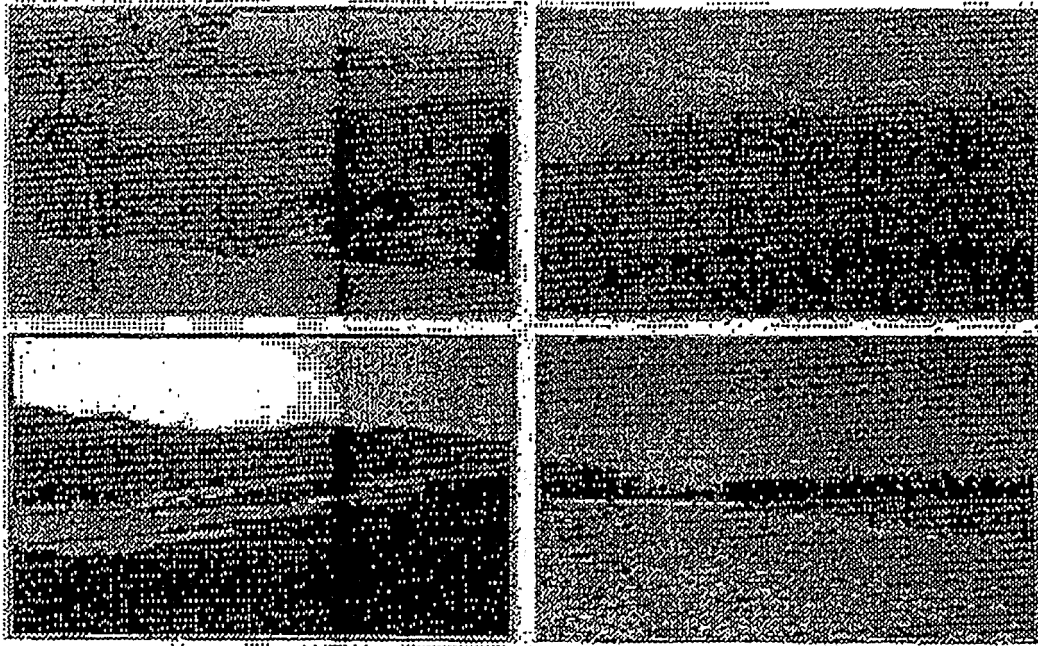


**COMMUNITY – BASED WATERSHED MANAGEMENT STUDY
(Comoro, Laclo, Dilor and Clere Watersheds)**



Project proposal prepared by

**Reforestation and Forest Rehabilitation Services
Directorate of Forestry and Water Resources
MINISTRY OF AGRICULTURE FORESTRY AND FISHERIES
Democratic Republic of Timor – Leste**

Submitted for funding by

Japan's Development Study Program

February 2004

APPLICATION FOR JAPAN'S DEVELOPMENT STUDY PROGRAM

Date of Entry: February 2004

Applicant: Democratic Republic of Timor - Leste

1. Project Digest

(1) Project Title: **Community – Based Watershed Management Study**

(2) Locations: Comoro Watershed (Dili and Aileu District, East Timor)
Laclo Watershed (Manatuto District, East Timor)
Dilor Watershed (Viqueque District, East Timor)
Clere Watershed (Manufahi District, East Timor)

(3) Implementing Agency: Department of Forestry and Water Resources
Ministry of Agriculture Forestry and Fisheries
(MAFF – DFWR)

Number of Staff of the Agency: National staff on: Reforestation..... 2 staff
Agroforestry..... 1 staff
Watershed..... 1 staff
District Forestry Staff.....13 staff

Budget allocated to the Agency: US\$ 75,000 / year

(4) Justification of the Project

Forest and Watershed Condition in Timor Leste:

The forest area of Timor – Leste is equivalent to 58% of the total land area. In spite of this significant percentage, the productivity of the forest in the country remains meager compare to the productivity of the forest areas in other countries in the region like Malaysia and Indonesia. The condition of most forest areas is alarming brought about by various factors such as forest fire, fuelwood gathering, indiscriminate cutting of timber and shifting cultivation. Because of these factors, deforestation in the country has accelerated to the maximum rate of 1.1% of the total forest area per year, a rate that is 4 times higher than the global average.

In addition to the significant forest areas, Timor Leste has also significant watershed areas. Based on the survey conducted by the Department of Forestry and Water Resources of the Ministry of Agriculture Forestry and Fisheries (MAFF – DFWR), the country has a total of 27 watershed areas covering a total area of about 110,620 hectares. The most significant of these watersheds in terms of area are Loes Watershed covering an area of 19,190 hectares and Laclo Watershed covering an

area of 13,660 hectares. All watershed areas consist of more than 100 river channels with the total length of about 1,159 kilometers. In addition to watersheds, the country has also fresh water lakes. The largest of which can be found in Lautem District (Ira Lalaro Lake) with the total area of approximately 2,200 hectares. The rest are small lakes, which can be found throughout the southern coast.

One of the most affected forest ecosystems in the country by deforestation is watershed. Due to the above-mentioned causal factors, majority of the watersheds in the country are in critical condition. Most watersheds are devoid of forest vegetations. The absence of enough vegetation, percentage slope of more than 40%, rainfall amount of as high as 2,500 – 3,000 mm/year in mountainous area and high intensity of human activities have resulted to excessive amount of soil erosion in these areas. This problem has resulted to the sedimentation of river channels, reduction on the quantity and quality of water and flashflood during peak rainy season. Based on the available data, only eight (8) of the river channels within the major watersheds have permanent courses of water. Some has available water below the pile of sediments and the rest dries up in dry season. The Irrigation Division of MAFF has estimated that around 279 hectares of rice land in 7 Districts are annually affected by flashfloods resulting to opportunity annual loss of paddy production of about US\$ 149,000.

Timor – Leste's policy on forestry and watershed:

Under the new government structure, the management of watershed areas is under MAFF – DFWR. Based on the Department's draft policy on forestry and watershed management, priority is given to the development of the country's watershed areas. The draft policy aims to promote the sustainable management of forest and watershed resources in the country to maintain ecological balance conducive for food production, generate rural employment in management activities, supply the domestic needs of the country for forest products and contribute significantly in the overall economic development of the country. Among the policy and strategies for watershed management outlined includes as follows:

- a. Conduct studies in all major watershed areas to determine their current status including the current activities undertaken by communities within the area;
- b. Prioritize the reforestation of critical watershed areas supporting major irrigations using tree species that has the capacity to regulate surface run – off and tree species that could improve the quantity and quality of water for irrigation and domestic use;
- c. Develop a long-term development plan for major watershed areas supporting major irrigation schemes and urban water supply system together with relevant Government agencies such as Irrigation Division of MAFF, Water and Sanitation Division of the Ministry of Public Works and Transport; District Administration; Local Leaders and Community members;

- d. Encourage community participation in the management of catchment areas in major watersheds by organizing and building their capacity; by assisting them to develop catchment management plan that indicates areas for protection, rehabilitation, grazing and farming and by providing them some inputs and technical assistance through relevant MAFF Divisions for them to effectively implement the plan; and
- e. Develop regulations for the sustainable management of watershed areas.

Problems to be solved in watershed sector:

- a. Deforestation in watershed areas
- b. Poor economic condition of the communities living within and near the watershed areas
- c. Shifting cultivation in watershed areas

Outline of Activities:

Phase I. Collection of Watershed Data and Development of Community – Based Watershed Management Strategies

Duration: 1 year

a. Preliminary activities

- Formation of MAFF and JICA Watershed Management Research Team
- Development of study design
- Procurement of necessary materials
- Training of Watershed Management Research Team on research methodologies

b. Implementation of data collection and analysis activities

This activity will be focused on collecting and analyzing socio – economic data and physical information of the watershed area such as soil characteristic, topography, vegetation, soil erosion, sedimentation, stream flow, water quality, run – off, evaporation, water infiltration, etc. Specific activities will include:

- Coordination with local leaders and community members to inform them on the background, objectives and process in the implementation of activities.
- Identification of village key person to participate in the research
- Orientation to village key person on the research methods
- Implementation of research activities
- Consolidation and analysis of data

c. **Development of community – based watershed management
Implementation strategies**

This activity will be focused on how to best implement community – based watershed management approach in 4 identified watershed areas based on the data collected and analyzed. Specific activities will include:

- National workshop to present research finding and solicit recommendations from different stakeholders
- Preparation of Community – Based Watershed Management Implementation Plan

**Phase II. Piloting of Community – Based Watershed Management
Implementation Strategies**

Duration: 2 Years

This phase will be focused on piloting the implementation strategies identified. The specific activities under this phase will depend on identified strategies. The participation of local NGOs will be encouraged in the implementation of these activities.

Objectives of the Project:

1. To collect and analyze social, physical and biological information from 3 watershed areas such as Comoro, Lacro, Dilor and Clere Watershed areas.
2. To develop strategies for the implementation of community – based watershed management approach in four (4) identified watersheds.
3. To pilot the implementation strategies developed in four (4) identified watershed areas.
4. To document the process and experiences in project implementation for consideration in the development of watershed management policy, strategy and related regulations.

Long Tem Goal: To promote the sustainable management of Comoro, Lacro, Dilor and Clere Watersheds following the community - based management approach.

Prospective beneficiaries:

The proposed project is expected to directly benefit at least 2,000 families living within and near the four (4) target watersheds and the whole populations utilizing the water from these watersheds for irrigation and domestic use within the Districts where these watersheds are located.

Linkages of the Proposed Project to Government Policy and Development Plans:

The proposed project on watershed study in Timor – Leste is intrinsically linked to the National Development Plan (NDP), MAFF Food Security Policy and Agriculture Sub– Sector Policy. These linkages are as follows:

National Development Plan of Timor – Leste

The National Development Plan of Timor – Leste projects visions of a) sustainable environment, b) active participation of the people in society's development activities, c) food supplies secured based on sound management and sustainable utilization of natural resources and d) employment increasing in agriculture, fisheries and forestry. Similarly, the Government's Stability Program, which was approved by the Council of Ministers on January 22, 2003, aims to strengthen local governance, enhance job opportunities and reduce poverty. The relationship of the proposed watershed study to NDP and Government's Stability Program includes as follows: a) collection of data from target watershed to serve as basis in the development of management plan b) promotion of sustainable management of the country's watershed resources by initiating the development of management plan in selected catchment areas covering reforestation, agroforestry, grazing and protection areas; c) encouraging community members to participate in watershed management activities by organizing and building their capacity, providing them assistance in the form of materials and technical support through relevant MAFF Divisions to implement the catchment management plan that they have prepared; d) promotion of agroforestry as alternative farming system to shifting cultivation and as a strategy to promote food security to community members; e) generating local employment by contracting community groups in management activities directly implemented by MAFF – DFWR; strengthening the capacity of the Local Leaders and community groups through direct technical and management training and by giving them the opportunity to participate in related training, workshops and conferences organized by other agencies.

MAFF Food Security Policy

The Medium Term Plan of MAFF as indicated in the Food Security Policy covers two broad goals of promoting food security and generating rural employment. In addition to these, the policy identifies policy directions related to forest resource management such as:

- a. Food production and supply availability;
- b. Conservation, regulation and management of natural resources;
- c. Rural employment/income generation through farming systems and value adding strategies; and
- d. Promotion of economic growth through diversification of niche exports and other economic activities.

The same with NDP and Government's Stability Program, the proposed watershed study will help enhance the attainment of MAFF's Food Security Policy goals and identified policy directions. In Phase II of this proposed project, agriculture activities will be promoted in integrated approach through agroforestry system. In this way, agriculture production will increase and food security among the community members will be ensured. Conservation, regulation and management of natural resources particularly the watershed resources will be achieved by working with the community members and relevant stakeholders to develop management plan on related catchment areas by directly implementing the identified management activities and by supporting the community members to implement some of the activities identified. The creation of rural employment and increase of cash income generation by the community members will be enhanced by contracting the community members in the implementation of management activities. Likewise, significant economic growth will be achieved by promoting the planting of crops with niche export potentials in the agroforestry system.

Agriculture Sub – Sectors

1. Crop Production Sub - Sector

The crop production sub – sector puts emphasis on the enhancement of food crop production, horticultural crop production, industrial crop production and support to farmers. The proposed project contributes in the realization of this policy by including priority crops in the development of agroforestry activities. Likewise, The proposed project puts emphasis on support to farmers since they are considered as partners in watershed management.

2. Livestock Sub - Sector

The livestock sub – sector aims to improve the livestock production in the country. The proposed project contributes in the fulfillment of this goal by promoting the planting of multi-purpose tree species, tree species that could be planted as living fence in agroforestry farm and at the same time could serve as source of fuelwood and forage for livestock. In addition, planting of forage grass will be encouraged in the agroforestry system.

3. Irrigation Sub - Sector

Irrigation sub – sector is concerned on the protection and management of water of Timor – Leste to be used efficiently for agriculture purposes. Since that this project is watershed management, it is certain that rehabilitation and protection of water source is well covered. This will then results to the improvement of quantity and quality of water for irrigation and domestic use

4. Fisheries Sub - Sector

The commercialization of the fisheries sub – sector in the country requires a balance ecosystem to make the replenishment of the fish stocks possible. The

proposed project in watershed will help enhance this requirement for fisheries through the reduction of the amount of soil erosion as the results of the implementation of project activities.

(5) Desirable or Scheduled time of the commencement of the Project:

This project is being proposed for the duration of 3 years having Phase I - Collection of Watershed Data and Development of Community - Based Watershed Management Strategies, implemented for the duration of 1 year and Phase II - Piloting of Community - Based Watershed Management Implementation Strategies, implemented for the duration of 2 years. It is expected that this project will commence on May or June 2004.

(6) Expected funding source and/or assistance (including external origin) for the Project:

This proposed project is expected to receive funding from Japan's Development Study Program for consultant services, materials and equipment needed in the implementation of watershed study, inputs to the community and salary of contracted local staff in the implementation watershed management activities. Through its regular budget, MAFF can provide the salary of the staff to be involved in the Watershed Research Team.

(7) Other relevant Projects, if any:

The University of Hawaii is currently implementing watershed research in Secal Watershed in Bacau District and MAFF has proposed to European Commission to finance the implementation of Watershed Development Projects in three (3) watersheds such as Tono Watershed (Oecusse District), Mula Tafara Watershed (Covalima District) and Loes Watershed (Liquica District). In addition, MAFF - DFWR is also collecting descriptive data in some major watersheds.

2. Terms of Reference of the proposed Study

(1) Necessity/Justification of the Study:

Rehabilitation of watershed through community - based approach has been identified by the Department of Forestry and Water Resources of the Ministry of Agriculture, Forestry and Fisheries as one of the priority activities of the Department. Rehabilitation of watershed has been given emphasis to secure the source of water for irrigation and domestic use, an important factor for the success of government policy on food security.

Community - based watershed management is a new strategy for East - Timor and it is important that a study on the appropriateness of this strategy must be undertaken before a wider promotion is carried out. Although community - based approaches is a current trend in watershed management and has been proven

effective in the Region, this strategy still needs further study in the context of Timor – Leste to develop appropriate implementing strategies.

(2) Necessity/Justification of the Japanese Technical Cooperation:

The meager manpower resources of Timor – Leste coupled with the lack of enough financial resources hampers the wider promotion of sustainable watershed management in the country. In addition, the government lacks financial resources to carry over detailed study of the major watersheds in the country. Due to these needs, a technical cooperation with Japan is being sought to conduct studies in four (4) major watershed areas in the country. Technical cooperation with Japan is essential to assist MAFF to develop the capacity of the staff in watershed management research, development of strategies for the implementation of community – based watershed management approach and implementation of watershed management activities.

(3) Objectives of the Study:

Capacity building of MAFF Staff: To increase the capacity of both men and women MAFF staff involved in the project in watershed management research and implementation of community – based watershed management activities.

Sustainable management of Timor – Leste's watersheds:

Long Term Goal: To promote the sustainable management of four (4) major watershed in Timor – Leste following the community – based management approach.

Specific Objectives:

1. To collect and analyze social, physical and biological information from 3 watershed areas such as Comoro, Laclo, Dilor and Clere Watershed areas.
2. To develop strategies for the implementation of community – based watershed management approach in these watershed areas.
3. To implement management activities following the strategies identified by organizing and training at least 2,000 families living within and nearby the area, assisting them develop watershed management activities and providing them inputs to implement the planned activities.
4. To enhance the participation of women in watershed management activities by encouraging them to become members of the small groups and by designing activities specific to their needs in the implementation of management activities.

(4) Areas to be covered by the Study:

- a. Comoro Watershed (Dili and Aileu District)
- b. Laço Watershed (Manatuto District)
- c. Dilor Watershed (Viqueque District)
- d. Clere Watershed (Manufahi District)

(5) Scope of the Study:

Phase I. Collection of Watershed Data and Development of Community – Based Watershed Management Strategies

a. Preliminary activities

- Formation of MAFP and JICA Watershed Management Research Team
- Development of study design
- Procurement of necessary materials
- Training of Watershed Management Research Team on research methodologies

b. Implementation of data collection and analysis activities

- Coordination with local leaders and community members to inform them on the background, objectives and process in the implementation of activities.
- Identification of village key person to participate in the research
- Orientation to village key person on the research methods
- Implementation of research activities
- Consolidation and analysis of data

c. Development of community – based watershed management implementation strategies

- National workshop to present research finding and solicit recommendations from different stakeholders
- Preparation of Community – Based Watershed Management Implementation Plan

Phase II. Piloting of Community – Based Watershed Management Implementation Strategies

(6) Study Schedule:

Activities	2004		2005				2006				2007	
	3	4	1	2	3	4	1	2	3	4	1	2
Phase I. Collection of Watershed Data and Development of Community – Based Watershed Management Strategies												
a. Preliminary activities												
b. Implementation of data collection and analysis activities												
c. Development of community – based watershed management implementation strategies												
Phase II. Piloting of community – based watershed management implementation strategies												

(7) Expected Major Outputs of the Study:

- a. Increased the capacity of at least 5 MAFF technical staff on watershed management research and project implementation.
- b. Physical and socio – economic data collected and analyzed in four (4) major watersheds.
- c. Increased the facilitation skills of at least 4 male and 4 female contracted facilitators in the implementation of community – based watershed management activities.
- d. Organized, trained and supported at least 2,000 families living within and nearby the target watersheds to implement rehabilitation activities such as reforestation (800 hectares) and agroforestry (200 hectares) in the catchment areas within the watersheds.
- e. Organized and trained at least 20 groups of women and assisted them to design and implement watershed management activities.

(8) Possibility to be implemented / Expected funding resources:

- Japan's Development Study Program to finance consultant services, materials needed in the implementation of watershed study, inputs to the community and salary of contracted local staff in the implementation watershed management activities
- MAFF to finance the salary of the staff to be involved in the Watershed Research Team.

(9) Request of the Study to other donor agencies, if any:

- Through its regular budget, the MAFF-DFWR is conducting descriptive study on the physical and social condition of selected watersheds.
- Hawaii University is conducting similar study in Secal Watershed in Baucau District.
- European Commission committed to finance the implementation of watershed management activities in three (3) major watersheds.

3. Facilities and information for the Study

**(1) Assignment of counterpart personnel of the implementing agency for the Study:
(number, academic background, etc.)**

MAFF – DFWR will identify and appoint staff to become members of the Watershed Research Team. The current staff assigned in watershed will automatically become the main counterpart.

**(2) Available data, information, documents, maps, etc. related to the Study:
(Please attach the list.)**

- a. Descriptive physical data (e.g. vegetation, water condition, etc.) of some watershed areas
- b. Estimated area of major watersheds
- c. Watershed maps
- d. Maps of vegetative cover
- e. Secondary data such as population and livelihoods of the communities living within the watershed

(3) Information on the security conditions in the Study Area:

The presence of United Nations Mission of Support to East Timor (UNMISET) Peace Keeping Force, East Police Force and East Timor Defense Force all throughout the country makes the security condition in the target areas more secured.

4. Global Issues (Environment, Gender, Poverty, etc.)

(1) Environmental components (such as pollution control, water supply, sewage, environmental management, forestry, biodiversity) of the Project, if any.

The proposed study on watershed and the eventual implementation of watershed management activities will help solve the global concerns on deforestation, loss of biodiversity, poor water quantity and quality in the watershed areas.

(2) Anticipated environmental impacts (both natural and social) by the Project, if any.

At the end of the project, it is expected that the physical condition, such as vegetation and soil condition, of the target watershed is improved by reforesting denuded areas and improving farming systems through the implementation agroforestry to improve soil fertility, control soil erosion and conserve water. In general, it can be expected in the long run that both quantity and quality of water, for irrigation and domestic consumptions, in the target watershed will be improved.

(3) Women as main beneficiaries or not.

Participation of women in forestry activities is given emphasis in the current policy of MAFF – DFWR. This policy also applies to this project. Women is targeted to be one of the main beneficiaries specially in the implementation of watershed management activities and this is accomplished by organizing them, training them, designing activities that benefits directly to them and providing them inputs to implement activities.

(4) Project components which require special considerations for women (such as gender difference, women specific role, women's participation), if any.

Phase II of this project will highly consider the participation of women. It is recognized that both men and women have the same potential contribution in the sustainable watershed resource management.

(5) Anticipated impacts on women caused by the Project, if any.

- a. Increased capacity of women to plan and implement activities of their concerns.
- b. Increased participation of women in the decision-making.
- c. The eventual increase on the quantity and quality of water will ease the burden of women and children in collecting water for domestic use.
- d. The adoption of agroforestry will help increase the volume of trees in the area making not difficult for women to collect firewood.

(6) Poverty alleviation components of the Project, if any.

In Phase II of the proposed project, agroforestry will be given the priority as one of the rehabilitation activities. In this way, it is anticipated that agriculture production will increase. Participating families can sell in the local market any surplus products thereby giving them opportunities to earn cash income.

(7) Any constraints against to the low-income people caused by the Project.

The proposed project does not foresee any negative impact to low – income people in the community. In the implementation of Phase II of the project, participatory process will be adopted. This process will encourage low-income community members to participate in the implementation of activities.

5. Undertakings of the Government of (the recipient country)

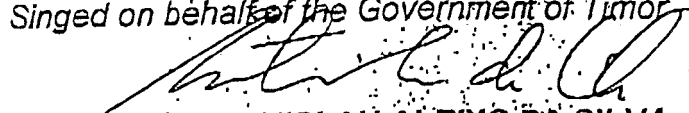
In order to facilitate the smooth and efficient conduct of the Study, the Government of the Democratic Republic of Timor - Leste shall take necessary measures such as:

- (1) Ensure the safety of the Study Team.
 - (2) Permit the members of the Study Team to enter, leave and sojourn in Timor-Leste in connection with their assignment therein, and exempt them from foreign registration requirements and consular fees;
 - (3) Exempt the Study Team from taxes, duties and any other charges on equipment, machinery and other materials brought into and out of Timor-Leste for the conduct of the Study;
 - (4) Exempt the Study Team from income tax and charges of any kind imposed on or in connection with the implementation of the Study;
 - (5) Provide necessary facilities to the Study Team for remittance as well as utilization of the funds introduced in Timor-Leste from Japan in connection with the implementation of the Study;
 - (6) Secure permission for entry into private properties or restricted areas for the conduct of the Study;
 - (7) Secure permission for the Study Team to take all data, documents and necessary materials related to the Study out of Timor-Leste to Japan for further analysis or publications following the prior written arrangements from both parties; and;
 - (8) Provide medical assistance as needed to the study team and the expenses of which will be charged to the concerned member of the Team.
6. The Government of Timor – Leste shall bear claims, if any arise against member(s) 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 member of the Study Team.
7. The Department of Forestry and Water Resources of the Ministry of Agriculture Forestry and Fisheries 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.

8. The Department of Forestry and Water Resources of the Ministry of Agriculture Forestry and Fisheries, as the executing agency of the project, will take responsibilities that may arise from the products of the Study.

The Government of Timor-Leste assures that the matters referred to in this application will be ensured for the smooth conduct of the Development Study by the Japanese Study Team.

Signed on behalf of the Government of Timor - Leste:


MINISTER ESTANISLAU ALEIXO DA SILVA
Minister, Ministry of Agriculture Forestry and Fisheries
Democratic Republic of Timor - Leste

Date: April 1st 2004

COMMUNITY – BASED WATERSHED MANAGEMENT STUDY
Project Proposal Submitted to JICA for funding

PROJECT OUTLINE

BACKGROUND AND IMPORTANCE

- Rehabilitation of watershed through community – based approach has been identified by the Department of Forestry and Water Resources of the Ministry of Agriculture, Forestry and Fisheries as one of the priority activities of the Department. Rehabilitation of watershed has been given emphasis to secure the source of water for irrigation, an important factor for the success of government policy on food security.
- Community – based watershed management is a new strategy for East – Timor and it is important that a study on the appropriateness of this strategy must be undertaken before a wider promotion is carried out.
- The Department of Forestry and Water Resources prepared and submitted to JICA for funding this proposal to implement community – based watershed management study in four (4) key watershed areas in Timor – Leste.

OBJECTIVES

1. To collect and analyze social, physical and biological information from 4 watershed areas such as Comoro, Lacio, Dilor and Clere Watershed areas.
2. To develop strategies for the implementation of community – based watershed management approach in four (4) identified watersheds.
3. To pilot the implementation strategies developed in four (4) identified watershed areas.
4. To document the process and experiences in project implementation for consideration in the development of watershed management policy, strategy and related regulations.

OUTLINE OF ACTIVITIES

Phase I. Collection of Watershed Data and Development of Community – Based Watershed Management Strategies

Duration: 1 year

a. Preliminary activities

- Formation of MAFP and JICA Watershed Management Research Team
- Development of study design
- Procurement of necessary materials
- Training of Watershed Management Research Team on research methodologies

b. Implementation of data collection and analysis activities

This activity will be focused on collecting and analyzing socio – economic data and physical information of the watershed area such as soil characteristic, topography, vegetation, soil erosion, sedimentation, stream flow, water quality, run – off, evaporation, water infiltration, etc. Specific activities will include:

- Coordination with local leaders and community members to inform them on the background, objectives and process in the implementation of activities.
- Identification of village key person to participate in the research
- Orientation to village key person on the research methods
- Implementation of research activities
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c. Development of community – based watershed management implementation strategies

This activity will be focused on how to best implement community – based watershed management approach in 4 identified watershed areas based on the data collected and analyzed. Specific activities will include:

- National workshop to present research finding and solicit recommendations from different stakeholders
- Preparation of Community – Based Watershed Management Implementation Plan

Phase II. Piloting of Community – Based Watershed Management Implementation Strategies

Duration: 2 Years

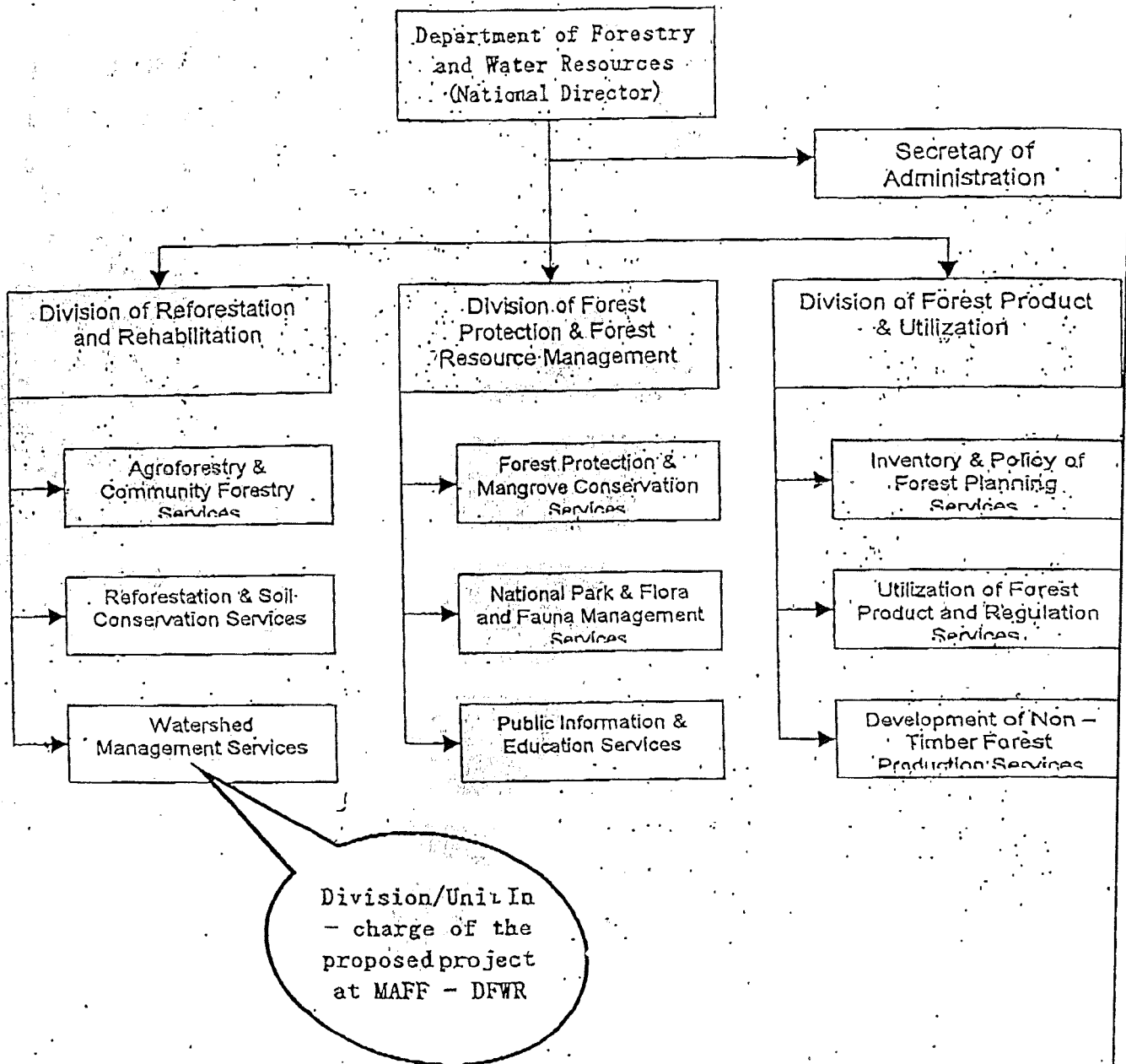
This phase will be focused on piloting the implementation strategies identified. The specific activities under this phase will depend on identified strategies. The participation of local NGOs can be encouraged in the implementation of these activities.

IMPLEMENTATION ARRANGEMENT

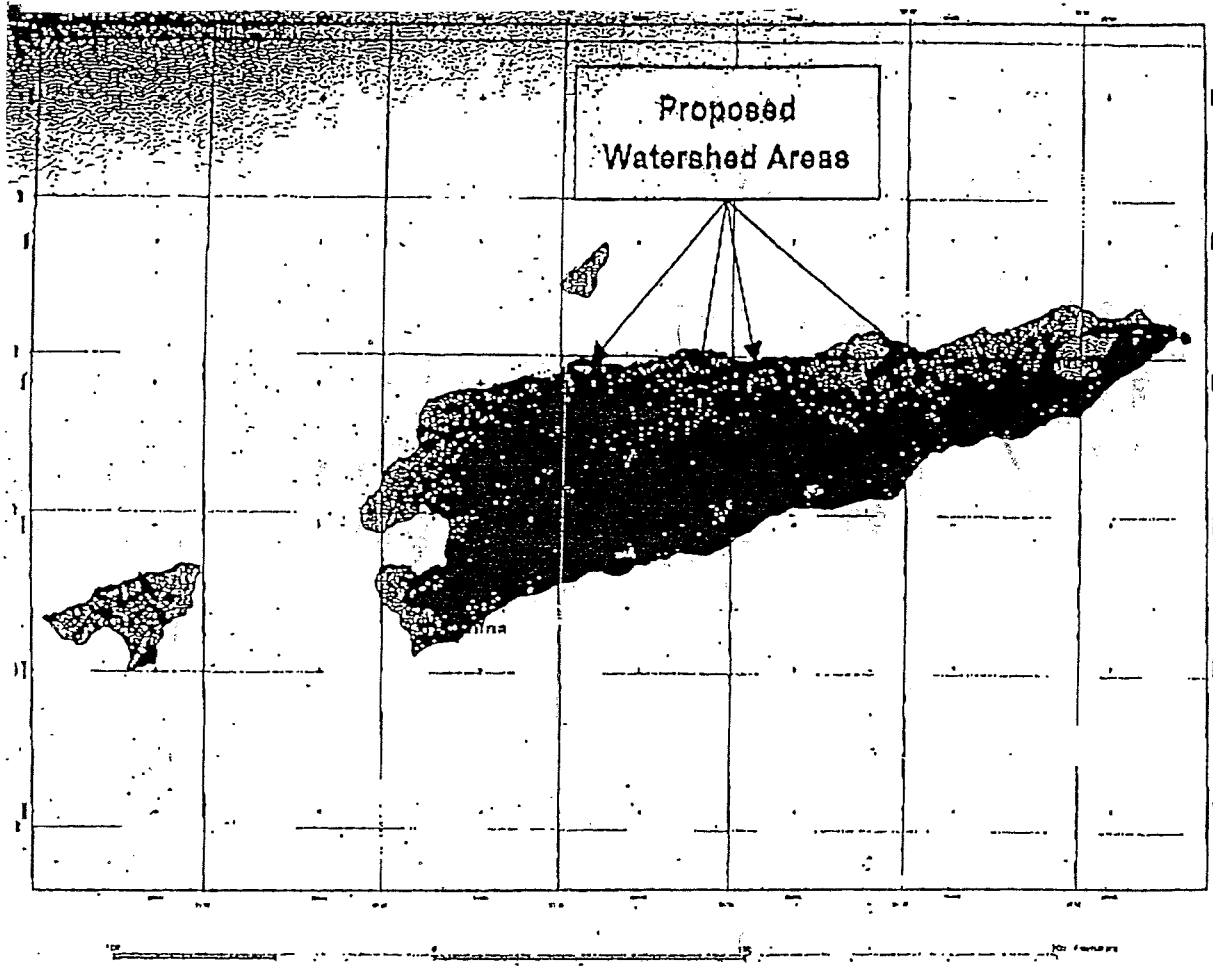
The Department of Forestry and Water Resources of the Ministry of Agriculture, Forestry and Fisheries prefers the following arrangement in the implementation of this project:

1. A Watershed Management Research Team consisting of selected staff from the Department of Forestry and Water Resources and JICA Team will be formed to handle the research. The Team must establish office at the Department of Forestry and Water Resources.
2. Training of the research team must be given emphasis before the commencement of the project.
3. Participation of community members through coordinating the activities to Local Leaders, and by selecting key person from the village to participate in the research activities, must be recognized in data collection to ensure the accuracy of data and security of any sampling plots established in the field.
4. In Phase II, the Department of Forestry and Water Resources must be given the authority to take the lead in the implementation and JICA support will be solicited to finance the activities and provide technical and management assistance to the Department.
5. In the implementation of Phase II, participation of local NGOs will be encouraged by contracting them to implement some of the activities.

Attachment 2. Organization Structure of the Department of Forestry and Water Resources, Ministry of Agriculture Forestry and Fisheries, 2004.



Map 1: Land Use of the Proposed Watershed Areas



- Land Use Classification Legend**
- Bare Land
 - Cities and Large Towns
 - Coastal Forests
 - Coastal forests - Mangrove
 - Dry Lowland Forest - Mixed
 - Dryland Arable - Food Crops
 - Estate Crops
 - Grassland
 - Highland Forest Single Species
 - Highland Forest Moist Mixed
 - Lake
 - Lowland Forest Single Species
 - Lowland Forest - Mixed
 - Man-made Forest
 - Moist Lowland Forest - Dense
 - Moist Lowland Forest - Sparse
 - Shifting Cultivation Areas
 - Smallholder Estate Crops
 - Villages and Mixed Gardens
 - Welland Arable
 - District Boundaries

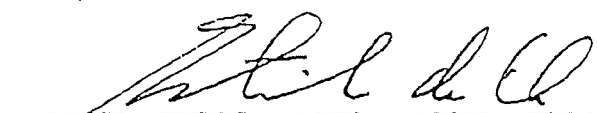
Map produced by GIS Unit
 Division of Agriculture Affairs
 ETDA, July 2001
 Based on Landsat TM Image 2000

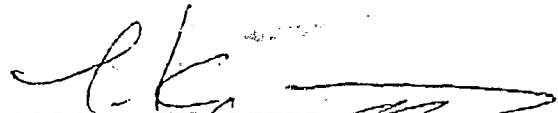


Draft Land Use Map

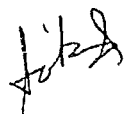
SCOPE OF WORK
FOR
THE STUDY
ON
COMMUNITY-BASED INTEGRATED WATERSHED MANAGEMENT
IN LACLO AND COMORO RIVIER BASINS
IN
THE DEMOCRATIC REPUBLIC OF TIMOR-LESTE
AGREED UPON BETWEEN
THE MINISTRY OF AGRICULTURE, FORESTRY AND FISHERIES
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

Dili, August 19, 2005


Eng. Estanislau Aleixo da Silva
Minister
Ministry of Agriculture, Forestry and Fisheries


Mr. Tetsuya KAMIPYO
Resident Representative
JICA Timor-Leste Office
Japan International Cooperation Agency

Witness


Ms. Aicha Bassarewan
Vice-Minister
Ministry of Planning and Finance

TM/GE - 006 J

3/7

I. INTRODUCTION

In response to the official request of the Government of the Democratic Republic of Timor-Leste (herein after referred to as "the Government of Timor-Leste"), the Government of Japan decided to conduct the Study on Community-Based Integrated Watershed Management in Lacro and Comoro River Basins (hereinafter referred to as "the Study") in accordance with the Agreement on Technical Cooperation between the Government of Japan and the Government of Timor-Leste signed on January 25, 2005 (hereinafter referred to as "the Agreement").

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programmes of the Government of Japan, will jointly undertake the Study with the authorities concerned of the Government of Timor-Leste.

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 community-based watershed management plan in Lacro and Comoro river basins,
2. to prepare community-based watershed management guidelines for the Ministry of Agriculture, Forestry and Fisheries (hereinafter referred to as "MAFF") in order to plan and implement watershed management in other areas, and
3. to develop the capacity of the counterpart personnel for watershed management through on-the-job training during the course of the Study.

III. STUDY AREA

The Study area shall cover the watershed of Lacro and Comoro rivers with a total area of approximately 160,000 ha as shown in Annex I.

IV. SCOPE OF THE STUDY

In order to achieve the objectives mentioned above, the Study will consist of two phases.

<Phase I>

Collection and analysis of data, development of a draft watershed management plan, and formulation of a pilot project

1. Formation of a working team (MAFF staff, Regional Office Staff, District MAFF staff, JICA study team, etc.)
2. Collection and analysis of relevant existing data and information, and field survey
 - (1) Natural conditions
 - (2) Socio-economic conditions, including land tenure, gender, and villagers' dependence on the forest including volume of the firewood for sale in Dili city
 - (3) Forest and forestry conditions
 - (4) Agricultural and social infrastructure
 - (5) Lessons learnt from other similar projects
 - (6) Other information related to the Study

3. Preparation of land-use and vegetation maps for the study area (scale: 1/25,000)
4. Identification of socio-economic, physical, technical, managerial, and institutional factors inhibiting and promoting watershed management
5. Identification of effective strategies for watershed management
6. Development of a draft community-based watershed management plan for the study area
7. Holding a national workshop to present findings and receive feedback from various stakeholders
8. Formulation of the pilot project on community-based watershed management
 - (1) Selection of targeted villages
 - (2) Preparation of the terms of reference for the pilot project (objectives, expected outputs, activities, inputs, work schedule, institutional arrangement, monitoring and evaluation system, etc.)
 - (3) Designing of watershed management activities of each targeted village in consultation with local communities

<Phase II>

Implementation of the pilot project, development of the watershed management plan, and preparation of community-based watershed management guidelines

1. Implementation of the pilot project in collaboration with local NGO(s)
 - (1) Conducting the activities through participation of local communities
 - (2) Evaluation of the activities by participatory way
2. Finalization of the community-based watershed management plan for the study area based on the result of the pilot project
3. Preparation of the community-based watershed management guidelines based on the findings and experience during the course of the Study
4. Holding a national workshop to present findings and receive feedback from various stakeholders

V. SCHEDULE OF THE STUDY

The Study will be carried out in accordance with the tentative schedule as attached in the Annex2. The schedule is tentative and subject to be modified when both parties agree upon any necessity that will arise during the course of the Study.

VI. REPORTS

JICA shall prepare and submit following reports in English to the Government of Timor-Leste.

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4. Draft Final Report:
 - Ten (10) copies at the end of the Study

Annex 2

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The Government of the Timor-Leste shall submit their comments within one (1) month after the receipt of the Draft Final Report.

5. Final Report:

Forty (40) copies within two (2) months after the receipt of the comments on the Draft Final Report

This report will include land-use and vegetation maps, watershed management plan in Lacio and Comoro river basins, and community-based watershed management guidelines.

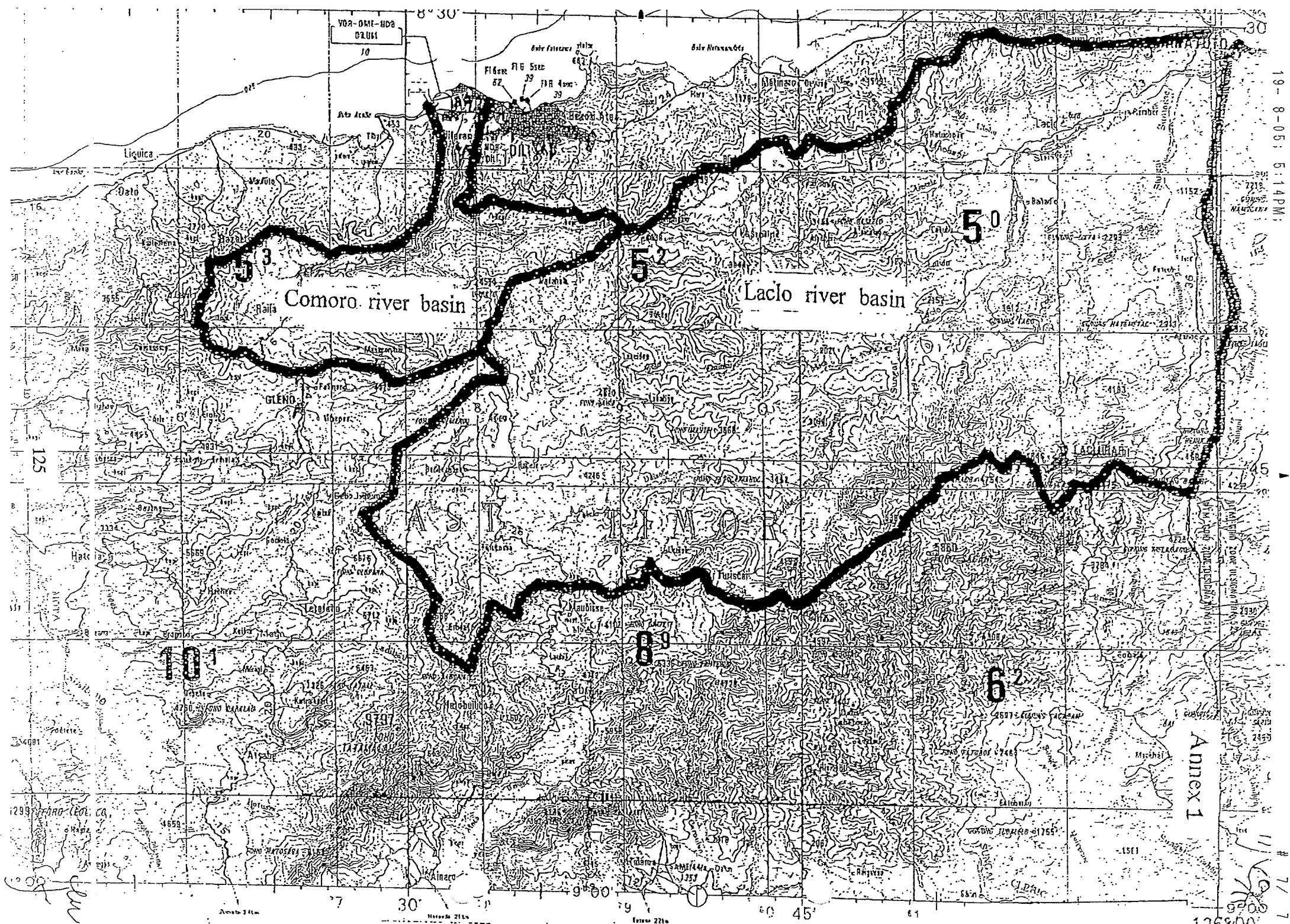
VII. UNDERTAKINGS OF THE GOVERNMENT OF TIMOR-LESTE

1. The Government of Timor-Leste shall accord privileges, exemptions and other benefits to the Japanese study team (hereinafter referred to as "the Team") in accordance with the Agreement on Technical Cooperation between the Government of Japan and the Government of Timor-Leste signed on January 25, 2005.
2. The Government of Timor-Leste shall bear claims, if any arises, against the members of the 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 Team in accordance with the Agreement.
3. Ministry of Agriculture, Forestry and Fisheries, Government of Timor-Leste shall act as a counterpart agency to the Team and also as a coordinating body with other relevant organizations for the smooth implementation of the Study, on behalf of the Government of Timor-Leste.
4. Ministry of Agriculture, Forestry and Fisheries, Government of Timor-Leste shall, at its own expense, provide the Team with the followings, in cooperation with other organizations concerned:
 - (1) Security-related information on as well as measures to ensure the safety of the Team
 - (2) Information on as well as support in obtaining medical service
 - (3) Available data (including maps and photographs) and information related to the Study
 - (4) Counterpart personnel
 - (5) Suitable office space with necessary equipment, and
 - (6) Credentials or identification cards.

VIII. CONSULTATION

JICA and the Ministry of Agriculture, Forestry and Fisheries shall consult with each other in respect of any matter that may arise from or in connection with the Study.

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Comoro river basin

Lacro river basin

Annex 1

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TENTATIVE SCHEDULE

Annex 2

Year	2005												2006												2007												2008												
Month	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
Rainy season																																																	
Study in Japan																																																	
Study in Timor-Leste																																																	
Report									Δ																																								
Phase																																																	

<Remarks>

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- * Comments on the Df/R by the Government of Timor-Leste
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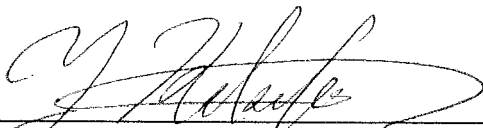
MINUTES OF MEETING
ON
THE STUDY
ON
COMMUNITY-BASED INTEGRATED WATERSHED MANAGEMENT
IN LACLO AND COMORO RIVER BASINS
IN
THE DEMOCRATIC REPUBLIC OF TIMOR-LESTE

In response to the official request of the Government of the Democratic Republic of Timor-Leste (herein after referred to as "the Government of Timor-Leste"), the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team (hereinafter referred to as "the Team") for the Study on Community-Based Integrated Watershed Management in Laclo and Comoro River Basins (hereinafter referred to as "the Study"), headed by Mr. Yukihide Katsuta to Timor-Leste from April 18 to April 29, 2005.

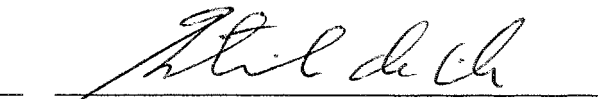
During its stay in Timor-Leste, the Team made field visits in the study area, and held a series of discussions with the officials of Ministry of Agriculture, Forestry and Fisheries (hereinafter referred to as "MAFF") and other authorities concerned of the Government of Timor-Leste. The list of those who attended these meetings is attached as Annex 1.

As a result of the discussions, MAFF and the Team agreed to the matters referred to in the documents attached hereto.

Dili, April 28, 2005



Mr. Yukihide Katsuta
Leader of the Preparatory Study Team
Japan International Cooperation Agency Eng.



Estanislau Aleixo da Silva
Minister
Ministry of Agriculture, Forestry and Fisheries

Witness



Ms. Aicha Bassarewan
Vice-Minister
Ministry of Planning and Finance

Attached document

1. Draft of the Scope of Work (S/W)

The Scope of Work (S/W) is an official document which defines contents of the Study. Draft of the S/W, attached as Annex 2, was prepared and confirmed through series of discussions by both sides. The draft S/W will be finalized and signed after notification of approval by JICA headquarters.

2. Title of the Study

The title of the Study was changed from “Community-Based Watershed Management Study” of the original proposal to “The Study on Community-Based Integrated Watershed Management in Laclo and Comoro River Basins” because the Study will focus on Laclo and Comoro river basins.

3. Study area

The Study will be implemented in Laclo and Comoro river basins based on the following reasons.

- (1) Laclo river basin is one of the poorest and most severely degraded regions due to its unsustainable use of natural resources by the villagers.
- (2) Several organizations including local NGOs have conducted community-based agricultural activities in Laclo river basin. Therefore, their experiences can be shared to execute the Study effectively.
- (3) Important infrastructure (irrigation scheme, etc.) exists and water user groups are formed in the downstream area in Laclo river basin.
- (4) Developing a watershed management plan for Comoro river basin is particularly important because of its proximity to Dili.

4. Pilot project

The pilot project will be implemented in consideration of the followings:

- (1) MAFF and the study team will jointly implement the pilot project in partnership with NGO(s) in order to develop a viable watershed management plan for Laclo and Comoro river basins, as well as produce practical community-based watershed management guidelines applicable to other watershed areas in Timor-Leste.
- (2) The counterpart personnel must be actively involved in not only the implementation but also the planning and evaluation of the pilot project. By doing so, they will be able to learn lessons and obtain experience in utilizing the guidelines for the management of other watershed areas.
- (3) It is assumed that the pilot project period of two years will be too short to produce all of the expected outputs, make the project feasible and sustainable, and scale up to other villages. Several natural resource management projects have been already implemented in the study areas; therefore, some of the villages where other projects (not on-going ones) had helped to develop institutional capacity should be included in the target villages for scaling-up and developing a viable model for watershed management.

5. Selection of the target villages for the pilot project

The pilot project will target several villages within Laclo and Comoro river basins. By the end of Phase I, several target villages will be selected based on the findings of the field work and data analysis.

6. Output of the Study

The following outputs will be produced:

- (1) land-use and vegetation maps for Lacro and Comoro river basins (scale: 1/25,000)
- (2) community-based watershed management plan for Lacro and Comoro river basins, and
- (3) community-based watershed management guidelines for MAFF staff members.

7. Counterpart personnel

MAFF will assign full-time counterpart personnel for the study team before their arrival. The sufficient number of other MAFF staff members will be assigned to each Japanese study team member as part-time counterpart personnel when necessary.

8. Equipment for the Study

The necessary equipment identified by both sides for the smooth implementation of the Study is as follows:

- (1) photocopy machine
- (2) personal computer
- (3) handy GPS and software for GIS system
- (4) portable generator, and
- (5) equipment for the pilot project.

9. Office space

MAFF will provide an office space in the Department of Forestry and Water Resources, MAFF in Dili for the use of the study team. The office will be equipped with telephone and basic furniture. In addition, the district agricultural offices in Manatuto and Aileu will be made available for the study team.

10. Opening of the final report to the public

The final report of the Study will be open to the public.

11. Cooperation with other donors and NGOs

The study team and MAFF will coordinate with other donors and NGOs to share experience and avoid duplication.

12. Schedule of the Study

The Study is expected to start in September 2005 if JICA's internal procedures are completed as scheduled.

List of Attendants**(Timor-Leste Side)****Ministry of Agriculture, Forestry and Fisheries**

Eng. Estanislau Aleixo da Silva	Minister
Mr. Mario Riveriro Nunes	Director, Department of Forestry and Water Resources
Mr. Manuel da Silva	Director, Forest Protection & Resources Management
Mr. Luis Godinho	Director, Reforestation & Soil Conservation
Mr. Jacinto Soares	Chief of Reforestation
Mr. Francisco Inacio	Watershed Management Coordinator

Ministry of Planning and Finance

Ms. Aicha Bassarewan	Vice-Minister
Mr. Eusebio Jeronimo	Director, National Directorate for Planning and External Assistance Coordination
Mr. Takeshi Watanabe	Advisor, National Directorate for Planning and External Assistance Coordination

(Japanese Side)**Preparatory Study Team**

Mr. Yukihide Katsuta	Leader
Mr. Kazutaka Okamoto	Member
Mr. Hiroshi Hidaka	Member
Mr. Seiich Mishima	Member
Mr. Kaneyasu Ida	Member

JICA Timor-Leste Office

Mr. Toshiaki Tanaka	Resident Representative
Mr. Shinga Kimura	Project Formulation Advisor

(Draft)

SCOPE OF WORK
FOR
THE STUDY
ON
COMMUNITY-BASED INTEGRATED WATERSHED MANAGEMENT
IN LACLO AND COMORO RIVIER BASINS
IN
THE DEMOCRATIC REPUBLIC OF TIMOR-LESTE
AGREED UPON BETWEEN
THE MINISTRY OF AGRICULTURE, FORESTRY AND FISHERIES
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

Dili, May , 2005

Eng. Estanislau Aleixo da Silva
Minister
Ministry of Agriculture, Forestry and Fisheries

Mr. Toshiaki Tanaka
Resident Representative
JICA Timor-Leste Office
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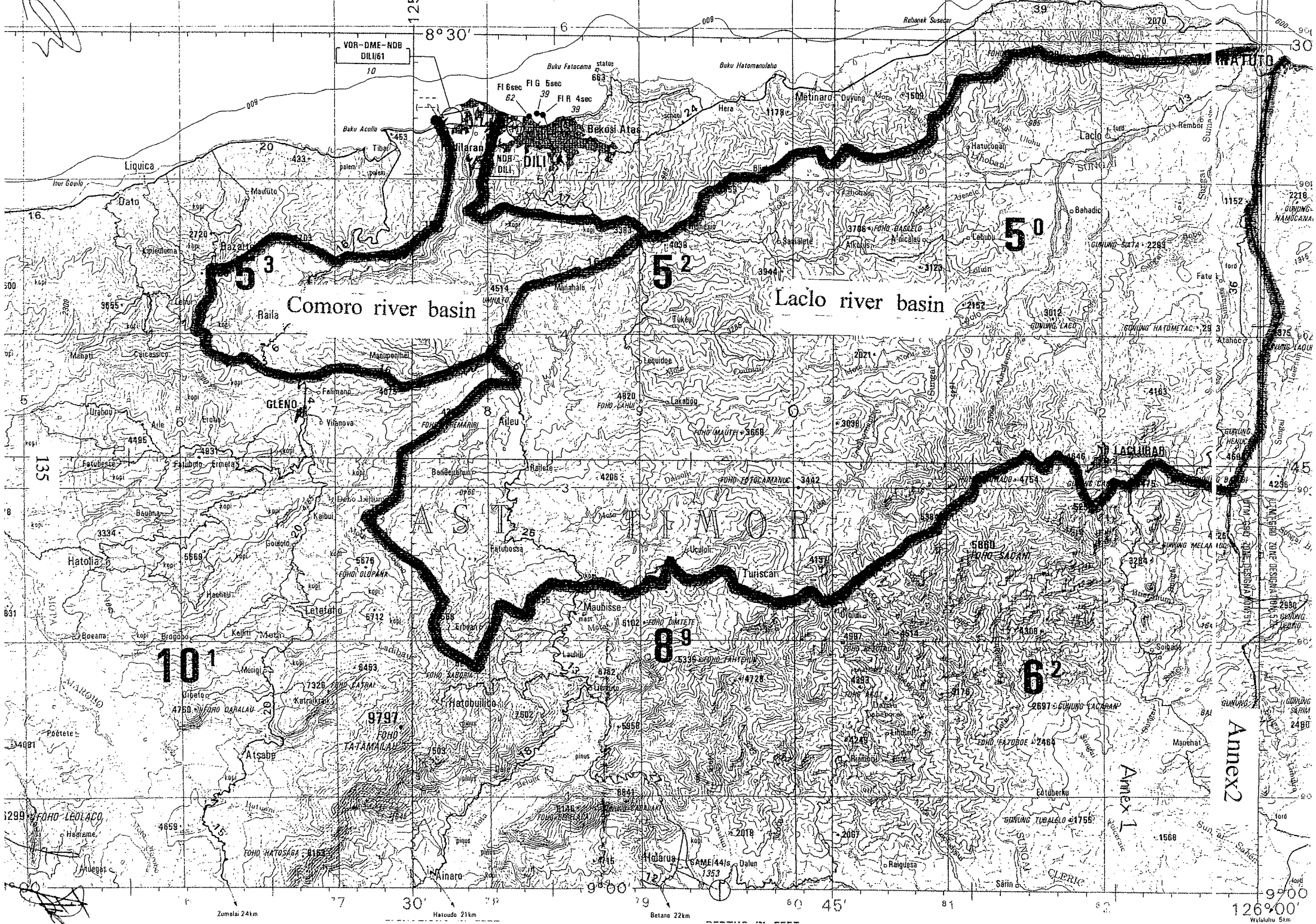
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Liquica

Buku Acollo
Buku Fatocama
Buku Hatomanulata

Bekosi Atas

DILI

5³

Comoro river basin

5²

Lacio river basin

5¹

GLENO

EAST TIMOR

LACUBAR

10¹

8⁹

6²

Annex 2

Annex 1

FOHO LEOLACO

Zumalai 24km

Hatoude 21km

Betane 22km

126° 00'
Wesluhu 5km

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TENTATIVE SCHEDULE

Year	2005												2006												2007												2008												
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Study in Japan																																																	
Study in Timor-Leste																																																	
Reports																																																	
Phase	Phase I												Phase II																																				

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- <Remarks>
- Ic/R Inception Report
 - Pr/R Progress Report
 - It/R Interium Report
 - Df/R Draft Final Report
 - © Comments on the Df/R by the Government of Timor-Leste
 - F/R Final Report

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事業事前評価表（開発調査）

1. 案件名
東ティモール国ラクロ川及びコモロ川流域住民主導型流域管理計画調査
2. 協力概要
(1) 事業の目的 本プロジェクト対象2流域（ラクロ川及びコモロ川）における流域管理計画の策定、及び他の流域においても活用可能な流域管理ガイドラインの策定を通じ、東ティモール国における住民の参加を核にした流域管理の方策を提示する。また、農林水産省職員及び地域住民、その他関係者の流域管理・保全に係る能力の向上を図る。
(2) 調査期間 2005年9月から全体で約36カ月（第1フェーズ 約12カ月、第2フェーズ 約24カ月）
(3) 総調査費用 1.9億円
(4) 協力相手先機関 (a) 協力相手国実施機関名：森林・水資源局 (b) 協力相手国実施機関の責任者：森林・水資源局局长
(5) 計画の対象（対象分野、対象規模等） (a) 調査対象地域：ラクロ川及びコモロ川の2流域 （対象県：ディリ（Dili）県、マナツト（Manatuto）県、アイレウ（Aileu）県、リキサ（Liquica）県、エルメラ（Ermera）県） (b) 対象面積・人口：約160,000ha、約76,000人 (c) 対象分野：流域管理
3. 協力の必要性・位置付け
(1) 現状及び問題点 東ティモール国では、1972年から1999年の間、年1.1%の割合で森林面積が減少し、密林の35%、林地の24%が失われた。この直接の原因は、森林火災、薪採取、焼畑農業、無秩序な伐採等と考えられている。森林の減少は、雨量が多く急勾配の傾斜地が多い東ティモール国において、土壌劣化、洪水などを引き起こし、住民の生活にとって大きな影響を与えている。一方で、農民の多数は、高地での焼畑農業に従事しており、その多くが比較的土壌の良い流域で焼畑及び放牧を行うため、流域の環境劣化を加速する要因となっている。農林水産省灌漑・水資源部の試算によれば、河川の氾濫により、毎年、約280ヘクタールの灌漑水田が被害を受けており、年間の被害総額は81万ドルに及ぶと推定されている。 このような現状を改善するためにも、適切な森林・流域管理が必要とされているものの、独立後間もない同国では、森林と流域管理に関する新政府の法律は制定されていない。併せて、インドネシア統治時代には約300名の林業省の職員が配置されていたが、現在、森林行政を担う農林水産省森林・水資源局の職員数は55名、うち林学の学士資格を有するものがわずか7名のみと、制度・人的にも非常に脆弱であり、森林及び流域管理に必要な人的資源と組織能力の向上が必要とされている。 行政側の取り組みに加え、荒廃した流域の復旧・保全を図るためには、農民が森林を始めとした流域の天然資源の利益を持続的に享受できるよう、主体的に移動耕作や放牧のあり方を見直し、森林の整備・保全活動、農地や放牧地の土壌保全活動に取り組む必要があることが、課題として挙げられる。

(2) 相手国政府国家政策上の位置づけ

国家計画(NDP) (2002 年策定) は、全セクターでの貧困削減と持続的かつ公正な経済成長の 2 本柱の目標を掲げ、その実現のためにセクター別の目標を示している。農林水産セクターでは、食料の安定供給と、農業システムの多様化と農産物の育成による農村の雇用改善の 2 つを目標としている。農林水産省国家森林・水資源局はこのセクター目標に沿って、「森林・流域サブセクターの政策と戦略」(2004 年 11 月) を策定した。

なお、同「政策と戦略」における主要な目標は以下のとおり。

- (a) 森林と流域の荒廃を抑制し、保全地域に残された森林資源と生物多様性の保全を図る。
- (b) 資源の取引と効果的な資源管理に最適な政策と法的な枠組みを確立する。
- (c) 森林と流域管理に必要な人的資源と組織能力の向上を図る。
- (d) ステークホルダー間の効果的な連携と参加を確保する。

(3) 他国機関の関連事業との整合性

本件調査内容に関連するドナー及び NGO 等関連機関として、ハワイ大学、欧州委員会 (EC) が流域管理・開発プロジェクトを実施・準備している。また、UNOPS、CARE International がマナツト県において、農民グループを組織し、アグロフォレストリー、植林資源管理を含む村落開発プロジェクトを行っている。

これらの機関の活動は、村落住民の食料の安全保障を主目的にしているが、住民参加型のアプローチや現地 NGO の活用など、プロジェクトの実施方法については類似点がある。社会調査の方法、サイト選定方法、現地 NGO の活用方法について情報・意見交換の場を持つことが重要である。

(4) 我が国援助政策との関連、JICA 国別事業実施計画上の位置づけ

適切な流域管理の実施には、地域住民に対する森林資源以外からの代替生計手段の確保等、農村開発的な働きかけが必要である。本調査では、当該分野の調査、パイロットプロジェクトの実施を取り入れている。これは、わが国の対東ティモール国援助政策のうち「農業・農村開発」支援に合致する。また、同国に対する JICA 国別事業実施計画の援助重点分野「農業農村開発」のうち「農林水産省組織強化—人材育成及び調査・開発能力強化」とも合致している。

4. 協力の枠組み

(1) 調査内容

<フェーズ 1>

データの収集・分析、流域管理計画(案)の作成、パイロットプロジェクトの実施準備

- (a) 作業チーム(農林省職員、地域事務所職員、県農林局職員、本格調査団)の結成
- (b) 既存情報の収集、現地調査の実施
 - ①自然条件
 - ②社会経済条件、土地所有制度、ジェンダー、ディリ市内販売用の薪の伐採量を含む村落住民の森林への依存度
 - ③森林及び林業の現状
 - ④農業及び社会インフラ
 - ⑤他ドナー、NGO による類似プロジェクトからの提言、教訓
- (c) 調査対象地域における土地利用図、植生図の作成(25,000 分の 1)
- (d) 流域管理を促進もしくは阻害する社会経済的、物理的、技術的、組織・制度的要因の

解明

- (e) 流域管理を効果的に実施するための戦略の策定
- (f) 対象流域における住民主導型流域管理計画(案)の策定
- (g) 関係者に対する調査結果の報告、調査及び管理計画(案)へのフィードバックを目的としたワークショップの開催
- (h) 流域管理計画(案)に基づく住民参加によるパイロットプロジェクトの実施準備
 - ①対象村落の選定
 - ②パイロットプロジェクトの実施計画の作成(目的、想定されるアウトプット、活動、投入、活動スケジュール、実施体制、モニタリング・評価体制等)
 - ③地域住民との協議結果に基づく流域管理活動の策定

<フェーズ2>

パイロットプロジェクトの実施、流域管理計画の策定、住民主導型流域管理ガイドラインの作成

- (a) 現地 NGO と連携したパイロットプロジェクトの実施
 - ①対象地域の住民の参加による活動の実施
 - ②参加型による活動の評価
- (b) パイロットプロジェクトの結果を反映した対象流域における住民主導型流域管理計画の作成
- (c) 調査結果に基づく住民主導型流域管理ガイドラインの作成
- (d) 関係者に対する調査結果の報告、調査及び管理計画(案)へのフィードバックを目的としたワークショップ開催

(2) アウトプット(成果)

- (a) 土地利用・植生図(25,000分の1)の作成
- (b) ラクロ川及びコモロ川流域における住民主導型流域管理計画の策定
- (c) 農林省職員を対象にした住民主導型流域管理ガイドラインの策定

(3) インプット(投入): 以下の投入による調査の実施

- (a) コンサルタント(分野/人数)
 - 総括/参加型流域管理/1
 - アグロフォレストリー/1
 - 植林/1
 - 村落開発/1
 - 住民参加/1
- (b) その他
 - 調査に必要な資機材の購入

5. 協力終了後に達成が期待される目標

(1) 提案計画の活用目標

- ・農林省職員が、策定した流域管理計画に基づき、ラクロ川及びコモロ川流域において、住民と協調し持続的な流域管理を行う。
- ・農林省職員が、策定した流域管理ガイドラインを活用し、プロジェクト対象地域外において、流域管理に必要な各種調査、管理計画の策定を行う。また、かかる経験を通じガイドラインの改訂を行う。

<p>(2) 活用による達成目標</p> <p>対象流域において持続的な森林管理及び適切な農地管理が実施され、地域住民の生計向上・生活の改善と同時に森林の再生が図られる</p>
<p>6. 外部要因</p> <p>(1) 協力相手国内の事情</p> <ul style="list-style-type: none"> ・ 政治的要因：政権交代等による森林保全や流域管理に係る政策転換 ・ 社会的要因：治安の大幅な悪化 ・ 自然的要因：大規模な洪水や山火事等の自然災害 <p>(2) 関連プロジェクトの遅れ</p> <p>特になし</p>
<p>7. 貧困・ジェンダー・環境等への配慮</p> <ul style="list-style-type: none"> ・ パイロットプロジェクトの実施方針、流域管理計画及びガイドラインは、貧困住民の森林資源への依存度等を十分調査し、彼らのニーズを反映させたものとなるよう配慮する。 ・ また、パイロットプロジェクトの実施においては、女性の参画を促進するよう配慮する。
<p>8. 過去の類似案件からの教訓の活用</p> <ul style="list-style-type: none"> ・ ドミニカ共和国「サバナ・イエグア・ダム上流域流域管理計画調査」では、住民参加を前提として実施される各種事業の円滑な展開のためには、実施機関、地方機関、住民組織間の信頼度を高め、確固たる協力関係の構築が必要であるとしている。本調査においては、森林・水資源局、地方農林局、調査団が作業チームを結成し、共同で調査を実施する。また、現地事情に精通している NGO を活用し、住民組織とのネットワークを構築し、彼等のニーズを積極的に調査内容に反映させていく。 ・ 本調査対象地域で UNOPS が実施した「コミュニティー活性化プロジェクト」からは、現地農林局の体制は非常に脆弱であるため、直営形式で住民組織を支援する必要がある、かつ住民組織のキャパシティー・ビルディングが重要であるとしている。本調査においては、パイロットプロジェクトの実施を通じ、住民組織のキャパシティー・ビルディングを図ることとするが、事業の持続性の観点からも可能な限り、地方農林局の関与を促していくこととする。
<p>9. 今後の評価計画</p> <p>(1) 事後評価に用いる指標</p> <p>(a) 活用の進捗度</p> <ul style="list-style-type: none"> ・ 対象地域において、本調査中に実施したパイロットプロジェクトを継続している村落数。 ・ 流域管理計画を基に、新たにパイロットプロジェクトに類する活動を実施した村落数。 ・ 流域管理ガイドラインの改訂状況。 <p>(b) 活用による達成目標の指標</p> <ul style="list-style-type: none"> ・ 対象流域における森林管理の実績（苗木生産本数、植林面積等） ・ アグロフォレストリー等の実施により、地域住民の生計が向上した割合 <p>(2) 上記（a）および(b)を評価する方法および時期</p> <p>必要に応じて調査終了後 2009 年度以降に評価を実施する。</p>

資料リスト (収集資料)

番号	資料の名称	形態(図書、ビデオ、地図、写真等)	収集資料	JICA作成/翻訳資料	発行機関	取扱区分	図書館記入欄
1	東チモール国農林水産業開発計画調査デベロプメントプランレポート	報告書		*	国際協力事業団農調部	Ⓜ CR () SC	
2	東チモール国農林水産業開発計画調査コンプリエションレポート (パイロットプロジェクト)	報告書		*	国際協力事業団農調部	Ⓜ CR () SC	
3	東チモール緊急復興チリ情報データベース作成調査ファイナルレポート (和文要約)	コピー文書		*	国際協力事業団社調部	Ⓜ CR () SC	
4	東ティモール地方部の社会構造-マナトゥト県ラクロ灌漑地区の調査を中心として-	報告書		*	国際協力機構東ティモール駐在員事務所	Ⓜ CR () SC	
5	Report on Research Findings and Policy Recommendations for A Legal Framework for State Property Administration/Lease of Government and Private Property (Land Law Program)	報告書	*		Universidade Nacional timor Lorasa'e, Tha Direccao de Terras e Propriedades, ARD, Inc	Ⓜ CR () SC	
6	Report on Research Findings and Policy Recommendations for A Legal Framework for Land Dispute Mediation (Land Law Program)	報告書	*		Universidade Nacional timor Lorasa'e, Tha Direccao de Terras e Propriedades, ARD, Inc	Ⓜ CR () SC	
7	Report on Research Findings and Policy Recommendations for A Law on Land Rights and Titles Restitution (Land Law Program)	報告書	*		Universidade Nacional timor Lorasa'e, Tha Direccao de Terras e Propriedades, ARD, Inc	Ⓜ CR () SC	
8	Report on Research Findings and Policy Recommendations for Compliance with the Constitution by Non-National Claimants of Pre-existing Freehold Rights in Timor-Leste (Land Law)	報告書	*		Universidade Nacional timor Lorasa'e, Tha Direccao de Terras e Propriedades, ARD, Inc	Ⓜ CR () SC	
9	Aileu District Development Plan	コピー文書	*		Aileu District Administrator	Ⓜ CR () SC	
10	Project Implementation Plan of the Third Agriculture Rehabilitation Project	コピー文書	*		Third Agriculture Rehabilitation Project (ARP III)	Ⓜ CR () SC	
11	Study on Lessons learned in Implementing Community Level Agricultural and Natural Resource Management Projects in Timor Leste	コピー文書	*		Oxfam, Republica Democratica de Timor-Leste Ministerio de Agricultura, Florestas e Pescas	Ⓜ CR () SC	
12	The 2001 Survey of Sucos - Initial Analysis and Implications for Poverty Reduction	コピー文書	*		ATPA, ADB, WB, UNDP	Ⓜ CR () SC	
13	Constitution of the Democratic Republic of East Timor	冊子	*		Assembleia Constituinte	Ⓜ CR () SC	
14	Baseline Survey of 17 Sucos in Lequidoe and Remixio	コピー文書	*		Halarae Foundation	Ⓜ CR () SC	
15	Rice Marketing Survey Report	報告書	*		CARE International Timor Leste	Ⓜ CR () SC	
16	Census Timor-Leste 2004 (人口データのみ)	コピー文書	*		UNFPA	Ⓜ CR () SC	
17	Census of population and housing Timor-Leste Household Questionnaire	冊子	*		Sensus Uma Kain Timor-Leste 2004	Ⓜ CR () SC	

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18	Ermera District Development Plan	コピー文書	*		Ermera District Administrator	CR() SC	
19	Draft Budget/Background Paper	コピー文書	*		Ministry of Planning and Finance	CR() SC	
20	The way ahead	コピー文書	*		UNDP	CR() SC	
21	MAFF-FW組織関連資料	コピー文書	*		Ministry of Agriculture, Forestry and Fisheries	CR() SC	
22	Timor-Leste: Second EC Rural Development Programme Identification Fiche (Proposal for Formulation)	コピー文書	*		EC	CR() SC	
23	Regulation No. 2000/17. On the Prohibition of Logging Operations and the Export of Wood from East	コピー文書	*		United Nations Transitional Administration in East Timor	CR() SC	
24	Regulation No. 2000/19. On Protected Places	コピー文書	*		United Nations Transitional Administration in East Timor	CR() SC	
25	CARE project関連資料	コピー文書	*		CARE International Timor Leste	CR() SC	
26	JICA-CARE joint evaluation and final report on jica community empowerment program in East Timor	コピー文書	*		CARE, JICA	CR() SC	
27	Profil District MANATUTO	コピー文書	*		United Nations Transitional Administration in East Timor	CR() SC	
28	CAREのプロジェクトサイトマップ	地図	*		CARE	CR() SC	
29	オランダ政府が可能性を検討している改良かまどにとりくむNGOの情報	コピー文書	*			CR() SC	
30	Timor-Leste map atlas	地図	*		AusAID	CR() SC	
31	ALGIS主題図セット	地図	*			CR() SC	
32	Biomass energy issues in Asia	コピー文書	*			CR() SC	
33	A case for a special role for Cunsus Mapping	コピー文書	*		Wine Langeraar	CR() SC	
34	Livelihood Improvement for Farmers' Empowerment (LIFE) Project in Timor-Leste	コピー文書	*		CARE, JICA	CR() SC	
35	地図 (1/250,000、1/50,000、1/25,000)	地図	*			CR() SC	
36	MAFF Documents	CD-R	*		Ministry of Agriculture, Forestry and Fisheries	CR() SC	
37	写真集	CD-R	*		事前調査団員	CR() SC	

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38	東チモールGISデータ	CD-R	*			Ⓜ CR () SC	
39	District Profiles and development Plan 2002	CD-R	*			Ⓜ CR () SC	
40	TimorAgri (1)	CD-R	*			Ⓜ CR () SC	
41	TimorAgri (2)	CD-R	*			Ⓜ CR () SC	
42	Final report for the study on urgent establishment of topographic mapping in East Timor	報告書		*	国際協力事業団社調部	Ⓜ CR () SC	
43	Policy and Strategy Forestry and Watershed Subsector	コピー文書	*		National directorate of Forestry and Water Resources / Ministry of Agriculture, Forestry and Fisheries	Ⓜ CR () SC	
44	Natural Resources and The Environment priorities and proposed sector investment program	コピー文書	*		Ministry of Agriculture, Forestry and Fisheries/ Ministry of Development and Environment/ Ministry of Transport, Communications and Public Works	Ⓜ CR () SC	

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