	
The Study in Indonesia	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
The Study in Japan	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Reports	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Phase	Phase I												Phase II										
IC/R													DF/R										F/R

- (Remarks) IC/R : Inception report  
 PR/R : Progress report  
 IT/R : Interim report  
 DF/R : Draft final report  
 F/R : Final report

MINUTES OF MEETING  
ON  
SCOPE OF WORK  
FOR  
THE STUDY  
ON  
CRITICAL LAND AND PROTECTION FOREST REHABILITATION  
AT TONDANO WATERSHED  
IN  
THE REPUBLIC OF INDONESIA

The Preparatory Study Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") headed by Mr. Hiroyuki HATORI visited the Republic of Indonesia from September 7 to 21, 1999 for the purpose of discussing and confirming the Scope of Work for the Study on Critical Land and Protection Forest Rehabilitation at Tondano Watershed in the Republic of Indonesia (hereinafter referred to as "the Study").

The Team had a series of discussions with officials of Directorate General of Land Rehabilitation and Social Forestry (hereinafter referred to as "DGLRSF"), Ministry of Forestry and Estate Crops and other relevant organizations on the Scope of Work for the Study. The list of participants in the meeting is attached as Annex.

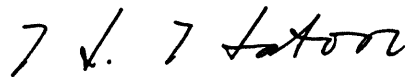
As a result of the discussions, DGLRSF and the Team agreed upon the Scope of Work for the Study.

The main issues discussed by the both sides in relation to the Scope of Work for the Study are shown in the documents attached hereto.

Jakarta, September 20, 1999



Mr. Ir. Hoesodo Sudarisman  
Secretary,  
Directorate General of Land Rehabilitation  
and Social Forestry,  
Ministry of Forestry and Estate Crops,  
the Republic of INDONESIA



Mr. Hiroyuki HATORI  
Leader,  
Preparatory Study Team  
Japan International Cooperation  
Agency,  
JAPAN

### **1. Working Committee**

For the smooth and effective conduct of the Study, it was mutually agreed to establish a Working Committee which shall be comprised of relevant organizations worked in the Study Area. Basically, the Committee will meet each time when the Japanese Study Team explains the reports and/or if necessity arises. The first Committee will be held on the arrival of the Japanese Study Team.

Members of the Committee shall be comprised heads of the following institutions;

- 1) Development Planning Agency for North Sulawesi Province (BAPPEDA I)-chairman;
- 2) Regional Forestry Office for North Sulawesi Province (KANWIL)-co-chairman;
- 3) Center of Land Rehabilitation and Soil Conservation (BRLKT)-secretary;
- 4) Development Planning Agency for Minahasa District (BAPPEDA II);
- 5) Provincial Forestry Service for North Sulawesi Province (Dinas Kehutanan I);
- 6) Forestry Service for Minahasa District (Dinas Kehutanan II);
- 7) Provincial Agricultural Service for North Sulawesi Province (Dinas Pertanian I);
- 8) Provincial Public Work Service for North Sulawesi Province (Dinas Perkerjaan Umum I);
- 9) Provincial Environmental Agency for North Sulawesi Province (BAPPEDALDA I);
- 10) Provincial Estate Service for North Sulawesi Province (Dinas Purkubunan I);
- 11) Provincial Fisheries Service for North Sulawesi Province (Dinas Perikanan I); and
- 12) others

### **2. Counterpart personnel**

DGLRSF promised to assign the counterpart personnel in the following areas;

- 1) forest management;
- 2) agroforestry;
- 3) watershed management;
- 4) community participation; and
- 5) socio-economy

### **3. Criteria for the Target area**

The Target Area will be decided in accordance with the following criteria;

- 1) suitable size and contiguousness of the area;
- 2) steep topographic condition;
- 3) severe erosion area;
- 4) possibility of positive community participation; and
- 5) others

### **4. Existing GIS**

DGLRSF promised to maintain suitable condition of existing GIS of BRLKT in order that BRLKT could utilize digital data developed in the Study for the purpose of Tondano Watershed management.

### **5. Taking aerial photographs**

DGLRSF promised to take necessary permission from the authorities concerned for taking aerial photographs of the Study Area.

**6. Taking out topographic maps to Japan**

DGLRSF promised to take necessary measures and arrangements to take out topographic maps to Japan for developing thematic maps such as land-use and vegetation map, land-use plan and critical land and protection forest rehabilitation plan map.

**7. Opening the final report to the public**

Both sides agreed that the final report would be open to the public.

**8. Training of counterpart personnel**

DGLRSF requested that Indonesian counterpart personnel would take advantage of training in Japan to promote an effective technology transfer. The Team promised to convey the request to JICA headquarters.

**9. Technology transfer seminar**

Both sides agreed that the Study should include a technology transfer seminar to disseminate the results of the Study at the stage of explanation of the draft final report. The seminar is to be jointly organized by both sides.

**10. Realization of the plan**

Both sides recognized the importance of realization of the Critical land and protection forest rehabilitation plan, and agreed to consider a method of its implementation.

LIST OF PARTICIPANTS

1. Indonesian side

1) Directorate General of Land Rehabilitation and Social Forestry, Ministry of Forestry and Estate Crops

Mr. Ir. Harsono	Director General of Land Rehabilitation and Social Forestry
Mr. Ir. Hoesodo Sudarisman	Secretary for Directorate General of Land Rehabilitation and Social Forestry
Mr. Ir. Asep Suwarna, Msc.	Head of Evaluation and Reporting Division
Dr. Suhardijono, Msc.	Head of Technical Cooperation Sub-division

2) Bureau of Foreign Cooperation, Ministry of Forestry and Estate Crops

Dr. Ir. Untung Iskandar S.	Head of Bureau of Foreign Cooperation
Mr. Yuichi SATO	JICA Expert

2. Japanese side

1) Preparatory Study Team

Mr. Hiroyuki HATORI	Leader
Mr. Kazuo FUJISHIRO	Member
Mr. Kokichi KOGURE	Member
Mr. Jun TOTSUKAWA	Member

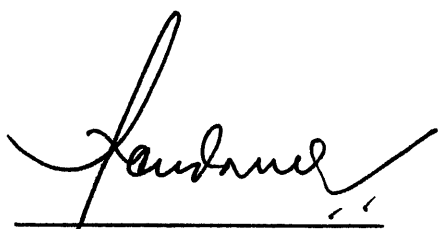
## ***Lampiran-2***

***Notulen Rapat mengenai Laporan Pendahuluan  
dari Studi Rehabilitasi Hutan Lindung  
dan Lahan Kritis di DAS Tondano***

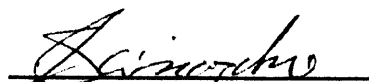
MINUTES OF MEETING  
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The JICA Study Team arrived in Indonesia on February 29, 2000, for commencement of the 1st field work in Phase I of the Study on Critical Land and Protection Forest Rehabilitation at Tondano Watershed (hereinafter referred to as "the Study"), and submitted forty (40) copies of the Inception Report to Directorate General of Land Rehabilitation and Social Forestry (hereinafter referred to as "DGLRSF"), in accordance with the Scope of Work for the Study signed between DGLRSF and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on September 20, 1999.

Meetings on the Report were hold twice, namely with officials of DGLRSF in Jakarta on March 2, 2000 and the Working Committee in Manado on March 4, 2000. In the meetings, the JICA Study Team explained the contents of the Report and further highlighted the outline and basic approach of the Study. Thereafter, a series of discussions was made among them. As a result of the discussions, in principle the Report was agreed by both sides. The main issues discussed by the both sides and the list of participants are shown in ANNEXES attached hereto.



Mr. Bambang Hendryo  
Head of North Sulawesi Regional Forestry Office  
Date: *March 6, 2000*



Mr. Hitoshi Shimazaki  
Leader of JICA Study Team  
Date: *March 6, 2000*



for Mr. Dodi Supriadi  
Secretary of Directorate General of  
Land Rehabilitation and Social Forestry  
Date: *March 9, 2000*



Mr. Hiroyuki Hatori  
Leader of JICA Advisory Team  
Date: *6 March 2000*



**Main Issues Discussed on the Inception Report at the Meetings in Jakarta and Manado**

**1. Watershed Management and Planning Mechanism**

- (1) The Study shall be referred to the existing official Watershed Management and Planning Mechanism.
- (2) The existing official watershed management and planning mechanism will be reviewed, especially for improvement of effectiveness of the mechanism.

**2. Technology Transfer**

- (1) Technology transfer should be implemented through On-the-Job Training and Workshop (s), so that Indonesian counterpart personnel could extend their technology/knowledge to extension workers and farmers/local communities concerned.
- (2) Technology transfer seminar will be held in Manado, to give opportunities to all the counterpart personnel and other staff involved in the Study to take part in the seminar,.

**3. Cost Estimate**

- (1) Standard cost estimate should be applied for all the proposed activities in the feasibility study in Phase II.

**4. Development Plan of Agroforestry**

- (1) In preparing the development plan of agroforestry, local techniques and knowledge and expertise should be taken into consideration, particularly to heighten the effectiveness and its suitability to the socio-economic condition of the community.

**5. Zoning System**

- (1) Zoning system shall be developed by referring to the Law No.24 Year 1992 regarding Spatial Planning.

**6. Close Communication with Relevant Agencies/Organizations**

- (1) The Study shall be executed in close cooperation with all agencies involved in Tondano and Tomohon, and also in regular contact with the Minahasa District government since main stakeholders are located in this District.
- (2) Leaders of Sub-Districts and Villages involved in the Study should be well informed and contacted because the project activities would be executed with the initiatives of the local communities, which is commonly called "Community Resources Based Management Approach".
- (3) The participatory approach at the planning stage shall be adopted in close contact with District Forestry and Agriculture Offices in Tondano, especially for the extension workers aiming to realize the development plan through their activities.

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## **7. Working Committee**

- (1) Members from University of Sam Ratulangi (Sociologist, Anthropologist, etc.), local NGOs and District Agriculture Office at Tondano should be added to the members of the Working Committee as mentioned in the Minutes of Meeting on Scope of Work for the Study signed September 20, 1999.
- (2) The 2nd Meeting of Working Committee will be held in the 3rd week of May 2000, following the discussion on the Progress Report in Jakarta.

## **8. RRA Survey**

- (1) RRA survey will be carried out on the basis of sub-contract with local consultant or NGO.

## **9. Office for the JICA Study Team**

- (1) The Sub-BRLKT office in Tomohon was provided for the JICA Study Team. BRLKT should provide a fax machine and a security guard for the JICA Study Team as early as possible.

**List of Participants**

**1. Indonesian Side**

**(1) Ministry of Forestry and Estate Crops**

- |                                    |  |
|------------------------------------|--|
| (a) Ir. Yaman Mulyana              | Director General, DGLRSF                   |
| (b) Dr.I.Nyoman Yuliarsana, M.Agr. | Director, DGLRSF                           |
| (c) Mr.Suhardijono Ph.D            | Secretariat, DGLRSF                        |
| (d) Mr.Rusdiyanto                  | Division Head, DGLRSF                      |
| (e) Mr.Hadi S.Pasaribu Ph.D        | Division Head, DGLRSF                      |
| (f) Mr.F.X.Mukidjo                 | Staff, DGLRSF                              |
| (g) Mr.Yudi Sutrismo               | Staff, DGLRSF                              |
| (h) Mr.M.Nasrun                    | Staff, DGLRSF                              |
| (i) Ms.Erni Mayana                 | Staff, DGLRSF                              |
| (j) Mr.Yuichi Sato                 | JICA Expert, Bureau of Foreign Cooperation |

**(2) Working Committee**

- |                              |  |
|------------------------------|--|
| (a) Ir. Bambang Hendryo      | Head, KANWIL                                       |
| (b) Mr.Djunaidi.             | Program Division Head, KANWIL                      |
| (c) Mr.Komar                 | Head, BRLKT  |
| (d) Mr.Agustinus La'lang     | Head, BIPHUT                                       |
| (e) Mr.David Allorerung Ph.D | Head, BALITKA                                      |
| (f) Ms.B.Puspita Devi        | Staff, BAPPEDA                                     |
| (g) Mr.J.E.Mala              | Staff, KANWIL                                      |
| (h) Mr.J.I.Baskoro           | Staff, BRLKT                                       |
| (i) Mr.O.M.Pontoh            | Staff, BAPEDALDA                                   |
| (j) Mr.O.Lingkubi            | Program Division Head, DINAS KEHUTANAN<br>PROVINCE |
| (k) Mr.E.Wonor               | Staff, DINAS KEHUTANAN MINAHASA                    |
| (l) Mr.N.Liow                | Staff, DINAS PERKEBUNAN                            |
| (m) Mr.H.Litow               | Staff, KPSA/LSM                                    |
| (n) Mr.A.Umboh               | NGO WANUATA WAYA                                   |
| (o) Mr.Isak Dolim            | Staff, BRLKT                                       |
| (p) Mr.F.Lumanauw            | Staff, BRLKT                                       |
| (q) Mr.D.Kaligis             | Staff, BRLKT                                       |
| (r) Mr.Donny Pangemanan      | Staff, BRLKT                                       |
| (o) Mr.Arifin A.Mohune       | Staff, BRLKT                                       |
| (p) Mr.S.Thayeb              | Staff, BRLKT                                       |
| (q) Mr.J.Sigarlaki           | Staff, BRLKT                                       |
| (r) Mr.Usman Adam            | Staff, BRLKT                                       |

## **2. Japanese Side**

### **(1) JICA Study Team**

- |                                  |               |
|----------------------------------|---------------|
| <b>(a) Mr. Hitoshi Shimazaki</b> | <b>Leader</b> |
| <b>(b) Mr. Isao Sakai</b>        | <b>Staff</b>  |
| <b>(c) Mr. Genshichi Wada</b>    | <b>Staff</b>  |
| <b>(d) Mr. Yoichi Kishi</b>      | <b>Staff</b>  |

### **(2) JICA Advisory Team**

- |                                |               |
|--------------------------------|---------------|
| <b>(a) Mr. Hiroyuki Hatori</b> | <b>Leader</b> |
| <b>(b) Mr. Kazuo Fujishiro</b> | <b>Staff</b>  |