

## 付 属 資 料

資料 1 S / W

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資料 3 インドネシア国新森林法 ( Draft )

資料 4 インドネシアで安全に暮らすために

資料 5 収集文献リスト

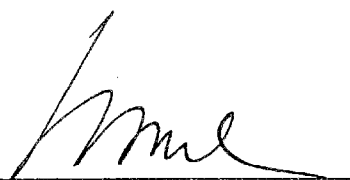
資料 6 収集資料リスト

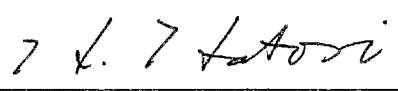


SCOPE OF WORK  
FOR  
THE STUDY  
ON  
CRITICAL LAND AND PROTECTION FOREST REHABILITATION  
AT TONDANO WATERSHED  
IN  
THE REPUBLIC OF INDONESIA

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

  
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

## 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 / regreening;
    - 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;

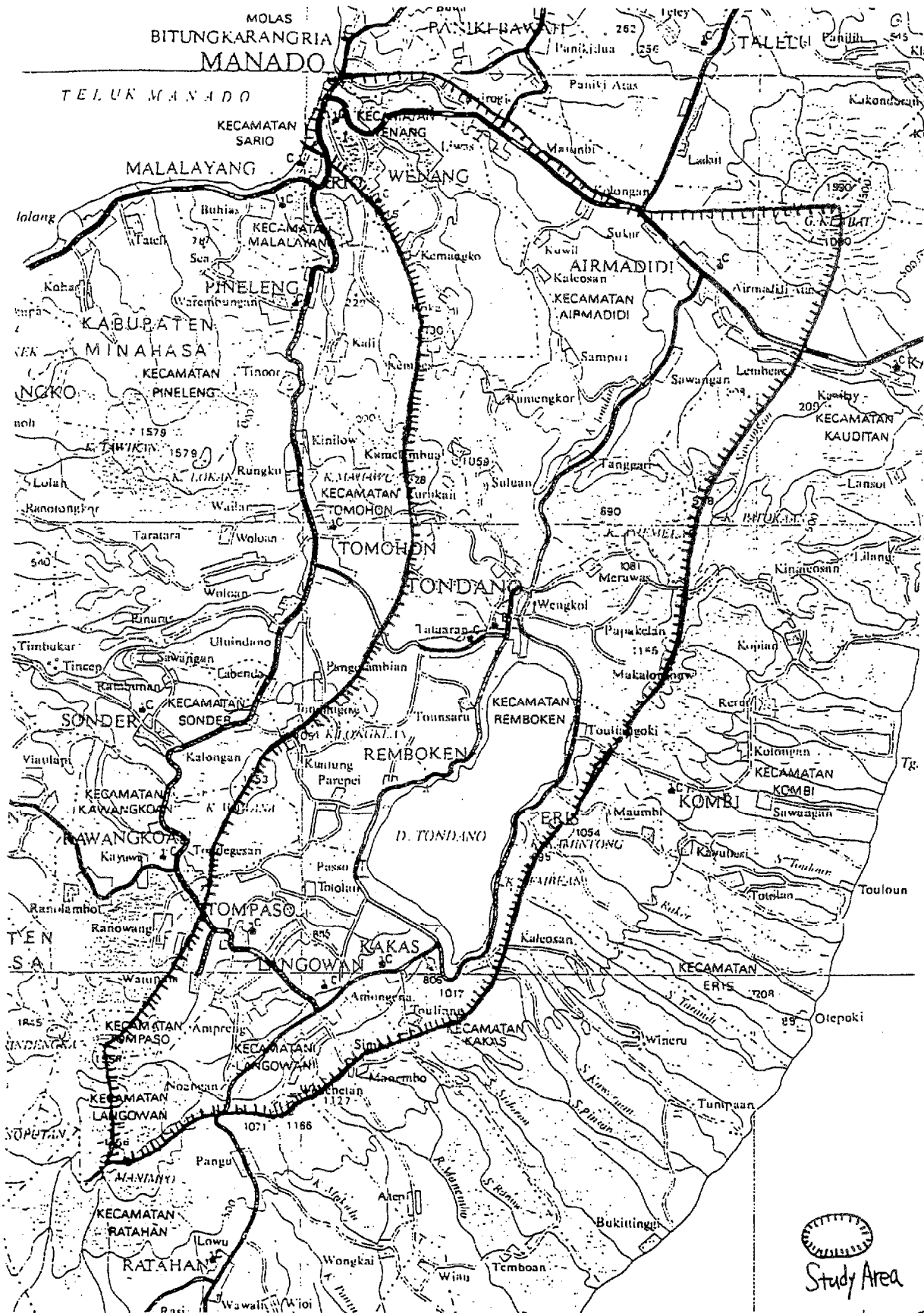
- (1) To dispatch, at its own expense, the Japanese Study Teams to Indonesia, and
- (2) To pursue technology transfer to the Indonesian counterpart personnel in the course of the Study.



## 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.

↓ (2)



### TENTATIVE SCHEDULE

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	△ IC/R					△ PR/R		△ IT/R								△ DF/R					△ F/R	
Phase	← Phase I										Phase II →											

- (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").

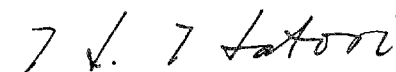
The Team had a series of discussions with officials of Directorate General of Land Rehabilitation and Social Forestry (hereinafter referred to as "DGLRSF"), Ministry of Forestry and Estate Crops and other relevant organizations on the Scope of Work for the Study. The list of participants in the meeting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