

(業務参考資料)

# 協定・討議議事録集

昭和 57 年 3 月

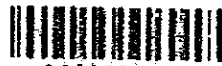
国際協力事業団  
林業水産開発協力部

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# 協定・討議議事録集

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## 目 次

### 1. 林 業

#### (農林業協力)

1. ビルマ・アラカン山系林業開発技術協力計画討議議事録 .....	1
2. インドネシア・ジャワ山岳林収獲技術協力計画討議議事録 .....	15
3. インドネシア・南スマトラ森林造成技術協力計画討議議事録 .....	26
4. フィリピン・パンタパンガン森林造成技術協力計画討議議事録 .....	41
5. タイ国造林研究訓練技術協力計画討議議事録 .....	70
6. ブラジル・サンパウロ林業研究協力計画討議議事録 .....	86
7. 南部パラグアイ農林業開発技術協力計画討議議事録 .....	99

#### (開発協力)

8. ベルー・アマゾン林業開発協力現地実証調査討議議事録 .....	112
------------------------------------	-----

#### (開発調査)

9. フィジー・林業開発調査S/W .....	127
10. ホンジュラス・ラ・モスキティア地区森林調査S/W .....	134
11. パラグアイ・北東部森林調査S/W .....	146



# I 林業編



1. ビルマ・アラカン山系林業開発技術協力計画討議事録

RECORD OF DISCUSSIONS BETWEEN THE JAPANESE FORESTRY  
SURVEY TEAM AND THE MINISTRY OF AGRICULTURE AND  
FORESTS CONCERNING THE TECHNICAL COOPERATION PROJECT  
FOR THE FOREST DEVELOPMENT IN THE ARAKAN RANGE.

In pursuance of the Feasibility Study which was conducted in June and July, 1977, the Japanese Forestry Survey Team, organized by the Japan International Cooperation Agency, and headed by Mr. Heizaburo Tezuka, visited the Socialist Republic of the Union of Burma from 27th November to 3rd December, 1977, for the purpose of discussing with the authorities concerned of the Government of the Socialist Republic of the Union of Burma concerning the desirable measures to be taken by both Governments to implement the Technical Cooperation Project for the Forest Development in the Arakan Range.

As a result of the discussions, both parties agreed to recommend to their respective Governments to carry out the matters referred to in the attached Record of Discussions concerning the technical cooperation in the said project.

2nd December, 1977

*Heizaburo Tezuka*

Heizaburo Tezuka  
Head of the Japanese  
Forestry Survey Team

*Khin Maung Gyi*  
*2/12*

Khin Maung Gyi  
Managing Director  
Timber Corporation  
Ministry of Agriculture  
and Forests  
The Socialist Republic  
of the Union of Burma

## Record of Discussions

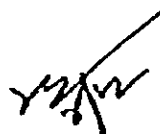
1. (1) In line with the forestry policy of the Socialist Republic of the Union of Burma aiming at the enhancement of forestry production on the basis of the third "Four Year Plan", the Government of the Socialist Republic of the Union of Burma and the Government of Japan will cooperate, through their appropriate agencies, in implementing the Technical Cooperation Project for the Forestry Development in the Arakan Range (hereinafter referred to as "the Project"). The purpose of the Project will be to establish forestry techniques for the proper development of hill forest, so as to contribute to the efficient extraction of the forest resources in the Arakan Range and other mountainous forest areas in Burma. The master plan of the Project is specified in Annex 1.

(2) The Project will be implemented based on the guidelines of the annual work plan to be formulated by the Joint Committee referred to in Article 8.

2. (1) In accordance with laws and regulations in force in Japan, the Japanese authorities concerned will take necessary measures to provide at their own expense the services of the Japanese experts as listed in Annex 2 through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

(2) In accordance with laws and regulations in force in the Socialist Republic of the Union of Burma, the Japanese experts mentioned above and their families will be granted in the Socialist Republic of the Union of Burma privileges, exemptions and benefits within the frame-work of the Colombo Plan Technical Co-operation Scheme.

H.7.



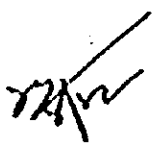
3. (1) In accordance with laws and regulations in force in Japan, the Japanese authorities concerned will take necessary measures to provide at their own expense such equipment, machinery, vehicles, motor boats, implements, instruments, tools, spare parts and other materials, as listed in Annex 3 required for the Project through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

(2) The articles referred to above will become the property of the Government of the Socialist Republic of the Union of Burma upon being delivered c.i.f. to the Burmese authorities concerned at the ports of disembarkation and/or international airports, and will be utilized exclusively for the implementation of the Project.

4. (1) In accordance with laws and regulations in force in Japan, the Japanese authorities concerned will take necessary measures to receive the Burmese personnel engaged in the Project for technical training or study tour in Japan through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

(2) The Government of the Socialist Republic of the Union of Burma through the authorities concerned will take necessary measures to ensure that the knowledge and experience acquired by the Burmese personnel through technical training in Japan will be utilized primarily for the effective implementation of the Project.

N. 2.



5. (1) In accordance with laws and regulations in force in the Socialist Republic of the Union of Burma, the Government of the Socialist Republic of the Union of Burma through the authorities concerned will take necessary measures to provide at its own expense:

- (a) the services of the Burmese experts and other personnel as listed in Annex 4;
- (b) acquisition of land and buildings as listed in Annex 5, as well as other incidental facilities required therefor;
- (c) supply or replacement of articles necessary for the implementation of the Project other than those provided by the Japanese authorities concerned under Article 3 (1);
- (d) suitable furnished housing accommodations for the Japanese experts and their families.

(2) In accordance with laws and regulations in force in the Socialist Republic of the Union of Burma, the Government of the Socialist Republic of the Union of Burma through the authorities concerned will take necessary measures to meet:

- (a) expenses necessary for the construction of forest roads and other facilities except for such equipment, machinery, vehicles, tools, spare parts and other materials, as listed in Annex 3;
- (b) expenses necessary for transportation within the Socialist Republic of the Union of Burma of the articles as listed in Annex 3 as well as for the installation, operation and maintenance thereof;
- (c) all operating expenses necessary for the implementation of the Project;

4.7

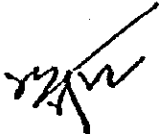


- (d) customs duties, internal taxes and any other charges, if any, imposed in the Socialist Republic of the Union of Burma with respect to the articles to be brought in from Japan as listed in Annex 3;
- (e) expenses for transportation facilities and internal travel in the Socialist Republic of the Union of Burma of the Japanese experts while on duty;
- (f) free medical and dental services and facilities for the Japanese experts and their families in state hospitals in Burma, within the framework of the Colombo Plan Technical Cooperation Scheme;
- (g) customs duties and taxes on personal and household effects of the Japanese experts and their families, as well as on one motor car for each expert, within the framework of the Colombo Plan Technical Cooperation Scheme.

6. The Ministry of Agriculture and Forests of the Government of the Socialist Republic of the Union of Burma will be responsible for the administrative matters for the implementation of the Project, and the Japanese experts will provide primarily technical guidance and advice for the Project.

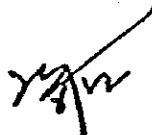
7. The Government of the Socialist Republic of the Union of Burma through the authorities concerned shall undertake to bear claims, if any accidents arise, on the Japanese experts engaged in the Project resulting from, occurring in the course of, or otherwise connected with, the discharge of their official functions in the Socialist Republic of the Union of Burma, except for those claims arising from wilfull misconduct or gross negligence of the Japanese experts.

N.T.



8. For the successful and smooth implementation of the Project a Joint Committee will be established as specified in Annex 6.
9. The period of cooperation will be from the date of signature of the record of discussions to the end of March in 1982. Concerning the follow-up cooperation thereafter, there will be mutual consultations between the two Governments concerned.

N.7.



## **Annex 1. The Master Plan of the Project**

### **1. Set-up of Implementing Organization**

(1) The Project will be implemented through the organization as shown in the attached chart.

(2) A Central Office of the Project will be established in the headquarters of the Timber Corporation in Rangoon.

(3) The Central Office will be headed by a Burmese project manager, who is the chief officer in charge of the Project.

A place will be given in the Office for one Japanese chief advisor, who is the chief of the Japanese experts dispatched for the Project.

(4) A Technical Cooperation Centre for the Development of Hill Forests will be established in Rangoon where Japanese experts and their counterparts are to be stationed.

(5) A Pilot Extraction Centre will be established in the South Arakan Area where associate experts and their counterparts are stationed, while Japanese experts and their counterparts will make visits for necessary supervision. The Pilot Centre will be composed of a Model Operation Forest in the Chaungtha reserved forest and a workshop in Bassein. The Scale of the Model Operation Forest will be around 1,000 ha in the Project period.

### **2. Functions of Each Component**

(1) The Central Office will be responsible for the overall administration and supervision of the Project.

It will also run the Joint Committee referred to in Articles 1 and 8, while coordinating the authorities concerned.

A.7.

(2) The Technical Cooperation Centre will conduct the following activities:

A. Development and Improvement of Requisite Techniques

- (1) Development and improvement of a system of timber extraction techniques in hill forests including cable logging system.
- (2) Development and improvement of a system of maintenance and repair techniques of forestry machinery to contribute to efficient mechanisation.

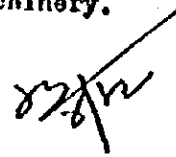
B. Fundamental Training

- (1) Education and training on the techniques of extraction planning for the rational development of hill forests.
- (2) Education and training on the operation of a yarder and other machines as well as on the maintenance and repair techniques of forestry machinery.

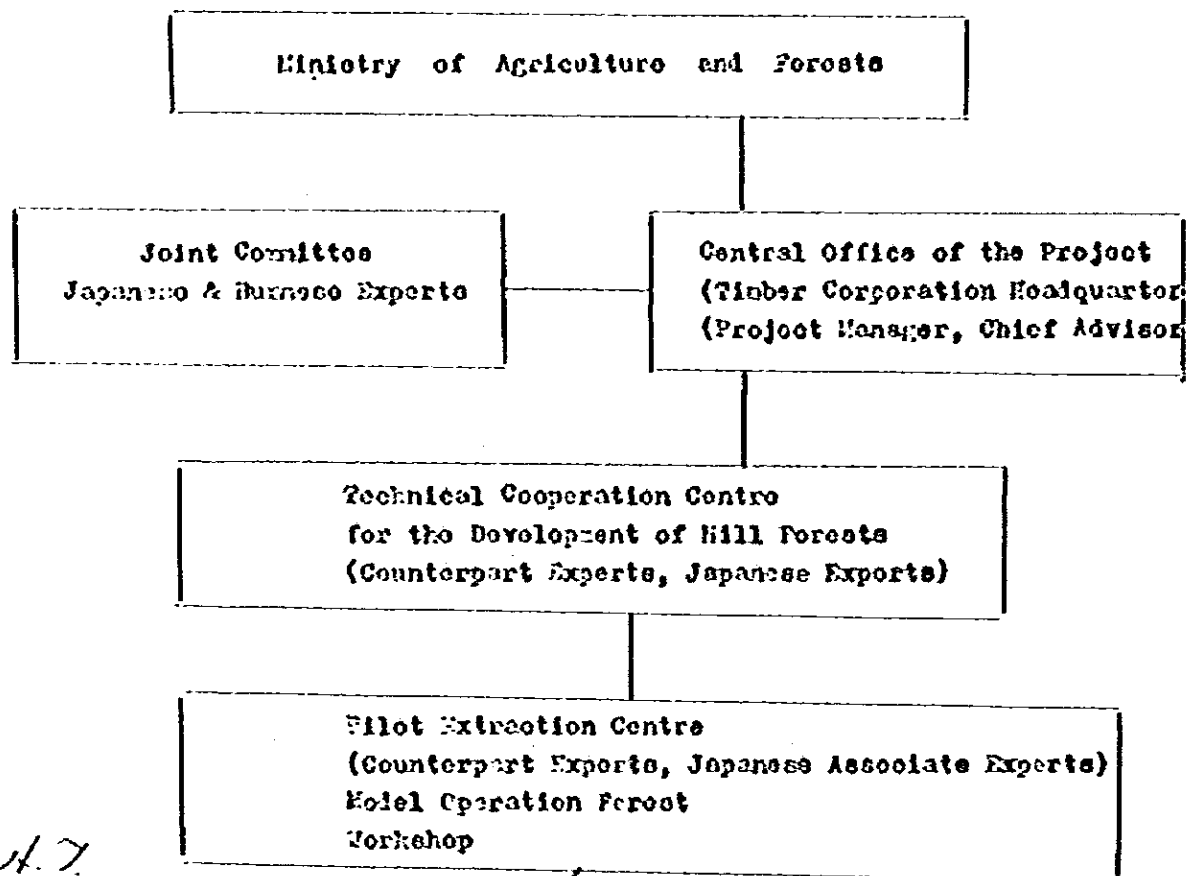
(3) The Pilot Extraction Centre will conduct the following activities:

- (1) At the Model Operation Forest will be given on-the-job training of various logging operations including cable logging system.
- (2) At the Workshop will be given on-the-job training of maintenance and repair works of forestry machinery.

N. J.



Organization Chart



Annex 2. Japanese Experts

Category	Field
1. Chief Advisor	
2. Experts	logging extraction machinery civil engineering extraction planning
3. Associate Experts	cable logging tractor logging forest road construction workshop mechanics
4. Liaison Officer	

Note: 1. The chief advisor will be attached to the Central Office of the project in the headquarters of the Tiaber Corporation.

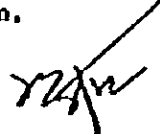
2. Short-term experts in the fields mentioned above as well as other fields to be mutually agreed upon may be dispatched when necessity arises.

N. J.



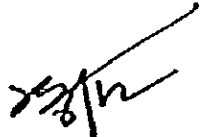
**Annex 3. Articles to be Provided  
by the Japanese Authorities Concerned**

1. Machinery, equipment and materials for extraction
2. Machinery, equipment and materials for forest road construction
3. Machinery, equipment and materials for a workshop
4. Machinery, equipment, implements, instruments and materials for training
5. Vehicles and motor boats
6. Spare parts and materials for repair works
- 117 7. Other necessary equipment, tools and materials to be mutually agreed upon.



**Annex 4. Burmese Counterparts and other Personnel**

<b>Category</b>	<b>Field</b>
1. Project Manager	
2. Deputy Project Manager	
3. Counterparts	logging extraction machinery civil engineering extraction planning
4. Liaison Officer	
5. Clerical and Service Employees	
6. Labourers	

A.7. 

## Annex 5. Land and Buildings

### 1. Buildings

- (1) A room for the Central Office in the headquarters of the Timber Corporation
- (2) Facilities for the Technical Cooperation Centre
  - (1) administrative office
  - (2) laboratories and lecture rooms
  - (3) dormitory for trainees
- (3) Facilities for the Model Operation Forest
  - (1) field accommodation for Japanese experts, counterparts, and trainees,
  - (2) sheds for machinery and equipment
- (4) Facilities for the Workshop
  - (1) workshop building
  - (2) sheds for machinery and equipment
  - (3) storehouse for materials and spare parts
  - (4) field accommodation for Japanese experts, counterparts and trainees.

### 2. Land.

- (1) All the requisite land for the above buildings
- (2) Land in the vicinity of Rangoon,  
as a training field for simulated logging operations  
3 ha
- (3) Land in the Chaungtha reserved forest,  
as the Model Operation Forest

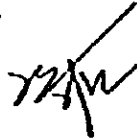
approx. 1,000 ha

**Annex 6. Composition of the Joint Committee**

<b>Chairman:</b>		<b>Project Manager</b>	
<b>Japanese Side</b>		<b>Burmese Side</b>	
1.	Chief Advisor	1.	Deputy Project Manager
2.	Experts	2.	Counterparts
3.	Liaison Officer	3.	Liaison Officer

**Note:** An official of the Embassy of Japan may attend the meetings of the Joint Committee as an observer.

*N.7.*




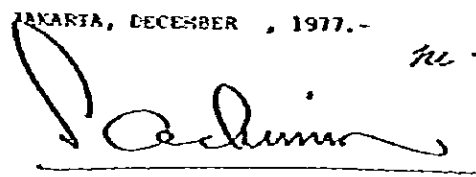
2. インドネシア・ジャワ山岳林収獲技術協力計画討議事録

RECORD OF DISCUSSIONS BETWEEN THE JAPANESE FORESTRY  
SURVEY TEAM AND PERUM PERHUTANI CONCERNING TECHNICAL  
COOPERATION FOR MOUNTAIN LOGGING PRACTICE PROJECT IN  
JAVA, ATA - 184.-

In pursuance of the preliminary survey which was conducted in June and July 1977, the Japanese Forestry Survey Team, organized by the Japan International Cooperation Agency (hereinafter referred to as JICA), and headed by Mr. Mishina visits the Republic of Indonesia from November 29 to December 9, 1977, for the purpose of discussing with PERUM PERHUTANI, State Forest Corporation of the Republic of Indonesia (hereinafter referred to as PERHUTANI), concerning the desirable measures to be taken by both Governments for the successful implementation of the Mountain Logging Practice Project.

As a result of the discussions, the Team and PERHUTANI agreed to recommend to their respective Governments to carry out the matters referred to in the attached document concerning the technical cooperation for the Mountain Logging Practice Project in Java, as a follow up of the Forest Inventory for Management and Logging for raw material supply to Central Java Pulp & Paper Mill.

  
TADUO MISHINA  
Head of the Japanese  
Forestry Survey Team

JAKARTA, DECEMBER , 1977.-  
  
SOEKHRAN ATNOSCEDARIO  
President Director of  
Perum Perhutani

MOUNTAIN LOGGING PRACTICE PROJECT  
IN JAVA

ATTACHED DOCUMENT

1. (1) For the purpose of transferring mechanical logging technology for yielding pine-logs as raw material to be supplied from mountainous forests of PERHUTANI to a pulp and paper mill which is to be established at Notoz, the Government of Japan and the Government of the Republic of Indonesia will cooperate with each other in implementing a technical cooperation for the Mountain Logging Practice Project in Java (hereinafter referred to as "the Project"). The master plan of the Project is specified in Annex I.  
(2) The Project will be implemented in accordance with an annual work plan to be formulated by the Joint-Committee referred to in paragraph 8.
2. (1) In accordance with laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense the services of the Japanese experts as listed in Annex II through the normal procedures under the Colombo Plan Technical Cooperation Scheme.  
(2) In accordance with the laws and regulations in force in the Republic of Indonesia, the Japanese experts mentioned in (1) above and their families will be granted in Indonesia the privileges, exemptions and benefits as listed in Annex III within the framework of the Colombo Plan Technical Cooperation Scheme.
3. (1) In accordance with laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at their own expense such equipment, machinery, vehicles, instruments, tools, spare parts and other materials required for the implementation of the Project as listed in Annex IV through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

- (2) The articles mentioned in (1) above will become the property of the Government of the Republic of Indonesia upon being delivered C.I.F. to the Indonesian authorities concerned at the ports or airports of disembarkation, and will be utilized exclusively for the implementation of the project in consultation with the Japanese Team Leader listed in Annex II.
4. (1) In accordance with laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to receive at its own expense the Indonesian personnel engaged in the Project for technical training or study tour in Japan through the normal procedures under the Colombo Plan Technical Cooperation Scheme.
- (2) The Government of the Republic of Indonesia will take necessary measures through PERHUTANI to ensure that the knowledge and experience acquired by the Indonesian personnel mentioned in (1) above through technical training and study tour in Japan may be utilized effectively for the implementation of the Project.
5. (1) In accordance with laws and regulations in force in Indonesia the Government of the Republic of Indonesia will take necessary measures through PERHUTANI to provide at its own expenses:
- (a) the services of the Indonesian technical officials and other personnel as listed in Annex V;
  - (b) land and building as listed in Annex VI as well as other incidental facilities required therefore;
  - (c) supply or replacement of articles necessary for the implementation of the Project other than those provided by the Government of Japan referred to in paragraph 3 (1);
  - (d) suitably furnished existing PERHUTANI housing accommodation for the Japanese experts and their families.
- (2) In accordance with laws and regulations in force in Indonesia the Government of the Republic of Indonesia will take necessary measures through PERHUTANI to meet;

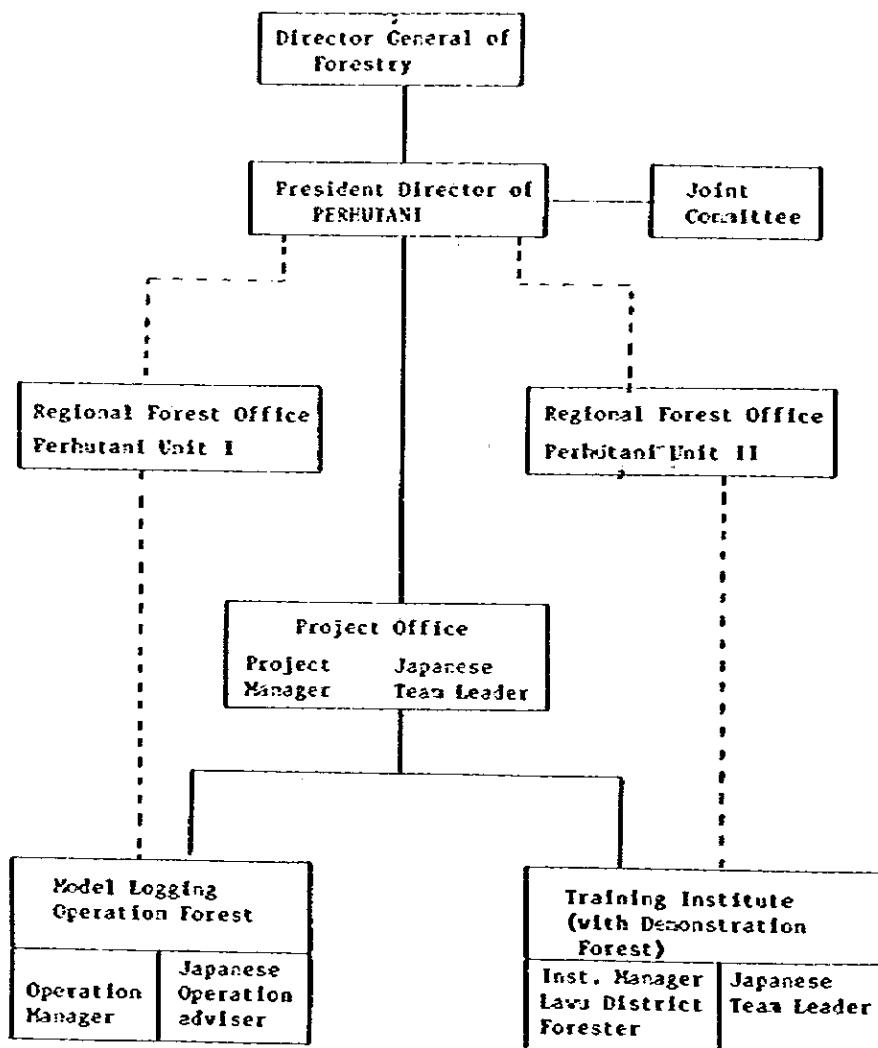
- (a) customs duties, internal taxes and any other charges, if any, imposed in the Republic of Indonesia in respect of the articles referred to in paragraph 3 (1);
  - (b) expenses necessary for transportation within the Republic of Indonesia, of the articles referred to in paragraph 3 (1) as well as for the installation, operation and maintenance thereof;
  - (c) all operational expenses necessary for the implementation of the Project;
  - (d) expenses for transportation facilities of internal travel of the Japanese experts on duty.
6. In accordance with laws and regulations in force in Indonesia the Government of the Republic of Indonesia undertakes to bear claims, if any arises, against the Japanese experts engaged in the Project resulting from, occurring in the course of, or otherwise connected with, the discharge of their official functions in the Republic of Indonesia, except for those claims arising from willful misconduct or gross negligence of the Japanese experts.
7. The Director General of Forestry, Ministry of Agriculture of the Republic of Indonesia, will be responsible for the administrative matters for the implementation of the Project and the Japanese experts will provide technical advice and guidance for the implementation of the Project.
8. For the successful implementation of the Project, a Joint Committee will be established as specified in Annex VII.
9. (1) The period of the technical cooperation mentioned in this Record of Discussions will be three (3) years starting at the date of the arrival of the Japanese experts.
- (2) There will be mutual consultations between the authorities concerned of both Governments concerning the possibility of further cooperation thereafter.

Annex I  
THE MASTER PLAN OF THE PROJECT

The object of the Project is to develop and to practice mountain logging technology at the organization as shown in the attached chart.

1. A Project Office will be established in Madiun, and will control the implementation of the Project.
2. A Training Institute at Madiun and Demonstration Forests at Lawu will be established, and the lecture of basic theory and the elementary practice for mechanical logging system and repair work will be implemented there for 6 months.
3. A Model Logging Operation Forest approximately 2,000 ha will be established at Pekalongan Forest District, Central Java, and the practical training for mechanical logging operation after the lecture and practice mentioned in (1) above will be implemented there for 12 months.
4. In principle, practical training in the Model Logging Operation Forest, so called "on-the-job training" will be implemented under the supervision of PERHUTANI, and the Training Institute will dispatch requested instructors to the job site from time to time.
5. The synopsis of the training items are as follows, and details of the curriculum will be determined through discussion between the Japanese experts and their counterparts;
  - a. Design and practice of skyline-logging
  - b. Design and practice of tractor-logging
  - c. Design and practice of access road construction
  - d. Operation of forestry equipment/machinery
  - e. Maintenance of forestry equipment/machinery.
6. Graduates will work mainly as technical staff who will be the leader of logging operation in PERHUTANI's working sites.

Attached Chart: ORGANIZATION CHART FOR INDONESIA - JAPAN  
MOUNTAIN LOGGING PRACTICE PROJECT



**Annex II**  
**THE JAPANESE EXPERTS**

<b>Category</b>	<b>Field of Specialty</b>
1. Team Leader	
2. Experts	Management of Logging Logging Forestry Machines
3. Project Liaison Officer	

- Note:**
1. Team leader will be assigned to the Training Institute and concurrently be appointed as representative of Japanese side at Project Office in Madiun.
  2. Above experts will be assigned to the Training Institute and one of those experts will be nominated by the Team Leader concurrently as the operation adviser of Model Logging Operation Forest.
  3. Beside the above experts, short term experts for the same fields as well as wood/forest products processing, soil conservation, forest protection, reforestation, forest survey and other forestry technical fields may be dispatched, if necessary, upon mutual agreement by both parties.

**Annex III**  
**PRIVILEGES, EXEMPTIONS AND BENEFITS**

(In accordance with laws and regulations in force in Indonesia)

1. Exemption from income tax and charges of any kind imposed on or in connection with the living allowance remitted from abroad.
2. Exemption from import and export duties and any other charges imposed in respect of personal and household effects ④ for each expert which may be brought into the Republic of Indonesia from abroad.
3. Free local medical services and facilities to the Japanese experts and their families in accordance with the regulations applied to Indonesian Government officials.

Annex IV  
THE EQUIPMENT, MACHINERY AND OTHER ARTICLES

1. Machinery, equipment and materials necessary for the skyline logging.
2. Machinery, equipment and materials necessary for the tractor logging.
3. Machinery, equipment and materials necessary for the access road construction.
4. Machinery, equipment and materials necessary for the audio-visual and other lectures and practice.
5. Equipment, tools, spare parts and materials for repair work
6. Vehicles
7. Other necessary equipment, tools and materials to be mutually agreed upon.

Annex V  
INDONESIAN TECHNICAL OFFICIALS  
AND OTHER PERSONNEL

Category	Field
1. Project Manager	
2. Manager of Training Institute	
3. Operation Manager of Model Logging Operation Forests	
4. Counterparts	Management of Logging Logging Forestry Machine
5. Clerical and service personnel including typists, clerks and drivers	
6. Laborers	

Note: Number and period of service of the above mentioned officials and other personnel will be adjusted according to necessary from time to time.

Annex VI  
LAND, BUILDINGS AND FACILITIES

1. Land

(1) Training Institute

- a. Land for the buildings and facilities ("Perhutani Pusdiklat" buildings and facilities will be utilized).
- b. Demonstration Forest approximately 200 Ha (Lawu Forest District)

(2) Model Logging Operation Forest approx. 2,000 ha (West Pekalongan Forest District)

2. Buildings and Facilities

(1) Project Office

(2) Training Institute

- a. Lecture Room, Practical Training Room and Administrative Office.
- b. Warehouse for Forestry Equipment/Machinery
- c. Workshop
- d. Garages
- e. Warehouse for Equipment and Materials
- f. Dormitory for Trainees
- h. Guest House
- i. Facilities in the Demonstration Forest such as Office Room, Warehouse for Machinery and Equipment, etc.

(3) Model Logging Operation Forest

- a. Administration Office
- b. Dormitory for Instructors
- c. Garages
- d. Warehouse for Equipments and Materials
- e. Generator Houses
- f. Pump Houses

Annex VII  
COMPOSITION OF THE JOINT COMMITTEE

1. Chairman                      President Director of PERHUTANI
2. Vice Chairman                Director of Programming  
                                    Directorate General of Forestry
3. Members
  - Indonesian side
    - 1) Project Manager
    - 2) Manager of Training Institute
    - 3) Representative of the Bureau of Planning,  
Ministry of Agriculture
    - 4) Representatives of PERHUTANI
  - Japanese side
    - 1) Team Leader
    - 2) Experts designated by Team Leader
    - 3) Liaison Officer
    - 4) Representatives of JICA

Note: An official of the Embassy of Japan may attend the meetings of the Joint - Committee as an observer.  
An official of the Government of the Republic of Indonesia assigned by the Director General of Forestry may attend the meetings of the Joint - Committee as an observer.

別 添



SEKRETARIAT NEGARA  
SEKRETARIAT KABINET RI

Jakarta, March 5, 1981.

NO. 1628 /Set.Kab/LN/P/3/1981.

Mr. K. Teshima  
First Secretary  
Embassy of Japan  
J A K A R T A .

Dear Mr. Teshima,

EXTENSION FOR PROJECT ATA-184

Referring to the Interim Report on Evaluation of Mountain Logging Practice Project in Java (ATA - 184), prepared by the Japanese and Indonesian Joint Evaluation Team on October 1, 1980, I would like to submit a technical assistance request for the extension of the project from April, 1981 to June, 1982 .

We would highly appreciate your kind assistance in forwarding this request to your Government for their favourable consideration and approval .

Thanking you for your continued cooperation, I remain,

Sincerely yours,

Indra Kartasasmita  
Head  
Bureau for Technical  
Cooperation.

CC :

1. Sekjen Dept Pertanian
2. Ditjen Kehutanan, Deptan
3. Dit KST, Dept Luar Negeri
4. Biro Pertanian dan Pengairan, BAPPENAS
5. JICA Representative Jakarta
6. PERUM PERHUTANI, Jln Gatot Subroto, Jakarta.



3. インドネシア・南スマトラ森林造成技術協力計画討議録事録

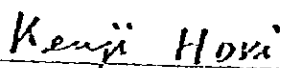
THE RECORD OF DISCUSSION BETWEEN THE JAPANESE  
IMPLEMENTATION SURVEY TEAM AND THE  
AUTHORITIES CONCERNED OF THE GOVERNMENT OF  
THE REPUBLIC OF INDONESIA  
ON THE TECHNICAL COOPERATION FOR THE TRIAL  
PLANTATION PROJECT IN BENAKAT, SOUTH SUMATERA  
( ATA - 186 )


The Japanese Implementation Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as JICA) and headed by Mr. Kenji Hori, Director of Forestry Development Cooperation Department, JICA, visited the Republic of Indonesia from April 2 to April 17 1979 for the purpose of working out the details of the technical cooperation program concerning the trial plantation project in Benakat, South Sumatra, in the Republic of Indonesia.

During its stay in the Republic of Indonesia, the Team exchanged views and had a series of discussions with the Indonesian authorities concerned in respect of the desirable measures to be taken by both Governments for the successful implementation of the above-mentioned Project.

As a result of the discussions, the Team and the Indonesian authorities concerned agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

Jakarta, April 12 1979

  
Kenji Hori  
Head of the Japanese  
Implementation Survey Team.

  
Ir. Moch. Harris Soeranggadjiva  
Director of Forestry Planning  
The Directorate General of Forestry.

## **THE ATTACHED DOCUMENT**

### **I. COOPERATION BETWEEN THE GOVERNMENT OF JAPAN AND THE GOVERNMENT OF THE REPUBLIC OF INDONESIA FOR THE TRIAL PLANTATION PROJECT IN BANAKAT, SOUTH SUMATERA**

1. The Government of Japan and the Government of the Republic of Indonesia will cooperate with each other in implementing the Technical Cooperation for the Trial Plantation Project in Banakat, South Sumatra (hereinafter referred as "the Project") for the purpose of establishing afforestation techniques so as to contribute to successful afforestation in the grassland in South Sumatra.
2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

### **II. DISPATCH OF JAPANESE EXPERTS**

1. In accordance with the laws and regulations in force in Japan the Government of Japan will take necessary measures through JICA to provide at its own expense services of the Japanese experts as listed in Annex II through normal procedures under the Colombo Plan Technical Cooperation Scheme.
2. The Japanese experts referred to in 1 above and their families will be granted in the Republic of Indonesia the privileges, exemptions and benefits no less favourable than those accorded to experts of third countries working in the Republic of Indonesia under the Colombo Plan Technical Cooperation Scheme, and will include the following:
  - (1) Exemption from income tax and charges of any kind imposed on or in connection with the living allowances remitted from abroad;
  - (2) Exemption from import and export duties and any other charges imposed in respect of personal and household effects which may be brought into from abroad or taken out of the Republic of Indonesia;

- (3) Exemption from import tax, import sales tax, sales tax, and other taxes and charges of any kind imposed on or in connection with the purchase in the Republic of Indonesia by the Experts of one motor vehicle per each expert;
- (4) Free local medical services and facilities to the Japanese Experts and their families.

### III. PROVISION OF MACHINERY AND EQUIPMENT

- 1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense such machinery, equipment and other materials necessary for the implementation of the Project as listed in annex III, through the normal procedures under the Colombo Plan Technical Cooperation Scheme.
- 2. The articles referred to in 1 above will become the property of the Government of the Republic of Indonesia upon being delivered c.i.f. to the Indonesian authorities concerned at the ports and or the airports of disembarkation, and will be utilized exclusively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.

### IV. TRAINING OF INDONESIAN PERSONNEL IN JAPAN

- 1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to receive at its own expense the Indonesian personnel connected with the Project for technical training in Japan through the normal procedures under the Colombo Plan Technical Cooperation Scheme.
- 2. The Government of the Republic of Indonesia will take necessary measures to ensure that the knowledge and experience acquired by the Indonesian personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

**V. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF INDONESIA**

1. In accordance with the laws and regulations in force in the Republic of Indonesia, the Government of the Republic of Indonesia will take necessary measures to provide at its own expense:
  - (1) Services of the Indonesian counterpart personnel and administrative personnel as listed in Annex IV;
  - (2) Land, buildings and facilities as listed in Annex V;
  - (3) Supply of replacement of machinery, equipment, instrument, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than those provided through JICA under III above;
  - (4) Transportation facilities and travel allowance for the Japanese experts for the official travel within the Republic of Indonesia;
  - (5) Existing suitably furnished accommodations for the Japanese experts and their families.
2. In accordance with the laws and regulations in force in the Republic of Indonesia, the Government of the Republic of Indonesia will take necessary measures to meet:
  - (1) Expenses necessary for the transportation within the Republic of Indonesia of the articles referred to in III above as well as for instalation, operation and maintenance thereof;
  - (2) Customs duties, internal taxes and any other charges, imposed in the Republic of Indonesia on the articles referred to in III above;
  - (3) All running expenses necessary for the implementation of the Project.
  - (4) The safety of the Project in general and the Forest fire in particular.

#### VI. ADMINISTRATION OF THE PROJECT

1. The Directorate General of Forestry will be responsible for the administrative matters for the implementation of the Project and the Japanese experts will provide technical advice and guidance for the implementation of the Project.
2. In order to secure smooth operation of the Project, a Joint-Steering Group will be established. The group will meet regularly at least once a year and its main task will be to formulate annual operational work plan and evaluate the progress of the Project, and to deal with the specific problems. The composition of the Group is specified in Annex VI.
3. The Project will be implemented with close cooperation extended by the Forest Research Institute, Forest Product Research Institute and the Provincial Forest Office of the Republic of Indonesia. The Project Organization is specified in Annex VII.

#### VII. CLAIMS AGAINST JAPANESE EXPERTS.

The Government of the Republic of Indonesia undertakes to bear claims, if any arises, against the Japanese experts engaged in the Project resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in the Republic of Indonesia except for those arising from the wilful misconduct or gross negligence of the Japanese experts.

#### VIII. MUTUAL CONSULT

There will be mutual consultation between the two Government on any major issues from, or in connection with this Attached Document.

#### IX. TERM OF CONSULTATION

The duration of the technical cooperation for the Project under this Attached Document will be five years from the date of signature of the Record of Discussion.

**ANNEX 1. MASTER PLAN**

1. A Project Office will be established at Bogor and Project Implementation Centre will be established at Benakat area in South Sumatra.

**Note :** Existing Forestry Office at Palembang will be used for communication.

2. The Project Office will conduct the administration and supervision of the Project. It will run the joint - Steering Group referred to in Article VI.
3. The Project Implementation Centre consists of an administrative office related facilities, trial plantation forest and nurseries. Development and improvement of planting techniques and on the job training will be performed in the Project Implementation Centre.
4. Trial plantation forests will be established at three different areas, each of which is around 700 ha based on the afforestation model for trial plantation forests as the result of the studies carried out in the previous scope of work signed on September 1st 1977.
5. Items of development and improvement
  - (1) Species trial
  - (2) Nursery techniques
  - (3) Planting techniques
  - (4) Techniques for counter-measures against fire, insect, disease and meteorological damage
  - (5) Techniques for designing and managing forest roads and soil-conservation work
  - (6) Techniques for the application of machine power

- (7) Test and investigation on the environmental implication of afforestation
- (8) Tests and studies on the social implications of afforestation
- (9) Planning and evaluation technique of afforestation project
- (10) Other necessary techniques

## **Annex II. Japanese Experts**

<b>Category</b>	<b>Field</b>	
1. Chief Advisor		1
2. Experts	Silviculture and Nursery	2
	Forest Ecology	1
	Forest Protection	1
	Forest Engineering	1
3. Liaison Officer		

- Note :**
1. The Chief advisor will be attached to the Project Office at Bogor.
  2. A team leader will be nominated by JICA from among the Experts.
  3. Short-term experts in the fields mentioned above and other fields may be dispatched when necessity arises.

## **Annex III. Articles to be provided by the Japanese Authorities concerned**

1. Machinery, equipment, spare parts and materials for nursery work
2. Machinery, equipment, spare parts and materials for planting work
3. Machinery, equipment, spare parts and materials for tending work
4. Machinery, equipment, spare parts and materials for forest roads, fire break, and soil conservation works
5. Machinery, equipment, spare parts and materials for fire control
6. Equipment, implements, instruments, spare parts and materials for research and training

7. Vehicles and their spare parts
8. Equipment, tools, spare parts and materials for repair work
9. Equipment, spare parts and materials for public utilities including radio communication system
10. Other necessary equipment, tools and materials to be mutually agreed upon

**Annex IV. Indonesian Counterparts and Other Personnel**

Category		Field	
1.	Project Manager (Senior Officer)		1
2.	Field Manager		1
3.	Counterparts	Silviculture and Nursery	2
		Forest Ecology	1
		Forest Protection	2
		Forest Engineering and Soil Conservation	2
4.	Clerical and Service Employees		
5.	Laborers		

**Note :** Number and period of service of the above mentioned officials and other personnel will be adjusted according to the necessity from time to time

**Annex V. Land Buildings**

**1. Land**

- (1) Land for nurseries**
- (2) Land for trial plantation forests**
- (3) Land for administration office and related facilities**

**2. Buildings**

- (1) A Project office at Bogor**
- (2) Administration office and related facilities in Benakat area**
  - 1. administration office**
  - 2. laboratories and lecture rooms**
  - 3. sheds for machinery and equipment**
  - 4. storehouse for forestry materials**
  - 5. workshop and garage**
  - 6. generator and pump house**
  - 7. field accommodation for Japanese experts and Indonesian counterparts**
  - 8. guest house**
  - 9. others**

**Annex VI. Composition of the Joint-Steering Group**

**1. Chairman**

**Director of Forestry Planning, Directorate General of Forestry**

**2. Members**

**(1) Indonesian side**

- Representative of Bureau Planning, Department of Agriculture
- Representative of the Directorate of Forestry Planning  
Directorate General of Forestry
- Representative of the Directorate of Reforestation and  
Rehabilitation, Directorate General of Forestry
- Representative of the Forest Research Institute and Forest  
Product Research Institute
- Representative of the South Sumatra Provincial Forest  
Office
- Project Manager and Field Manager

**(2) Japanese side**

**Chief Advisor**

**Team Leader**

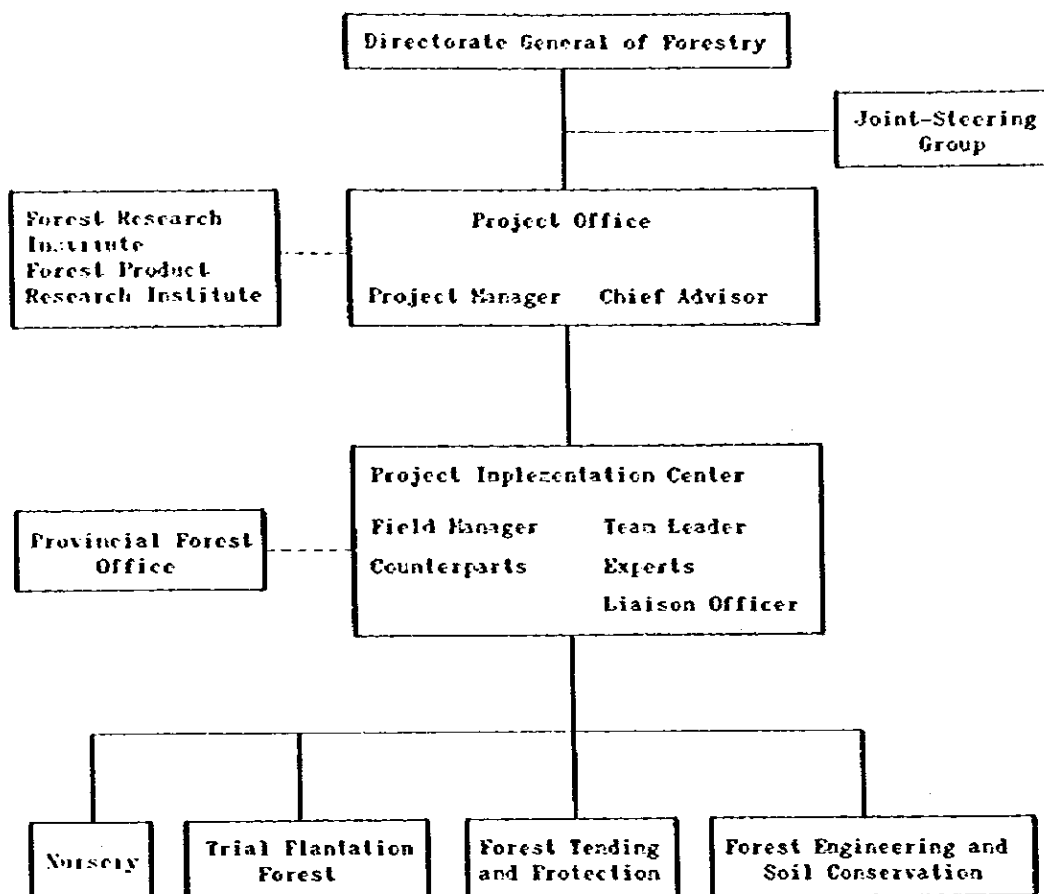
**Representative of JICA**

**Expert(s) designated by Chief Advisor**

**Liaison Officer**

- Note :**
1. Officials of the Embassy of Japan may attend the meeting of the Joint-Steering Group as observers
  2. Officials of the Government of the Republic of Indonesia assigned by the Director General, Directorate General of Forestry may attend the meeting of the Joint-Steering Group as observers

Annex VII. Organization Chart



MINUTES OF DISCUSSIONS BETWEEN THE JAPANESE CONSULTATION  
MISSION AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT  
OF THE REPUBLIC OF INDONESIA ON THE IMPLEMENTATION OF THE  
PILOT INFRASTRUCTURE SCHEME IN THE TRIAL PLANTATION PROJECT  
IN BENAKAT, SOUTH SUMATERA


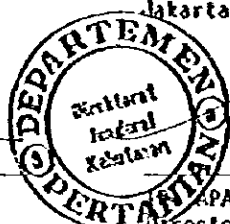

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The Japanese Consultation Mission (hereinafter referred to as "the Mission"), headed by Mr. Masato Furuya and organized by the Japan International Cooperation Agency (hereinafter referred to as "the JICA"), visited the Republic of Indonesia from June 25 to July 9, 1981, for the purpose of outlining the proposed pilot infrastructure scheme (hereinafter referred to as "the Scheme") established in the Trial Plantation Project in Benakat, South Sumatera, which is being implemented by Record of Discussions signed between the JICA and Directorate General of Forestry on April 12, 1979.

During its stay in the Republic of Indonesia, the Mission had a series of discussions and exchanged views with the Directorate General of Forestry on basic matters necessary for the implementation of the Scheme.

As a result of discussions, the Directorate General of Forestry and the Mission recognized the importance and necessity of the Scheme and agreed to implement the Scheme according to the herein general work plan under the cooperation of the implementing agencies of the two governments and to recommend the matters referred to in the attached general work plan to their respective governments.

Jakarta, July 6, 1981.

    
MR. MASATO FURUYA  
Team Leader  
The Japanese Consultation  
Mission  
KATSUTOSHI KATSUNOKORO  
Director  
Directorate of Reforestation and  
Rehabilitation  
Directorate General of Forestry

**GENERAL WORK PLAN ON  
THE PILOT INFRASTRUCTURE SCHEME IN  
THE TRIAL PLANTATION PROJECT IN BENAKAT, SOUTH SUMATERA**

**1. Purpose**

The Trial Plantation Project in Benakat, South Sumatera aims at the development and improvement of afforestation techniques on tropical grasslands. For this purpose, new afforestation techniques are introduced and adjusted through trial plantation so as to fit into the conditions of the tropical grasslands. In order to promote a large scale afforestation in Indonesia in future, it is essential to involve local inhabitants in the process of afforestation so that established plantations can be well protected and improved techniques spread widely in many localities.

The Pilot Infrastructure Scheme aims at carrying out agroforestry and prepare required infrastructure for a model plantation to encourage people's participation in afforestation exercise.

**2. Outline of the Pilot Infrastructure Scheme.**

**1). Proposed Project Area**

Inside the Trail Plantation Project (ATA-186) area or its vicinity which has suitable geographical and topographical conditions.

**2) Components of Infrastructure**

Necessary infrastructure such as forest roads, bridges, look-out towers and fire breaks will be constructed in the Project area.

**3) Tree Species Introduced.**

Tree species suitable for firewood, charcoal, construction and furniture manufacturing will be planted. In addition, fruit trees or other agricultural crops will be introduced.

**3. Measures to be taken by JICA**

- 1. To bear expenses necessary for the following construction works.**
  - a. Forest roads.
  - b. Cultivation of project area
  - c. Fire prevention facilities
  - d. Bridges
  - e. Other appurtenant works (including procurement of materials and equipment)
- 2) To dispatch short-term experts for basic design and supervision of construction works.**

**Measures to be taken by Directorate General of Forestry,**

- 1) To make necessary lands available for the Scheme.**
- 2) To bear all expenses necessary for the establishment of plantations for the following works other than those carried out by JICA.**
  - a. Production of seedlings.
  - b. Site preparation.
  - c. Planting.
  - d. Tending.
  - e. Fertilization and supply of fertilizers.
- 3). To make necessary arrangements for the participation of local inhabitants in the Project area with full understanding of and cooperation with the Scheme.**
- 4) Other related activities**

4. フィリピン・パンタバンガン森林造成技術協力計画討議議事録

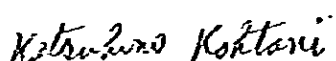
RECORD OF DISCUSSIONS BETWEEN THE JAPANESE  
FORESTRY SURVEY TEAM AND DEPARTMENT OF  
NATURAL RESOURCES CONCERNING THE TECHNICAL  
COOPERATION PROJECT FOR THE AFFORESTATION  
OF THE PANTABANGAN AREA.

- ooo -

In pursuance of the Survey for Implementation Planning of the Project which was conducted in December, 1975, the Japanese Forestry Survey Team, organized by the Japan International Cooperation Agency (JICA) and headed by Mr. Katsuhiro KOHTARI, Special Adviser to the President of JICA visited the Philippines from June 10 to 18, 1976, for the purpose of discussing with the authorities concerned of the Government of the Republic of the Philippines concerning the desirable measures to be taken by both Governments to implement the Technical Cooperation Project for the Afforestation of the Pantabangan Area.

As a result of the discussions, both parties agreed to recommend to their respective Governments to carry out the matters referred to in the attached Record of Discussions concerning the technical co-operation in the said project.

June 18, 1976

  
KATSUHIRO KOHTARI  
Head of the Japanese  
Forestry Survey Team

  
EDMUNDO V. CORTES  
Director  
Bureau of Forest Development

## RECORD OF DISCUSSIONS

1. (1) In line with the forestry policy of the Republic of the Philippines aiming at the proper conservation, management and utilization of forest resources, the Government of the Republic of the Philippines and the Government of Japan will cooperate, through their appropriate agencies, in implementing the Technical Co-operation Project for the afforestation of the Pantabangan Area (hereinafter referred to as "the Project").

The purpose of the Project will be to establish afforestation techniques so as to contribute to successful afforestation in the open grass lands and other denuded lands of about 50,000 has. in the Pantabangan Area which is one of the most important watersheds in the Republic of the Philippines. The master plan of the Project is specified in Annex 1.

- (2) The Project will be implemented based on the guidelines of the annual work plan to be formulated by the Joint Committee referred to in Article 8.



K.K.

2. (1) In accordance with laws and regulations in force in Japan, the Japanese authorities concerned will take necessary measures to provide at their own expense the services of the Japanese experts as listed in Annex 2 through the normal procedures under the Colombo Plan Technical Cooperation Scheme.
- (2) In accordance with laws and regulations in force in the Philippines, the Japanese experts mentioned above and their families will be granted in the Philippines, privileges, exemptions and benefits within the framework of the Colombo Plan Technical Cooperation Scheme.
3. (1) In accordance with laws and regulations in force in Japan, the Japanese authorities concerned will take necessary measures to provide at their own expense such equipment, machinery, vehicles, a motor boat, implements, instruments, tools, spare parts and other materials, as listed in Annex 3 required for the Project through the normal procedures under the Colombo Plan Technical Cooperation Scheme.
- (2) The articles referred to above will become the property of the Government of the Republic of the Philippines upon being delivered c.i.f.

K.K.

to the Philippine authorities concerned at the ports of disembarkation and/or international airports, and will be utilized exclusively for the implementation of the Project.

4. (1) In accordance with laws and regulations in force in Japan, the Japanese authorities concerned will take necessary measures to receive the Philippine personnel engaged in the Project for technical training or study tour in Japan through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

(2) The Government of the Republic of the Philippines through the authorities concerned will take necessary measures to ensure that the knowledge and experience acquired by the Philippine personnel through technical training in Japan will be utilized primarily for the effective implementation of the Project.

5. (1) In accordance with laws and regulations in force in the Philippines, the Government of the Republic of the Philippines through the authorities concerned will take necessary measures to provide at its own expense:

(a) the services of the Philippine experts

and other personnel as listed in Annex 4;

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- (b) acquisition of land and buildings as listed in Annex 5, as well as other incidental facilities required therefor;
  - (c) supply or replacement of articles necessary for the implementation of the Project other than those provided by the Japanese authorities concerned under Article 3 (1);
  - (d) suitably furnished housing accommodations for the Japanese experts and their families.
- (2) In accordance with laws and regulations in force in the Philippines, the Government of the Republic of the Philippines through the authorities concerned will take necessary measures to meet:
- (a) expenses necessary for the construction of forest roads and other facilities except for such equipment, machinery, vehicles, tools, spare parts and other materials, as listed in Annex 3;
  - (b) expenses necessary for transportation within the Philippines of the articles as listed in Annex 3 as well as for the installation, operation and maintenance thereof;
  - (c) all operating expenses necessary for the implementation of the Project;

K.K.

- (d) customs duties; internal taxes and any other charges, if any, imposed in the Philippines with respect to the articles to be brought in from Japan as listed in Annex 3;
- (e) expenses for transportation facilities and internal travel in the Republic of the Philippines of the Japanese experts while on duty;
- (f) free medical and dental services and facilities for the Japanese experts and their families, within the framework of the Colombo Plan Technical Cooperation Scheme;
- (g) customs duties and taxes on personal and household effects of the Japanese experts and their families, as well as on one motor car for each expert, within the framework of the Colombo Plan Technical Cooperation Scheme.

6. The Secretary of the Department of Natural Resources through the Director of the Bureau of Forest Development of the Government of the Republic of the Philippines will be responsible for the administrative matters for the implementation of the Project, and the Japanese experts will provide primarily technical guidance and advice for the Project.

7. The Government of the Republic of the Philippines through the authorities concerned shall undertake

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to bear claims, if any accidents arise, on the Japanese experts engaged in the Project resulting from, occurring in the course of, or otherwise connected with, the discharge of their official functions in the Philippines, except for those claims arising from willfull misconduct or gross negligence of the Japanese experts.

8. For the successful and smooth implementation of the Project a Joint Committee will be established as specified in Annex 6.
9. (1) The period of the technical cooperation mentioned in this record of discussions will be two (2) years.  
(2) Within this period there will be mutual consultations between the two governments to reach a bilateral agreement for the technical cooperation thereafter.  
(3) This record of discussions will serve as a basis for the implementation of the Project.

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Annex 1. The Master Plan of the Project

The Project will be implemented through the organization as shown in the attached chart. The Technical Cooperation Center is composed of an administrative office and related facilities, a pilot forest, and nurseries.

The administrative office and related facilities will be established in the district office of the Upper Pampanga River Basin Multiple Use Management District. Supervision and administration of the whole activities of the Technical Cooperation Center, as well as the fundamental experiments and indoor trainings necessary for the Project implementation, will be conducted by the officers stationed at the Center.

In the Pilot Forest (including forest roads) and the nurseries, development and improvement of requisite techniques and on-the-job training will be performed.

As to the scale of the Pilot Forest, trial plantations of 1,300 has. will be established in the first phase of the Project, and test plantations of 6,800 has. in the second phase.

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The activities of the Center will be:

1. Development and improvement of requisite techniques

1) Development of specific techniques

- (1) Species trial
- (2) Tree improvement
- (3) Trials in nursery techniques
- (4) Trials in planting techniques
- (5) Trials of counter measures against fire, insects, diseases and meteorological damages
- (6) Trials in the techniques on forest road and soil conservation works

2) Management Test

- (1) Systematization of silvicultural and forest protection techniques
- (2) Economic assessment of afforestation on an industrial scale
- (3) Test and investigation on the environmental implications of afforestation
- (4) Test and study on the social implications of afforestation
- (5) Other necessary studies and investigation


2. Technical Training

1) Training of managerial staff

- (1) Planning techniques of afforestation project



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- (2) Technical and managerial aspects of nursery and plantation works
  - (3) Techniques for designing and managing forest road and soil conservation works
  - (4) Techniques for the application of machine power
  - (5) Techniques to control fire, insects, diseases and meteorological damages
- 2) Training of Technical Staff
- (1) Techniques of nursery and plantation works
  - (2) Techniques of tree improvement
  - (3) Techniques of forest road and soil conservation works
  - (4) Operation and maintenance of machinery
  - (5) Education on forest protection
- 

**Annex 2. Japanese Experts**

<b>Category</b>	<b>Field</b>
1. Chief Adviser	
2. Experts	Silviculture
	Forest Environment
	Tree Improvement
	Forest Management
3. Liaison Officer	


- Note:**
1. The Chief Adviser will be attached to the Central Office of the Project in the Department of Natural Resources.
  2. A team leader will be nominated by JICA from among the Experts.
  3. Short-term experts in the fields mentioned above as well as soil conservation and erosion control, civil and mechanical engineering, forest protection and other fields may be dispatched when necessity arises.



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Annex 3. Articles to be Provided by the Japanese  
Authorities Concerned

1. Machinery, equipment and materials for nursery works
2. Machinery, equipment and materials for planting works.
3. Machinery, equipment and materials for tending and thinning.
4. Machinery, equipment and materials for forest road, fire break, and soil conservation works.
5. Machinery, equipment and materials for fire fighting.
6. Equipment, implements, instruments and materials for research and training.
7. Vehicles and a motor boat.
8. Equipment, tools, spare parts and materials for repair works.
9. Equipment and materials for public utilities including radio communication system.
10. Other necessary equipment, tools and materials to be mutually agreed upon.



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**Annex 4. Philippine Counterparts and Other Personnel**

<b>Category</b>	<b>Field</b>
1. Project Director	
2. Project Leader	
3. Co-project Leader	
4. Counterparts	Silviculture Forest Environment Tree Improvement Forest Management Soil Conservation & Erosion Control Civil & Mechanical Engineering Forest Protection
5. Assistants	
6. Clerical and Service Employees	
7. Laborers	

**Note:** 1. Co-project Leader may concurrently act as a counterpart in one of the above fields.

2. Counterparts in the fields of Soil Conservation & Erosion Control and Forest Protection may be on a short-term basis.



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**Annex 5. Land and Buildings**

- 1. Land**
  - 1) Land for Nurseries**
  - 2) Land for Pilot Forest**
    - (1) trial plantations 1,300 has.**
    - (2) test plantations 6,800 has.**
  - 3) Land for Administrative Office of the Technical Cooperation Center and related facilities.**
- 2. Buildings**
  - 1) Central Office in the Department of Natural Resources**
  - 2) Administrative Office and the related facilities.**
    - (1) administrative office**
    - (2) laboratories and lecture rooms**
    - (3) storehouse for forestry materials**
    - (4) sheds for machinery and equipment**
    - (5) workshop garage**
    - (6) generator house**
    - (7) pump house**
    - (8) dormitory for trainees**
    - (9) field accommodation for Japanese experts and Philippine counterparts**
    - (10) guest house**
    - (11) others**


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Annex 6. Composition of the Joint Committee

Chairman: BFD Director

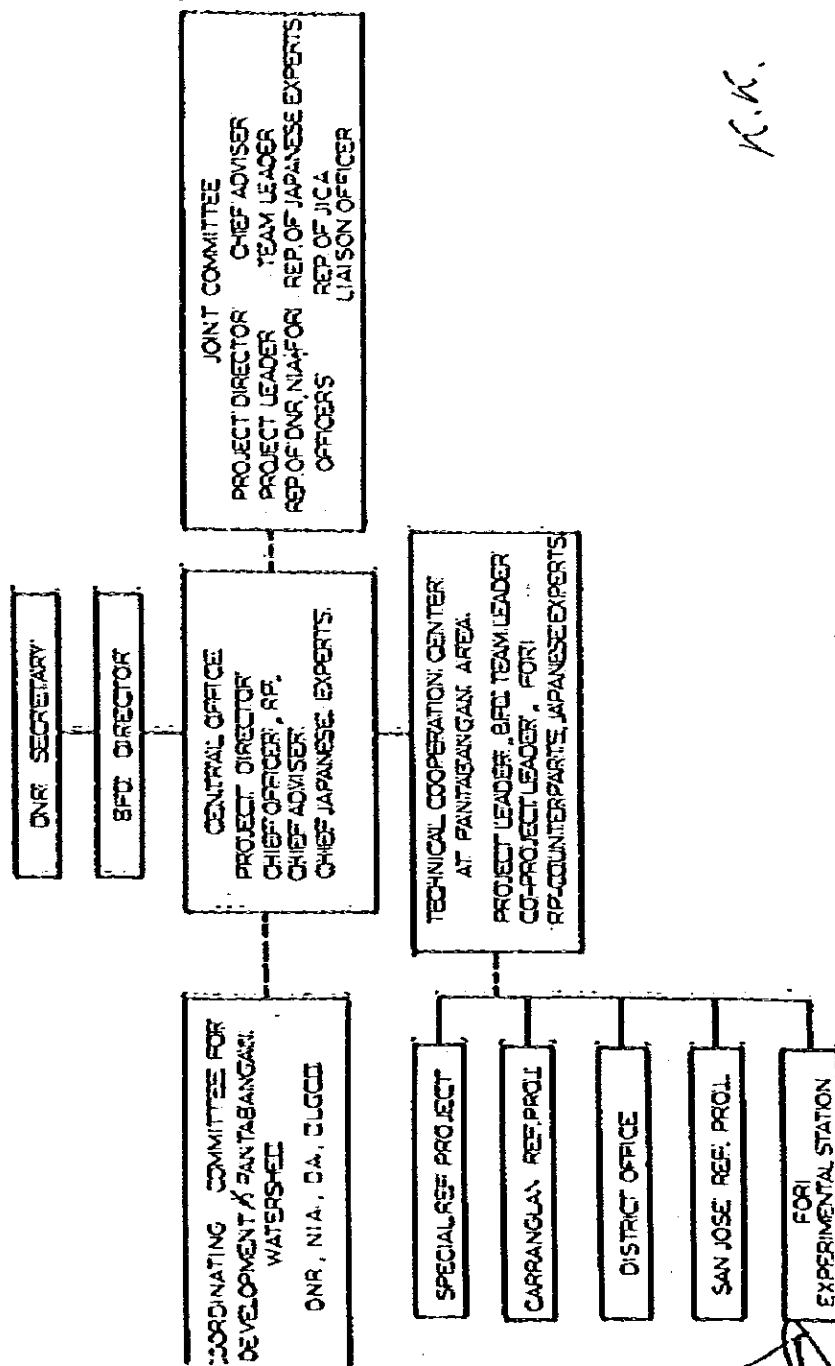
Japanese Side	Philippine Side
1. Chief Adviser	1. Project Director
2. Team Leader	2. Project Leader
3. Expert(s) designated by Chief Adviser	3. One Representative from DNR
4. Representative of OICA	4. One Representative from NIA
5. Liaison Officer	5. One Representative from FORI

Note: An official of the Embassy of Japan may  
attend the meetings of the Joint Committee  
as an observer.



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# TECHNICAL COOPERATION PROJ. FOR THE AFFORESTATION OF THE PANTABANGAN AREA



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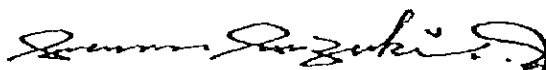
MINUTES OF DISCUSSIONS BETWEEN THE JAPANESE TECHNICAL  
GUIDANCE TEAM AND THE AUTHORITIES CONCERNED OF THE  
GOVERNMENT OF THE PHILIPPINES ON THE IMPLEMENTATION OF THE  
PILOT INFRASTRUCTURE PROJECT IN THE PANTABANGAN AREA

The Japanese technical guidance team (hereinafter referred to as "the Team"), headed by Mr. Susumu SUZUKI and organized by the Japan International Cooperation Agency (hereinafter referred to as "the JICA"), visited the Philippines from June 8 to June 25, 1980, for the purpose of outlining the proposed pilot infrastructure project (hereinafter referred to as "the Project") established in the RP-Japan Afforestation Project which is being implemented by Record of Discussions signed between the JICA and the Bureau of Forest Development (hereinafter referred to as "the BFD") on June 18, 1976.

During its stay in the Philippines, the Team had a series of discussions and exchanged views with the BFD on basic matters necessary for the implementation of the Project under the technical cooperation scheme and also conducted a field survey on the proposed project sites.

As a result of discussions, the BFD and the Team recognized the importance and necessity of the Project and agreed to implement the Project according to the herein work plan under the cooperation of the implementing agencies of the two governments and to recommend the matters referred to in the attached work plan to their respective governments.

June 23, 1980  
Manila, Philippines



MR. SUSUMU SUZUKI  
Team Leader  
The Japanese Technical  
Guidance Team



ATTY. EDMUNDO V. CORTES  
Director  
Bureau of Forest Development

WORK PLAN ON THE IMPLEMENTATION OF THE  
PILOT INFRASTRUCTURE PROJECT IN THE PANTABANGAN AREA

1. OBJECTIVE

The objective of the Project which will be financed by the pilot infrastructure fund of Japan is to extend agro-forestry techniques to the local inhabitants by introducing a diversified program based on family approach concept within the RP-Japan Afforestation Project area and at the same time to enhance the forestry consciousness among the people by ensuring their good lives, expecting successful result of the RP-Japan Afforestation Project through prevention of forest fire occurrence.

It is expected that the Project will become a good model and contribute greatly toward the advancement of afforestation throughout the Pantabangan area.

2. Outline of the Project

1.) The Project Sites and Size:

Suitable project sites with approximately 350 hectares will be selected within the RP-Japan Afforestation Project area.

2.) Components of Infrastructure:

Necessary infrastructure such as forest roads, bridges, water tanks, look-out towers and fire breaks will be constructed in the Project area.

3.) Species of Trees:

Tree species suitable for firewood and charcoal, construction and furniture materials will be planted. In addition fruit trees will also be planted.

*Saem Suzuki*      *J. V. O. O. O.*

3. Measures to be taken by the BFD

- 1.) To provide the necessary land for the Project.
- 2.) To bear all expenses necessary in the establishment of plantations through the family approach reforestation scheme for the following works other than those borne by the JICA.
  - (1) Seedling production and maintenance
  - (2) Site preparation
  - (3) Planting
  - (4) Fertilization work and supply
- 3.) To make the necessary arrangements for the participation of local inhabitants in the Project area with full understanding and cooperation.
- 4.) Other related activities

4. Measures to be taken by the JICA

- 1.) To bear expenses necessary for the following construction works under the direct management of JICA.
  - (1) Forest roads
  - (2) Tilling on selected areas
  - (3) Fire preventing facilities
  - (4) Erosion control facilities
  - (5) Bridges
  - (6) Other appurtenant works (including procurement of materials and equipment.)
- 2.) To dispatch short-term experts for basic designs and supervision of construction works.

*Sun Suzuki, J. R. Ohta*

MEMORANDUM ON THE PILOT INFRASTRUCTURES FOR THE  
RP-JAPAN TECHNICAL COOPERATION PROJECT FOR  
THE AFFORESTATION IN THE PANTABANGAN AREA


The Government of Japan, through the Japan International Cooperation Agency (hereinafter referred to as "JICA"), shall provide the fund for the construction of the pilot infrastructures for efficient and effective implementation of the said project on the basis of the Note Verbale exchanged between both governments on 24 and 25, November 1980, respectively.


Using the fund, the JICA Manila Office shall construct the pilot infrastructures as shown in the attached paper under direct management.

The Bureau of Forest Development (hereinafter referred to as "BFD"), implementing the said pilot infrastructure project, agreed to cooperate with the JICA Manila Office in procuring labor forces, equipment, supplies and materials, supervising actual works, and inspecting constructed items, by all means.

For this cooperation work, the JICA Manila Office shall consign both the supervision and inspection of the works to the BFD. On this consignment, the BFD shall assign the supervisor and assistant supervisors who <sup>will</sup> implement the works on the directions of the JICA Manila Office, inspect constructed items, and submit the inspection report to the JICA Manila Office. The Japanese short term experts for the said project shall give the necessary advises to the supervisor and their assistants mentioned above.

06 January 1981

  
Mr. TOSHIKAZU MIURA  
Resident Representative  
JICA Manila Office

  
Atty. EDUARDO V. CORTES  
Director  
Bureau of Forest Development

## ANNEX

### 1. Project:

RP-Japan Technical Cooperation Project for the  
Afforestation in the Pantabangan Area.

### 2. Description of Work:

Construction of necessary bridge and forest roads,  
Tilling on Selected Area, Fire Preventing and Erosion  
Control Facilities, and other appurtenant works  
in Compartment 90 in Parcel II and 101, 102 in Parcel  
III.

### 3. Fund Allocated:



53,000,000 Yen *equivalent* (nearly equal to 1,750,000 Pesos)

### 4. Major Works Included

- (1) Forest Road : 5.9 kms.
- (2) Tilling : 100 hectares
- (3) Access Road to  
the nursery : 10 kms.
- (4) Facility for forest  
fire protection :
  - : Lookout tower - 1
  - : Water tank - 2
  - : Dam - 2
  - : Fire break - 8.4 km.

### 5. Schedule:

All the works will be completed within the first  
half of year 1981.



MEMORANDUM

PREScribing THE REGULATIONS AND GUIDELINES  
FOR IMPLEMENTING THE CONSTRUCTION OF PILOT  
INFRASTRUCTURES FOR THE RP-JAPAN TECHNICAL  
COOPERATION PROJECT FOR THE AFFORESTATION  
IN THE PANTABANGAN AREA.

Both the resident representative of JICA Manila Office (hereinafter referred to as "A") and the representatives of the Bureau of Forest Development agreed to set up the following detailed regulations for implementing the construction of Pilot infrastructures, based on the memoranda exchanged between "A" and the Director of the Bureau of Forest Development.

Article 1: Supervisor and Assistant Supervisors

(1) The Bureau of Forest Development (hereinafter referred to as "B") shall assign a full-time supervisor responsible for the implementation including quality control, schedule control, progress control, etc., in the field concerned.

(2) "B" shall also assign assistant supervisors who will help the supervisor and replace him in case of his absence for each work. However, an assistant supervisor may be assigned for more than two (2) works at a time.


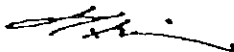
(3) The supervisor and assistant supervisors shall follow the matters to be attended to, as stated in the Annex.

(4) "A" shall assign the Japanese short-term experts as his representative (hereinafter referred to as "Experts" for the implementation of the work).

Article 2: Procurement of supplies and materials and related matters

(1) To procure supplies and materials, the supervisor shall specify the quality, standard, and amount of the items to be purchased, and to submit to "A" through "Experts" the cost estimates of various legitimate dealers.

"A" shall determine the most reasonable estimate from among those which are submitted and shall disburse



through "Experts" the amount necessary to "B". "B" shall purchase the supplies and materials based on the amount received from "A", and submit the official receipt to "A".

Article 3: Procurement of labor forces and related matters

(1) "B" shall be responsible for all the labor management including the procurement of labor forces, safety control, etc.

(2) "B" shall submit the bill based on payroll to "A" through "Experts" for a given period.

"A" shall disburse through "Experts" the amount necessary to "B" as soon as the bill is recognized to be reasonable, "B" shall pay directly to laborers upon receipt of the amount disbursed by "A".

Article 4: Confirmation of completion of the work

(1) When the work is completed, the supervisor shall submit a report both to "A" and "B".

(2) Based on the report submitted, "A" shall confirm the completion of the work himself or by his substitute, at the presence of the representative from "B" and the supervisor.

Article 5: Time limit on construction

(1) Time limit on construction cannot be extended as a rule. In case where a natural calamity, some inevitable situation, or any other special reason occurs, however, the supervisor may submit to "A" a request for the extension of the time limit with the necessary justification.

(2) "A" may allow a minimal extension if the reasons are really inevitable and not contrary to the objectives of the works.

Article 6: Change of construction drawings

(1) In case where deviation from the construction  

plan is inevitably needed during the construction, the supervisor may submit to "A" through "Experts" a request for the change of the construction plan with the necessary reasons, details, and cost estimates.

(2) Upon receipt of the request, "A" through "Experts" may allow such a change if necessary, within the fund allocated.

Article 7: Damages caused by natural calamity, etc.

(1) In cases where there will be some serious damages caused by natural calamity, etc. to the completed part of the works and repair works are needed urgently, the supervisor shall submit to "A" through "Experts" a report on the damage including the plan for the repair of same together with the necessary drawings and specifications.

(2) Upon receipt of the plan mentioned above, "A" through "Experts" may allow an additional work, if necessary within the fund allocated. In case where there is no additional fund, "A" may consider the importance of this repairing work as compared with the remaining works and take the necessary action.

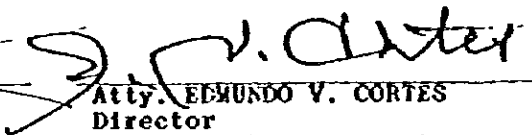
Article 8: Others

For other things which are not stated in the foregoing articles, "B" shall ask for the directions of "A", whenever the necessity arises.

FOR THE JAPAN INTERNATIONAL  
COOPERATION AGENCY:

FOR THE BUREAU OF FOREST  
DEVELOPMENT:

  
Mr. TOSHIKAZU MIURA  
Resident Representative  
JICA Manila Office

  
Atty. EDMUNDO V. CORTES  
Director  
Bureau of Forest Development

**Annex: Matters to be attended for supervision:**

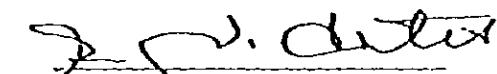
1. Supervisor and assistant supervisors (hereinafter referred to as "S") shall be well familiar with construction drawings and specification, and carry out the works smoothly based on those documents.
2. "S" shall be full-time and shall have a complete control over all the works.
3. "S" shall follow the comments of Japanese Experts.
4. "S" shall set up the schedule suited to the time limit for the whole construction work. Based on the schedule, "S" shall arrange daily, weekly and monthly program, including the procurement of supplies, materials, and labor forces, on which progress control shall be done.
5. "S" shall ask for the directions to JICA Manila Office through "Experts" beforehand, in case where there is any question in the drawings and specification.
6. "S" shall inspect the supplies and materials for the works, based on the specification, when carried into the field of construction.
7. "S" shall take pictures of the parts, which are hidden after the completion of the work.
8. "S" shall take emergency measures immediately, report to the agencies concerned, and take appropriate further measures, in case where an accident or a calamity occurs.
9. "S" shall always be aware of the progress of the works and control the quality properly.

THE RECORD OF DISCUSSIONS CONCERNING EXTENSION OF  
THE PERIOD OF THE TECHNICAL COOPERATION PROJECT  
FOR THE AFFORESTATION OF THE PANTABANGAN AREA

The Japan International Cooperation Agency (hereinafter referred to as the JICA) held a series of talks, through its Manila Office represented by Mr. Toshikazu Miura, with the authorities concerned of the Government of the Republic of the Philippines on the extension of the period of technical cooperation project for the Afforestation of the Pantabangan Area based on the Record of Discussions signed in Manila on 18 June 1976.. As a result of the talks, the JICA and the Philippine authorities concerned agreed to recommend to their respective governments the following understanding reached between them.

The period of the technical cooperation based on the above-mentioned Record of Discussions is further re-extended to 31 March 1982, or until a new document (Bilateral Agreement) has been signed, whichever comes first.

30 September 1981

  
EDMUNDO V. CORTES  
Director  
Bureau of Forest Development

  
TOSHIKAZU MIURA  
Resident Representative  
JICA Manila Office

THE RECORD OF DISCUSSIONS ON THE  
JAPANESE TECHNICAL COOPERATION PROJECT FOR THE  
AFFORESTATION OF THE PANTABANGAN AREA

The Japanese Consultation Team (hereinafter referred to as "the Team"), organized by the Japan International Cooperation Agency (hereinafter referred to as JICA) and headed by Mr. Kazuhiko Shigeta, visited the Philippines from January 25 to February 6, 1982.

During its stay in the Philippines, the Team had a series of talks with the authorities concerned of the Government of the Philippines on the Provision of Special Measures by the Government of Japan in the Japanese Technical Cooperation Project for the Afforestation of the Pantabangan Area.

As a result of the discussion, both sides agreed to recommend to their respective governments to put an additional provision to the Record of Discussions on the Japanese Technical Cooperation Project which was signed on June 18, 1976 between the Japanese Forestry Survey Team organized by JICA and the authorities concerned of the Government of the Philippines. The new provision shall be indicated as Article 10, to read as follows:

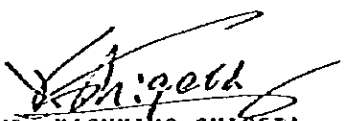
"10. For fostering the smooth promotion of the Project, in accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense travel

*Shigeta*

*J. V. O. O. O.*

allowance of training tour, materials  
to be procured for teaching and  
training, and a part of additional  
expense within the Philippines".

06 February 1982

  
MR. KAZUHIKO SHIGEIA  
Head, Consultation Team  
for the Technical Cooperation  
Project for the Afforestation  
of the Pantabangan Area

  
ATTY. EDMUNDO V. CORTES  
Director  
Bureau of Forest Development  
Philippines

5. タイ・造林研究訓練技術協力計画討議議事録

THE RECORD OF DISCUSSIONS

between

THE JAPANESE IMPLEMENTATION SURVEY TEAM

and

THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF THAILAND

on

THE JAPANESE TECHNICAL COOPERATION

for

THE RESEARCH AND TRAINING IN RE-AFFORESTATION PROJECT  
IN THAILAND

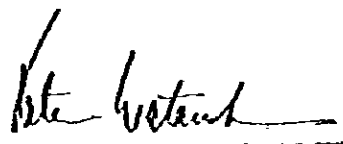
THE RECORD OF DISCUSSIONS  
BETWEEN  
THE JAPANESE IMPLEMENTATION SURVEY TEAM  
AND  
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF THAILAND  
ON  
THE JAPANESE TECHNICAL COOPERATION  
FOR  
THE RESEARCH AND TRAINING IN RE-AFFORESTATION PROJECT  
IN THAILAND

The Japanese Implementation Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as JICA) and headed by Mr. Katsura Watanabe, Director of Forestry and Fisheries Development Cooperation Department, JICA, visited Thailand from July 18 to July 30, 1981 for the purpose of working out the details of the technical cooperation program concerning the Research and Training in Re-forestation Project in Thailand.


During its stay in Thailand, the Team exchanged views and had a series of discussions with the Thai authorities concerned in respect of the desirable measures to be taken by both Governments for the successful implementation of the above-mentioned Project.

As a result of the discussions, the Team and the Thai authorities concerned agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

Bangkok, July 29, 1981

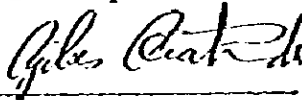


Katsura Watanabe  
Leader,  
Japanese Implementation  
Survey Team,  
Japan International  
Cooperation Agency



Pong Sono  
Director-General,  
Royal Forest Department  
Ministry of Agriculture and  
Cooperatives

In the presence of



Apilas Osatananda  
Director-General,  
Department of Technical and Economic Cooperation  
Office of the Prime Minister

## **THE ATTACHED DOCUMENT**

### **I. COOPERATION BETWEEN BOTH GOVERNMENTS**

1. The Government of Japan and the Government of Thailand will cooperate with each other in implementing the Research and Training in Re-afforestation Project in Thailand (hereinafter referred to as "the Project") for the purpose of developing techniques, research and training in re-afforestation so as to promote a large scale re-afforestation in Thailand.
2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

### **II. DISPATCH OF JAPANESE EXPERTS**

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense services of the Japanese experts as listed in Annex II through the normal procedures under the Colombo Plan Technical Cooperation Scheme.
2. The Japanese experts referred to in 1 above and their families will be granted in Thailand the privileges, exceptions and benefits no less favourable than those accorded to experts of third countries working in Thailand under the Colombo Plan Technical Cooperation Scheme.

### **III. PROVISION OF MACHINERY AND EQUIPMENT**

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense such machinery, equipment and other materials necessary for the implementation of the Project as listed in Annex III, through the normal procedures under the Colombo Plan Technical Cooperation Scheme.
2. The articles referred to in 1 above will become the property of the Government of Thailand upon being delivered c.i.f. to the Thai authorities concerned at the ports and/or airports of disembarkation, and will be utilized exclusively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.

### **IV. PROVISION OF SPECIAL MEASURES**

For fostering the smooth promotion of the Project, in accordance with

the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA as follows:

1. to supplement a portion of the local cost expenditures for the execution of the physical infrastructure such as construction work of nursery, forest road and so on when necessity arises.
2. to provide at its own expense travel allowance of training tour, materials to be procured for teaching, training and a part of additional expense within Thailand.

**V. TRAINING OF THAI PERSONNEL IN JAPAN**

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to receive at its own expense the Thai personnel connected with the Project for technical training in Japan through the normal procedures under the Colombo Plan Technical Cooperation Scheme.
2. The Government of Thailand will take necessary measures to ensure that the knowledge and experience acquired by the Thai personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

**VI. SERVICES OF THAI COUNTERPART PERSONNEL AND ADMINISTRATIVE PERSONNEL**

1. In accordance with the laws and regulations in force in Thailand, the Government of Thailand will take necessary measures to secure at its own expense necessary services of Thai counterpart personnel and administrative personnel as listed in Annex IV.
2. As to the Thai counterpart personnel, the Government of Thailand will endeavor to allocate the necessary number of suitably qualified personnel corresponding to each Japanese expert to be dispatched by the Government of Japan as specified in Annex II, to fulfill the effective and successful transfer of technology under the Project.

**VII. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THAILAND**

1. In accordance with the laws and regulations in force in Thailand, the Government of Thailand will take necessary measures to provide at its own expense:
  - (1) Land, buildings and facilities as listed in Annex V;
  - (2) Supply or replacement of machinery, equipment, instrument,

vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than those provided through JICA under III above;

- (3) Transportation facilities and travel allowance for the Japanese experts for the official travel within Thailand;
  - (4) Suitably furnished accommodations for the Japanese experts and their families.
2. In accordance with laws and regulations in force in Thailand, the Government of Thailand will take necessary measures:
- (1) to meet expenses necessary for the transportation within Thailand of the articles referred to in III above as well as for the installation, operation and maintenance thereof;
  - (2) to exempt customs duties, internal taxes and any other charges, imposed in Thailand on the articles referred to in III above;
  - (3) to meet all running expenses necessary for the implementation of the Project.

#### VIII. ADMINISTRATION OF THE PROJECT

1. The Director-General of the Royal Forest Department will bear overall responsibility for the administrative matters for the implementation of the Project, and Japanese experts will provide technical advice and guidance necessary for the implementation of the Project.
2. There will be close consultation on any matters concerning the implementation of the Project between both sides. For this purpose, the Joint Committee will be established with the functions and composition as specified in Annex VI.

#### IX. CLAIMS AGAINST JAPANESE EXPERTS

The Government of Thailand undertakes to bear claims, if any arises, against the Japanese experts engaged in the Project resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in Thailand except for those arising from the willful misconduct or gross negligence of the Japanese experts.

#### X. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments on any major issues arising from, or in connection with this Attached Document.

#### XI. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be five years from the date of signature of the Record of Discussions. However, there will be a general review on the progress of the implementation of the Project during the third year of the cooperation taking into account the measures to be taken by the two Governments in order to decide as to whether the cooperation should be modified for the rest of the period.

**ANNEX I     MASTER PLAN**

1. The Project Office will be established at the Royal Forest Department in Bangkok. The Field Office will be established at Sakaerat Project Site on Highway 304, approximately 65 km from Nakornratchasima.
2. The Project Office will advise the Royal Forest Department on developing techniques, research and training in re-afforestation and administer and supervise the Field Office. The Field Office will establish a demonstration-plantation in order to facilitate developing techniques, research and training in re-afforestation carried out by the Royal Forest Department.
3. Items of developing techniques, research and training in re-afforestation
  - (1) Nursery techniques
  - (2) Techniques for site classification and species selection
  - (3) Planting and tending techniques
  - (4) Mechanization techniques related to re-afforestation activities
  - (5) Systematization of various techniques included in re-afforestation
  - (6) Techniques for counter-measures against fire, insects, diseases and other natural damages
  - (7) Agroforestry (part of demonstration-plantation will be utilized for agroforestry)
4. Investigation into environmental as well as socio-economic aspects of re-afforestation will be carried out in the course of the establishment of demonstration-plantation.

## **ANNEX II JAPANESE EXPERTS**

<b>Category</b>	<b>Field</b>
1. Chief Advisor	
2. Experts	1) Silviculture (Plantation) 2) Silviculture (Nursery) 3) Forest Machinery 4) Forest Soil
3. Liaison Officer	

- Note:**
1. The Chief Advisor will be attached to the Project Office.
  2. A team leader will be nominated by JICA from the group of experts.
  3. Short-term experts in the field mentioned above and other fields may be dispatched when necessity arises.

## **ANNEX III LIST OF ARTICLES**

1. Machinery, equipment, spare parts and materials for re-afforestation activities
2. Machinery, equipment, spare parts and materials for forest roads, fire break, and soil conservation works
3. Equipment, instruments, spare parts and materials for research and training activities
4. Vehicles and their spare parts
5. Equipment, tools, spare parts and materials for repair workshop
6. Other necessary equipment, tools and materials

**ANNEX IV LIST OF THAI STAFF**

<b>Category</b>	<b>Field</b>
1. Project Manager	
2. Field Manager	
3. Counterpart Experts	1) Silviculture (Plantation) 2) Silviculture (Nursery) 3) Forest Machinery 4) Forest Soil
4. Clerical and Service Employees	
5. Laborers	

**Note:** The Thai side will assign necessary number of suitably qualified Thai experts corresponding to each long/short term expert to be dispatched from Japan.

**ANNEX V LIST OF LAND, BUILDINGS AND FACILITIES**

1. Land
  - (1) Land for nursery
  - (2) Land for demonstration-plantation
  - (3) Land for the Field Office and related facilities
2. Buildings
  - (1) The Project Office at Bangkok
  - (2) The Field Office and related facilities at Sakaerat project area:
    - a. Field office
    - b. Laboratories and lecture rooms
    - c. Sheds for machinery and equipment
    - d. Storehouse for materials
    - e. Workshop and garage
    - f. Generator and pump house
    - g. Field accommodation for Japanese Experts and Thai Counterparts
    - h. Guest house
    - i. Others

## ANNEX VI      JOINT COMMITTEE

### 1.    Functions

The Joint Committee composed of those members as listed under 2. below will meet at least once a year or whenever necessity arises, and work:

- 1) To review the overall progress of Tentative Implementation Schedule in line with the Master Plan of the Project;
- 2) To review those measures taken by the Government of Japan, i.e.:
  - (1) Dispatch of Japanese experts;
  - (2) Acceptance of Thai counterpart personnel in Japan for training;
  - (3) Provision of machinery and equipment;
- 3) To review those measures taken by the Government of Thailand, i.e.:
  - (1) Allocation of necessary budget (including local cost expenditure);
  - (2) Allocation of necessary counterpart personnel;
  - (3) Utilization of machinery and equipment provided by the Government of Japan;
- 4) To review and approve the Annual Operation Plan of the Project;
- 5) To recommend to the two Governments on:
  - (1) Budgetary matters;
  - (2) Recruitment and appointment of Thai counterpart personnel;
  - (3) Selection and effective utilization of machinery and equipment;
  - (4) Appropriate dispatch of Japanese experts;
  - (5) Acceptance of Thai counterpart personnel in Japan for training;
  - (6) Others.

### 2.    Composition

**1) Chairman**

**Director-General, Royal Forest Department (RFD)**

**2) Members**

**(1) Thai side**

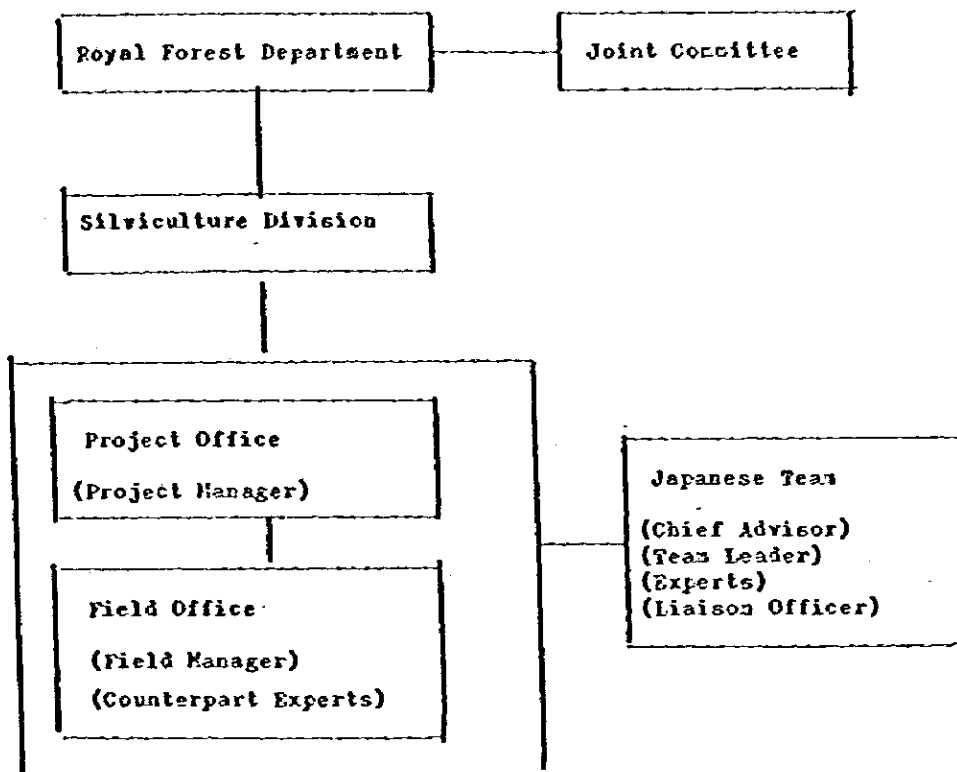
- Deputy Director-General for Technical Affairs, RFD
- Director, Silviculture Division, RFD
- Director, Watershed Management Division, RFD
- Director, National Forest Land Management Division, RFD
- Director, Planning Division, RFD
- Director, Foreign Agricultural Relations Division, Office of the Under Secretary of State for Agriculture and Cooperatives
- Representative, Department of Technical and Economic Cooperation
- Representative, Budget Bureau
- Representative, Civil Service Commission
- Dean, Faculty of Forestry, Kasetsart University
- Chief, Forest Research Sub-division, Silviculture Division
- Station Manager, Sakaerat Environmental Research Project
- Representative, Committee on Sakaerat Environmental Research Project
- Project Manager
- Field Manager

**(2) Japanese side**

- Chief Advisor
- Team Leader
- Representative of JICA
- Expert(s) designated by Chief Advisor
- Liaison Officer

- Note: 1. Officials of the Embassy of Japan may attend the meeting of the Joint Committee as observers.
2. Officials of the Royal Forest Department assigned by the Director-General may attend the Joint Committee as observers.

ANNEX VII ORGANIZATION FOR THE IMPLEMENTATION OF THE PROJECT

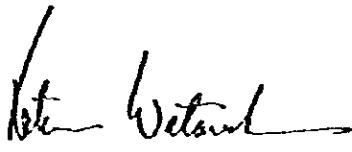


**TENTATIVE IMPLEMENTATION PROGRAM**  
**OF**  
**THE RESEARCH AND TRAINING IN RE-AFFORESTATION PROJECT**  
**IN THAILAND**

TENTATIVE IMPLEMENTATION PROGRAM  
OF  
THE RESEARCH AND TRAINING IN RE-AFFORESTATION PROJECT  
IN THAILAND

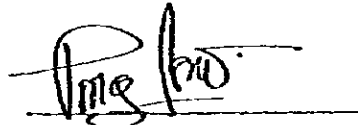
The Japanese Implementation Survey Team and the authorities concerned of the Government of Thailand have jointly formulated a Tentative Implementation Program of the Project as annexed hereto. This has been formulated in connection with I-2 of the Attached Document of the Record of Discussions signed between the Japanese Implementation Survey Team and the authorities concerned of the Government of Thailand for the Research and Training in Re-afforestation Project in Thailand on the conditions that necessary budget will be allocated for the implementation of the Project by both sides, and that the above-mentioned Program is subject to change within the framework of the Record of Discussions when necessity arises in the course of the implementation of the Project.

Bangkok, July 29, 1981



Katsura Matsunabe

Leader,  
Japanese Implementation  
Survey Team,  
Japan International  
Cooperation Agency



Fong Sono

Director-General  
Royal Forest Department  
Ministry of Agriculture and  
Cooperatives

**ANNEX TENTATIVE IMPLEMENTATION PROGRAM**

Item	Year					Total
	1981	1982	1983	1984	1985	
<u>1. Japanese Contribution</u>						
1. Dispatch of Experts						
(1) Long-term Experts						
Chief Advisor						
Experts, Silviculture (Nursery)						
Silviculture (Plantation)						
Forest Machinery						
Forest Soil						
Liaison Officer						
(2) Short-term Experts						
Subject matters, number and duration of these experts will be agreed upon during the operation of the Project						
<u>2. Training of Thai Personnel in Japan</u>						
Subject matters, number and duration of Thai Personnel to be trained in Japan will be agreed upon during the operation of the Project						
<u>3. Provision of Equipment and Machinery</u>						
<u>4. Dispatch of Missions</u>						
Implementation Survey						
Implementation Design						
Consultation/General Review						
Consultation/Guidance/Evaluation						
Approximately 300 million yen						

Item	Year					Total	
	1981	1982	1983	1984	1985		
<u>II. Thai Contribution</u>							
1. Thai Counterpart Staff							
Project Manager							
Field Manager							
Counterpart Experts, Silviculture (Plantation)							
Silviculture (Nursery)							
Forestry Machinery							
Forest Soil							
Administration Staff							
Labor							
2. Buildings and Other Facilities							
3. Running Cost							
(Vages, installation of equipment, etc.)							
4. Others							

Note: 1. This program is subject to conditions that necessary budget will be acquired for the implementation of the Project.

2. This scope of Technical Cooperation is subject to change within the scope of the provisions given in the Record of Discussions.

3. Regarding buildings and other facilities to be provided by the Thai Government, those required for operation should be completed in accordance with the program of the project.

6. ブラジル・サンパウロ林業研究協力計画討議議事録

THE RECORD OF DISCUSSIONS BETWEEN THE  
JAPANESE IMPLEMENTATION SURVEY TEAM  
AND THE AUTHORITIES CONCERNED OF THE  
GOVERNMENT OF THE FEDERATIVE REPUBLIC  
OF BRAZIL ON THE JAPANESE TECHNICAL  
COOPERATION PROJECT FOR THE FORESTRY  
RESEARCH IN SÃO PAULO

The Japanese Implementation Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Dr. Hidenori Nakano, Director, Forest Influence Div., Forestry and Forest Products Research Institute, Forestry Agency, visited the Federative Republic of Brazil - São Paulo State from Nov. 25 to the Dec. 5, 1978 for the purpose of working out the details of the technical cooperation program concerning the Japanese Technical Cooperation Project for the Forestry Research in São Paulo.

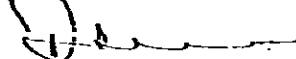
During its stay in the Federative Republic of Brazil the Team exchanged views and had a series of discussions with the Brazilian authorities concerned in respect of the desirable measures to be taken by both Governments for the successful implementation of the above-mentioned Project.

As a result of the discussions, the Team and the Brazilian authorities concerned agreed to recommend to their respective Governments the matters referred to in the document attached hereto, on the basis of the "BASIC AGREEMENT ON TECHNICAL COOPERATION BETWEEN THE GOVERNMENT OF JAPAN AND THE GOVERNMENT OF THE FEDERATIVE REPUBLIC OF BRAZIL".

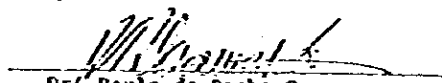


Dr. Hidenori Nakano  
Head of the Japanese  
Implementation Survey Team  
JICA

São Paulo, Dec. 4 1978.



Dr. Paulo Egydio Martins  
Governador do Estado de  
São Paulo



Dr. Paulo da Rocha Cargio  
Secretary of Agriculture  
State of São Paulo

THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN BOTH GOVERNMENTS

1. The Government of Japan and the Government of the Federative Republic of Brazil will cooperate with each other in implementing the Japanese Technical Cooperation Project for the Forestry Research in São Paulo (hereinafter referred to as "the Project") for the purpose of contributing to the appropriate watershed forest management in São Paulo State.
2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

II. DISPATCH OF JAPANESE EXPERTS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense services of the Japanese experts as listed in Annex II through the normal procedures under the Technical Cooperation Scheme of Japan.
2. The Japanese experts referred to in 1 above and their families will be granted in the Federative Republic of Brazil the privileges, exemptions and benefits as listed in Annex III and will be granted privileges, exemptions and benefits no less favourable than those granted to experts of third countries or international organizations performing similar missions.

III. PROVISION OF MACHINERY AND EQUIPMENT

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense such machinery, equipment and other materials necessary for the implementation of the Project as listed in Annex IV, through the normal procedures under the Technical Cooperation Scheme of Japan.
2. The articles referred to in 1 above will become the property of the Government of the Federative Republic of Brazil upon being delivered c.i.f. to the Brazilian authorities concerned at the ports and/or airports of disembarkation, and will be

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utilized exclusively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.

**IV. TRAINING OF BRAZILIAN PERSONNEL IN JAPAN**

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to receive at its own expense the Brazilian personnel connected with the Project for technical training in Japan through the normal procedures under the Technical Cooperation Scheme of Japan.
2. The Government of the Federative Republic of Brazil will take necessary measures to ensure that the knowledge and experience acquired by the Brazilian personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

**V. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE FEDERATIVE REPUBLIC OF BRAZIL**

1. In accordance with the laws and regulations in force in the Federative Republic of Brazil, the Government of Federative Republic of Brazil through the Government of São Paulo State will take necessary measures to provide at its own expense:
  - (1) Services of the Brazilian counterpart personnel and administrative personnel as listed in Annex V;
  - (2) Land, building and facilities in Annex VI;
  - (3) Supply or replacement of machinery, equipment, instrument, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than those provide through JICA under III-1 above;
  - (4) Transportation facilities and travel allowance for the Japanese experts for the official travel within the Federative Republic of Brazil;
  - (5) Suitably furnished accommodations for the Japanese experts and their families.
2. In accordance with the laws and regulations in force in the Federative Republic of Brazil, the Government of Federative Republic of Brazil through the Government of São Paulo State

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will take necessary measures to meet:

- (1) Expenses necessary for the transportation within the Federative Republic of Brazil of the articles referred to in III-1 above as well as for the installation, operation and maintenance thereof;
- (2) Customs, duties, internal taxes and any other charges, imposed in the Federative Republic of Brazil on the articles referred to in III-1 above;
- (3) All running expenses necessary for the implementation of the Project.

**VI. ADMINISTRATION OF THE PROJECT**

1. The Secretary of Agriculture of the São Paulo State, will be responsible for the administration and implementation of the Project, and the Japanese experts will provide necessary technical guidance and advice for the implementation of the Project.
2. For the successful implementation of the Project, a Joint-Committee will be established as specified in Annex VII and will meet regularly. The committee will formulate the annual operation work plan of the Project based on the master plan in Annex I.

**VII. CLAIMS AGAINST JAPANESE EXPERTS**

The Government of the Federative Republic of Brazil undertakes to bear claims, if any arises, against the Japanese experts engaged in the Project resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in the Federative Republic of Brazil except for those arising from the willful misconduct or gross negligence of the Japanese experts.

**VIII. MUTUAL CONSULTATION**

There will be mutual consultation between the two Governments on any major issues arising from, or in connection with this Attached Document.

**IX. TERMS OF COOPERATION**

The duration of the technical cooperation for the Project under this Attached Document will be five (5) years from April 1, 1979.

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**Annex I**

**MASTER PLAN**

1. The Project will be implemented in the fields of watershed management, mechanical logging, remote-sensing and small diameter timber processing for the purpose of establishing watershed forest management techniques through strengthening forestry research capabilities of São Paulo Forest Institute.
2. The Project will consist of the following:
  - a. Development of research capability of researchers through the activities of above researches.
  - b. Exchange of information and research reports.
  - c. Other activities necessary for the implementation of the Project.

**Annex II**

**JAPANESE EXPERTS**

1. Team leader
2. Expert

- (1) Watershed management
- (2) Mechanical logging
- (3) Small diameter timber processing
- (4) Remote-sensing

3. Liaison officer

note 1. In the fields of above 2. (1) and (2), additional short term experts may be dispatched when necessity arises.

2. The experts of the fields of above 2. (3) and (4) will be dispatched on the short term basis.

**Annex III**

**PRIVILEGES, EXEMPTIONS AND BENEFITS**

1. Exemptions from income tax and charges of any kind imposed on or in connection with the living allowances remitted from abroad.

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2. Exemptions from import and export duties and any other charges in respect of personal and household effects, including one motor vehicle per family, which may be brought into the Federative Republic of Brazil from abroad.
3. Free medical services and facilities to the Japanese experts and their families.

Annex IV

LIST OF THE ARTICLES TO BE PROVIDED BY THE GOVERNMENT OF JAPAN

1. Machinery, equipment, instruments, tools, spare parts and other materials for laboratory work.
2. Machinery, equipment, instruments, tools, spare parts and other materials for the experimental forest.
3. Specialized automobile units for experimental work.
4. Seed, fertilizer, pesticide and chemicals.
5. Audio-visual aids and articles for indoor training.
6. Books and other necessary printed matters.
7. Other necessary machinery and equipment.

Annex V

LIST OF BRAZILIAN COUNTERPARTS AND OTHER PERSONNEL

1. Project manager
2. Counterpart
  - (1) Watershed management
  - (2) Mechanical logging
  - (3) Small diameter timber processing
  - (4) Remote-sensing
3. Laboratory assistants
4. Workers for the experimental forest
5. Clerical and service personnel including typist, clerks, drivers and interpreters.

Note: Number and period of the above 3 to 5 officials and other personnel will be adjusted according to necessary from time to time.

Annex VI

LIST OF LAND, BUILDINGS AND OTHER FACILITIES

1. Office for the Japanese experts
2. Laboratories

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3. Experimental forest
4. Garages
5. Warehouses for machinery, equipment and materials
6. Other land, buildings and facilities

**Annex VII**

**THE COMPOSITION OF THE JOINT-COMMITTEE**

1. Chairman: Secretary of Agriculture, São Paulo State
2. Members

**JAPANESE SIDE**

- (1) Team leader
- (2) Representative of experts
- (3) Liaison officer
- (4) Representative of JICA

**BRAZILIAN SIDE**

- (1) Director General of São Paulo Forest Institute
- (2) Project Manager
- (3) Representatives of counterparts (2)

**Note:**

The following representatives may attend the committee as observers:

- (1) An official of the Embassy or Consulate General of Japan and any other person designated by the Embassy or Consulate General of Japan.
- (2) Representatives of the Ministry of Agriculture of the Federal Republic of Brazil.
- (3) Representatives of the Brazilian inter-ministerial system of coordination of international technical co-operation.

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#### 4. プロジェクト費算出表

##### Tentative Implementation Programme of the Forestry Research in São Paulo Project

The Japanese Implementation Survey Team and Secretary of Agriculture, São Paulo State have jointly formulated the Tentative Implementation Programme of the Project as annexed hereto. These have been formulated in connection with 1-2 of the Attached Document of the Record of Discussions between Japanese Implementation Survey Team and Secretary of Agriculture, São Paulo State on Forestry Research in São Paulo Project for its reference on such condition that necessary budget will be allocated for the implementation of the Project, and are subject to change within the framework of Record of Discussions when necessity arises in the course of implementation of the Project.

##### TENTATIVE ESTIMATED SCALE OF JAPANESE ASSISTANCE

Total amount	approximately 530 million yen
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$\left( \begin{array}{l} \text{Amount of Machinery,} \\ \text{equipment and Materials} \\ \text{(C.I.F. São Paulo)} \end{array} \right)$	approximately 30½ million yen
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# TENTATIVE SCHEDULE OF IMPLEMENTATION

	1978 Apr. Oct.	1979	1980	1981	1982	1983
Japanese Exports						
Team Leader		1 person				
Watershed management		1 person				
Mechanical logging			2 persons			
Liaison officer			1 person			
(Short Term Exports)						
Remote Sensing						
Small Diameter Timber Processing						
Others						
Training in Japan			11 persons			
Articles, materials, etc.						
Dispatching Survey Team		implement planning team	guidance team	guidance team	guidance team	evaluation team

5 予定供与器材一覧

LIST OF EQUIPMENT, MACHINERY AND MATERIALS PROVIDING  
BY JAPANESE GOVERNMENT

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Name of machinery, etc.

---

1. Machinery, equipment, and other materials for laboratory work

(Watershed management)

- a. Equipment for land survey
- b. Small size electric computer
- c. Instrument for measuring
- d. Sieve shaker
- e. Dryer

(Small diameter timber processing)

- a. Band saw
- b. Circular saw
- c. Planer
- d. Chipper
- e. Dust cleaner

(Mechanical logging)

- a. Equipment for land survey
- b. Equipment for measuring
- c. Instrument for drawing
- d. Equipment for tree measuring

(Remote sensing)

- a. Plotting machine
- b. Stereo scope
- c. Printer
- d. Enlarger
- e. Chemicals

2. Machinery, equipment and materials for experimental forest

(Watershed management)

- a. Automatic meteorological station
  - b. Long term recording rain gauge
  - c. Long term recording rain gauge and evaporimeter
  - d. Totalizer
  - e. Long term recording water level gauge
  - f. Water level recorder
  - g. Sunshine gauge
  - h. Long term recording heat flowmeter
  - i. Long term recording earth thermometer
  - j. Long term recording thermo-hydrograph
  - k. Long term net exchange radiometer
-

Name of machinery, etc.	
1.	Long term dry-bulb thermometer
2.	Long term wet-bulb thermometer
n.	Long term wind vane and anemometer
o.	Infiltrometer
p.	Automatic grain size analyzer
q.	Generator
r.	Pump
s.	Tractor with dozer shovel (6t)
t.	Tractor with dozer (6t)
3.	Machinery, equipment and other materials for experimental forest (Mechanical logging)
a.	Logging tractor (6t)
b.	Yarder
c.	Tools
d.	Track with crane (4t)
e.	Track (2t)
4.	Vehicles
a.	Automobile (all wheel driving)
b.	Light van
c.	Track (2t)
5.	Seed, fertilizer and chemicals
6.	Audio-visual aid, etc. for indoor training
a.	File projector (16mm)
b.	ditto (8mm)
c.	Slide projector
d.	Tape recorder
e.	Over head projector
f.	Movies
7.	Others
a.	Books and data
b.	Camera (35mm)
c.	Movie camera
d.	Office instruments

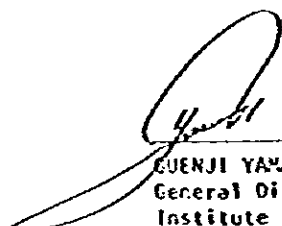
THE RECORD OF DISCUSSIONS ON  
THE JAPANESE TECHNICAL COOPERATION  
PROJECT FOR THE FORESTRY RESEARCH IN SAO PAULO

Mr. SHIGEO UMETANI, Resident Representative of the Japan International Cooperation Agency in Brazilia had a series of the talks with the authorities concerned of the Government of the Federative Republic of Brazil- Sao Paulo State on the Provision of Special Measures by the Government of Japan in the Japanese Technical Cooperation Project for the Forestry Research in Sao Paulo.

As a result of the discussion, both sides agreed to recommend to their respective governments to add the provision in the document attached hereto as the Article X to the Record of Discussions on the Japanese Technical Cooperation Project for the forestry Research in Sao Paulo which was signed on December 4th, 1978 between the Japanese Implementation Survey Team organized by the Japan International Cooperation Agency and the authorities concerned of the Government of the Federative Republic of Brazil- Sao Paulo State.

Sao Paulo, 26 de Novembro 1980

  
SHIGEO UMETANI  
Resident Representative, Japan  
International Cooperation  
Agency in Brazilia

  
GUENJI YAMAZOE  
General Director of Forestry  
Institute  
Secretary of Agriculture and  
Supplying on behalf of the  
Government of Sao Paulo  
State Brazil

#### X. PROVISION OF SPECIAL MEASURES

For fostering the smooth promotion of the project, In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to supplement a portion of the local cost expenditures for the execution of the physical infrastructure such as construction work of the stream gauging weir and so on when necessity arises.

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7. 南部パラグアイ農林業開発技術協力計画討議議事録

THE RECORD OF DISCUSSIONS BETWEEN THE JAPANESE  
IMPLEMENTATION SURVEY TEAM AND THE AUTHORITIES  
CONCERNED OF THE GOVERNMENT OF THE REPUBLIC OF  
PARAGUAY ON THE JAPAN-PARAGUAY TECHNICAL  
COOPERATION FOR THE AGRICULTURE AND FORESTRY  
DEVELOPMENT PROJECT IN THE SOUTHERN PARAGUAY

The Japanese Implementation Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Akira ARIMATSU, Executive Director, JICA, visited the Republic of Paraguay from March 11, 1979, to March 18, 1979, for the purpose of working out the details of the technical cooperation program concerning the Agriculture and Forestry Development Project in the Southern Paraguay.

During its stay in the Republic of Paraguay, the Team exchanged views and had a series of discussions with the Paraguayan authorities concerned in respect, of the desirable measures to be taken by both Governments for the successful implementation of the above-mentioned Project.

As a result of the discussions, the Team and the Paraguayan authorities concerned agreed to recommend to their respective Government the matters referred to in the document attached hereto based on "ACUERDO SOBRE COOPERACION TECNICA ENTRE EL GOBIERNO DEL JAPON Y EL GOBIERNO DE LA REPUBLICA DEL PARAGUAY (AGREEMENT ON TECHNICAL COOPERATION BETWEEN THE GOVERNMENT OF JAPAN AND THE GOVERNMENT OF THE REPUBLIC OF PARAGUAY)", signed at Asunción on February 9, 1979.

Asunción, March 16, 1979

Mr. Akira ARIMATSU  
Head  
of  
the Japanese Implementation Survey Team  
(Executive Director,  
Japan International Cooperation Agency)

Ing. Luis PAMPLIEGA C.  
Director General  
Ministry of Agriculture  
and Live-Stock  
The Republic of Paraguay

## **THE ATTACHED DOCUMENT**

### **I - COOPERATION BETWEEN BOTH GOVERNMENTS**

1. The Governments of Japan and the Governments of the Republic of Paraguay will cooperate with each other in implementing the Agriculture and Forestry Development Project in the Southern Paraguay (hereinafter referred to as "the Project") for the purpose of contributing to the agriculture and forestry development in the Southern Paraguay, mainly in Itapua Department.

2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

### **II - DISPATCH OF JAPANESE EXPERTS**

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense services of the Japanese experts as listed in Annex II through the normal procedures under the Technical Cooperation Scheme of Japan.

2. The Japanese experts referred to in 1. above and their families will be granted in the Republic of Paraguay the privileges, exemptions and benefits as listed in Annex III and will be granted privileges, exemptions and benefits no less favourable than those granted to experts of third countries or international organizations performing similar missions.

### **III - PROVISION OF MACHINERY AND EQUIPMENT**

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense such machinery, equipment and other materials necessary for the implementation of the Project as listed in Annex IV, through the normal procedures under the Technical Cooperation Scheme of Japan.

2. The articles referred to in 1. above will become the property of the Government of the Republic of Paraguay upon being delivered c.i.f. to the Paraguayan authorities concerned at the ports and/or airports of disembarkation, and will be utilized exclusively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.

### **IV - TRAINING OF PARAGUAYAN PERSONNEL IN JAPAN**

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to receive at its own expense the Paraguayan

personnel connected with the Project for technical training in Japan through the normal procedures under the Technical Cooperation Scheme of Japan.

2. The Government of the Republic of Paraguay will take necessary measures to ensure that the knowledge and experience acquired by the Paraguayan personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

#### **V- MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF PARAGUAY**

1. In accordance with the laws and regulations in force in the Republic of Paraguay, the Government of the Republic of Paraguay will take necessary measures to provide at its own expense:

- (1) Services of the Paraguayan counterpart personnel and administrative personnel as listed in Annex V;
  - (2) Land, building and facilities as listed in Annex VI;
  - (3) Supply or replacement of machinery, equipment, instrument, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than those provided through JICA under III-1, above;
  - (4) Transportation facilities and travel allowance for the Japanese experts for the official travel within the Republic of Paraguay;
  - (5) Suitably furnished accommodations for the Japanese experts and their families.
2. In accordance with the laws and regulations in force in the Republic of Paraguay, the Government of the Republic of Paraguay will take necessary measures to meet:
- (1) Expenses necessary for the transportation within the Republic of Paraguay of the articles referred to in III-1 above as well as for the installation, operation and maintenance thereof;
  - (2) Customs duties, internal taxes and any other charges, imposed in the Republic of Paraguay on the articles referred to in III-1 above;
  - (3) All running expenses necessary for the implementation of the Project.

#### **VI- ADMINISTRATION OF THE PROJECT**

1. The Ministry of Agriculture and Livestock of the Republic of Paraguay will be responsible for the administration and implementation of the Project, and the Japanese experts will provide necessary technical guidance and advice for the implementation of the Project.

2. For the successful implementation of the Project, a Joint-Committee will be established as specified in Annex VII and meet more than once a year. The Joint-Committee will formulate the details of the Master Plan referred to in Annex I and annual operational work plan of the Project. The details of the Master Plan and the annual operational work plan will be submitted to the authorities concerned of the two Governments for the approval.

Under the Joint-Committee, Agriculture, Agricultural Machinery and Forestry Sub-Committees may be established to discuss specific matters when necessity arises.

3. For the close cooperation between the Ministry of Agriculture and Livestock and other agencies concerned of the Republic of Paraguay and Japanese experts the Project Central Office will be established at Asunción and the Japanese General Coordinator will be assigned there. The General Coordinator will support the successful implementation of the three Programs through advice and coordination.

4. The Project will be implemented in contact with agricultural and forestry research stations concerned in the Republic of Paraguay.

#### **VII - CLAIMS AGAINST JAPANESE EXPERTS**

The Government of the Republic of Paraguay undertakes to bear claims, if any arises, against the Japanese experts engaged in the Project resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in the Republic of Paraguay except for those arising from the willful misconduct or gross negligence on the Japanese experts.

#### **VIII - MUTUAL CONSULTATION**

There will be mutual consultation between the two Governments on any major issues arising from, or connection with this Attached Document.

#### **IX - TERM OF COOPERATION**

The duration of the technical cooperation for the Project under this Attached Document will be five years from March 16, 1979, to March 15, 1984. The authorities concerned will hold mutual consultation concerning the necessity of extending the terms of cooperation with a view to the progress of the Project and may recommend to their respective Governments the extension of the duration.

## **ANNEX I: MASTER PLAN OF THE PROJECT**

1. The Project consists of the following three programs.

(1) Centro Regional de Investigación y Extensión Agrícola (hereinafter referred to as "CRIA") Strengthening Program;

(2) Agriculture Mechanization Program;

(3) Forestry Development and Training Program.

2. The objectives and activities of the three Programs are as follows.

(1) CRIA Strengthening Program:

For the purpose of strengthening the experimental and extension activities at CRIA, Capitan Miranda, Itapua Department, the following activities will be implemented at CRIA.

i) Breeding of upland crops including wheat and soybean for improvement of their stability and productivity;

ii) Experiment on new crop productivity;

iii) Adaptability trial and demonstration of the new varieties and cultivation techniques developed at CRIA;

iv) Multiplication of elite seeds;

v) Development of techniques to conserve the soil;

vi) Development of techniques to control diseases and pest insects;

vii) Supporting extension activity to disseminate the developed techniques to the farmers.

(2) Agriculture Mechanization Program:

For the betterment of the operation, maintenance and repairing techniques for cultivation and reclamation machines and tools, Centro de Mecanización Agrícola (hereinafter referred to as "CEMA") will be established in Pirapo, Itapua Department, and the following activities will be implemented.

i) Fostering the operators and the mechanics for the improved agricultural mechanization;

ii) Technical training on operation of the cultivation and reclamation machines;

iii) Technical training on repair and maintenance of the machines and tools.

(3) Forestry Development and Training Program:

For the purpose of developing forestry in the Southern Paraguay, mainly in Itapua Department, the Centro de Desarrollo Forestal (hereinafter referred to as "CEDEFO")

will be established in Pirapo, Itapua Department, which consists of two departments, namely Wood Processing Guidance Department and Afforestation Guidance Department.

i) Wood Processing Guidance Department will conduct the technical training and development of sawmilling, wood working, wood preservation and utilization of non-commercial wood;

ii) Afforestation Guidance Department will conduct the technical training and development of logging, nursery practice, mechanical afforestation and afforestation practice.

#### ANNEX II: LIST OF JAPANESE EXPERTS

	<u>Category</u>	<u>Field</u>
1. Project Central Office	(1) General Coordinator (2) Liaison Officer	
2. CRIA	(1) Expert	Agronomy
3. CEMA	(1) Expert	Mechanics Operation
4. CEDEFO	(1) Expert	Sawmilling Wood working Nursery practice Afforestation Forestry machinery

- Note: (1) A team Leader will be assigned among the experts of 2., 3. and 4. above respectively.
- (2) Experts in the above-mentioned fields are long-term ones, and short-term experts in the fields mentioned above as well as others may be dispatched when necessity arises.

### **ANNEX III: PRIVILEGES, EXEMPTIONS AND BENEFITS**

1. Exemptions from income tax and charges of any kind imposed on or in connection with the living allowances remitted from abroad;
2. Exemptions from import and export duties and any other charge in respect of personal and household effects, including one motor vehicle per family, which may be brought into the Republic of Paraguay from abroad;
3. Free medical services and facilities to the Japanese experts and their families.

### **ANNEX IV: LIST OF THE ARTICLES**

1. The Agriculture Sector:
  - (1) Agriculture and reclamation machines and equipment, and their spare parts;
  - (2) Machines and tools for repair work;
  - (3) Equipment, instruments, tools and their spare parts for laboratory and field experiments;
  - (4) Fertilizers, agricultural chemicals and other materials;
  - (5) Teaching and extension materials including audio-visual aids;
  - (6) Vehicles and their spare parts;
  - (7) Radio communication equipment and its spare parts;
  - (8) Other necessary equipment, tools and materials to be mutually agreed upon for the effective implementation of the Project.
2. The Forestry Sector:
  - (1) Forestry machines and equipment, and their spare parts;
  - (2) Machines and tools for repair work;
  - (3) Equipment, instruments, and their spare parts for experiments;
  - (4) Fertilizers, agricultural chemicals and other materials;
  - (5) Teaching materials including audio-visual aids;
  - (6) Vehicles and their parts;
  - (7) Radio communication equipment and its spare parts;
  - (8) Other necessary equipment, tools and materials to be mutually agreed upon for the effective implementation of the Project.

## ANNEX V: LIST OF PARAGUAYAN STAFF

	<u>Category</u>	<u>Field</u>
1. Project Central Office	(1) Project Coordinator (2) Clerk	
2. CRIA	(1) Project Manager (2) Expert (3) Clerical and service employee	Agronomy
3. CEMA	(1) Project Manager (2) Expert (3) Clerical and service employee	Mechanics Operation
4. CEDEFO	(1) Project Manager (2) Expert (3) Clerical and service employee	Sawmilling Wood working Nursery practice Afforestation Forestry Machinery

**Note:** In addition to the above-mentioned, necessary labores are included in 2., 3 and 4. respectively.

## ANNEX VI: LIST OF LAND, BUILDINGS AND FACILITIES

1. Project Central Office
  - (1) Rooms for General Coordinator and Liaison Officer
  - (2) Parking Lot
2. CRIA
  - (1) Land
    - i) Land for buildings
    - ii) Land for the experimental field

**(2) Buildings and facilities**

- i) Main office (laboratory, seed-storage room, lecture room, library, meeting room, etc.)
- ii) Storage for farming materials
- iii) Storage for machinery and equipment
- iv) Management office for the experimental field
- v) Green house and glass house
- vi) Generator house
- vii) Garage
- viii) Dormitory
- ix) Houses for Paraguayan staff
- x) Guest house
- xi) Others

**3. CEMA**

**(1) Land**

- i) Land for buildings
- ii) Field for operation training of cultivation and reclamation machines

**(2) Buildings and facilities**

- i) Main office (Team leader's room, expert's rooms, meeting room, lecture room, etc.)
- ii) Workshop for training
- iii) Storage for equipment and tools
- iv) Generator house
- v) Dormitory for trainees
- vi) Houses for Paraguayan staff
- vii) Workshop for repair and maintenance of machines
- viii) Storage for materials
- ix) Pump house
- x) Garage
- xi) Storage for machinery and equipment
- xii) Others

#### 4. CEDEFOP

##### (1) Land

- i) Land for buildings
- ii) Land for nursery and practical forest

##### (2) Buildings and facilities

- i) Main Office (administration office, training rooms, etc.)
- ii) Sawmill and wood factory
- iii) Wood testing rooms
- iv) Garages
- v) Warehouses for equipment
- vi) Dormitory for trainees
- vii) Guest house
- viii) Generator house
- ix) Pump house
- x) Office for nursery (including garage, warehouse, generator house and pump house)
- xi) Office for practical training forest (ditto)
- xii) Houses for Paraguayan staff
- xiii) Others

#### ANNEX VII: THE COMPOSITION OF THE JOINT-COMMITTEE

1. Chairman	Director General of Ministry of Agriculture and Livestock
2. Member	
<u>Japanese side</u>	<u>Paraguayan side</u>
(1) General Coordinator	(1) Director of Technical Cabinet (Project Coordinator)
(2) Team Leaders	(2) Director of Research and Extension for Agriculture and Forestry
(3) Experts	(3) Director of Education for Agriculture and Forestry

**Japanese side**

**(4) Liaison Officer**

**(5) Representative of JICA**

**Paraguayan side**

**(4) Director of National Forestry Service**

**(5) Director of Administration**

**Note:** Representatives of other Ministries concerned and the Embassy of Japan, including Project Managers of the three Programs, may attend the meeting as observers.

**TENTATIVE IMPLEMENTATION PROGRAMME OF  
THE AGRICULTURE AND FORESTRY DEVELOPMENT  
PROJECT IN THE SOUTHERN PARAGUAY**

The Japanese Implementation Survey Team and Director General of the Ministry of Agriculture and Livestock of the Republic of Paraguay have jointly formulated the Tentative Implementation Programme of the Project as annexed hereto. These have been formulated in connection with I-2, of the Attached Document of the Record of Discussions between the Japanese Implementation Survey Team and Director General of the Ministry of Agriculture and Livestock of the Republic of Paraguay on the Agriculture and Forestry Development Project in the Southern Paraguay for its reference on such condition that necessary budget will be allocated for the implementation of the Project, and are subject to change within the framework of the Record of Discussions when necessity arises in the course of implementation of the Project.

Asunción, March 16, 1979

**Mr. AKIRA ARIMATSU**  
Head of  
the Japanese Implementation Survey Team  
(Executive Director,  
Japan International Cooperation Agency)

**Ing. LUIS PAMPLIEGA C.**  
Director General  
Ministry of Agriculture  
and Livestock  
The Republic of Paraguay

I- TENTATIVE SCHEDULE OF IMPLEMENTATION

	1979	1980	1981	1982	1983	1984
Japanese Experts						
General Coordinator			1 person			
Liaison Officer			1 person			
Experts for CRIA			1 person (Breeding)			
			1 to 2 persons (Pathology, Entomology)			
Experts for CEDEF			2 persons (Nursery, Afforestation)			
			2 persons (Sawmilling, Machinery)			
			1 person (Woodworking)			
Experts for CEMA			3 persons (Machinery, Operation)			
			3 persons (Machinery, Operation)			
			Several persons			
Training in Japan						
Articles, materials, etc.	X	X	X	X	X	X
Dispatching Survey Team						
	implement- ation design team	implement- ation planning team	guidance team	implemen- tation planning team	guidance team	evaluation team

8. パルー・アマゾン林業開発協力現地実証調査討議議事録

パルー共和国アマゾン地域森林造成現地実証共同研究  
プロジェクトのための実施細則に関する日本国実施協  
議調査団と林業動物研究所との間の討議議事録

国際協力事業団（以下「JICA」という。）が組織し、  
外務省開発協力課長 大塚清一郎氏を団長とする日本国実施協  
議調査団が共同研究プロジェクトの詳細を策定するため、  
1981年10月パルー共和国を訪問した。

慎重な調査・協議の結果、日本国実施協議調査団と林業動  
物研究所（以下「INFOR」という。）は、技術協力に関  
する日本国政府とパルー共和国政府との間の基本協定（以下  
「基本協定」という。）に基づき、別添の実施細則に従い、  
プカルバ地域における森林造成現地実証プロジェクトの実施  
について、それぞれの政府に勧告することに同意した。

パルー共和国リマ市

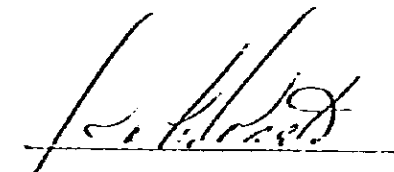
1981年10月9日



団長 大塚清一郎

パルー共和国アマゾン地域森林

造成現地実証共同研究 プロジェ  
クト実施協議調査団



Ing. José Prato Mathews

パルー共和国 林業動物研究所長

ペルー共和国アマゾン地域森林造成現地実証  
共同研究プロジェクトのための実施細則

I 両政府間の共同研究

1. 日本国政府とペルー共和国政府は、アマゾン地域における熱帯降雨林の調和ある開発と保全に貢献するための更新技術体系の確立をはかることを目的としてブカルバ地域の森林造成現地実証プロジェクト（以下「プロジェクト」という。）を、円滑かつ効果的に実施することに協力する。
2. プロジェクトは、基本協定に基づき、付表Ⅰの基本計画に従って実施される。

II 日本人専門家の派遣

1. 日本国政府は、日本国で施行されている法令に従い、付表Ⅰに掲げる日本人専門家の役務を自己の負担において提供するため、JICAを通じ必要な措置をとる。
2. 上記1項にいう日本人専門家及びその家族は、基本協定に従って、ペルー共和国において特権、免除及び便宜が与えられる。

III 資機材の供与

1. 日本国政府は、日本国で施行されている法令及び基本協定第2条c項に従い、付表Ⅱに掲げるプロジェクト実施に必要な資機材を自己の負担において供与するため、JICAを通じ必要な措置をとる。
2. 上記1項にいう資機材は、付表Ⅱに掲げる日本人専門家と協議の上プロジェクト実施のためのみに使用され、プロジェクト終了時点においてペルー共和国政府の所有となる。

IV 特別措置

日本国政府は、プロジェクトの円滑な推進を確保するため、日本国で

施行されている法令に従い、林道の作設、その他必要な関連インフラストラクチャー整備に要するローカルコストの一部を負担するためJICAを通じ必要な措置をとる。

Ⅶ ベル人カウンターパート及び事務職員の役務

1. ベル共和国政府は、ベル共和国で施行されている法令に従い、付表Ⅳに掲げるベル人カウンターパート及び事務職員の役務を自己の負担において確保するため必要な措置をとる。

2. ベル共和国政府は、ベル人カウンターパートに関し、付表Ⅰに掲げる日本国政府により派遣される各専門家に対し、プロジェクトにおいて技術移転が有効的に実施されるために、適格なカウンターパートを必要数配置する。

Ⅷ ベル共和国政府のとるべき措置

1. ベル共和国政府は、ベル共和国で施行されている法令及び基本協定第5条に従い、次のものを自己の負担において提供するために必要な措置をとる。

(1) 付表Ⅴに掲げる土地、建物及び付帯施設

(2) 上記Ⅱ条ノ項によりJICAを通じて供与される機材以外で、プロジェクト実施に必要な機械、設備、器具、車輛、工具、部品及びその他の物品の調達もしくは取替

(3) 日本人専門家のベル共和国内における公務出張にかかわる交通の便宜及び旅費

(4) 日本人専門家及びその家族に対する適当な家具付住居施設

(5) 日本人専門家に対する医療の便宜

2. ベル共和国政府は、ベル共和国で施行されている法令及び基本協定第7条に従い、次の経費を負担するために必要な措置をとる。

(1) 上記Ⅱ条ノ項に掲げる資機材のベル共和国内における検送、据付、

操作及び維持に必要な経費

- (2) 上記Ⅱ条ノ項に掲げる資機材に対するベルー共和国内で課される関税、国内税及びその他の全ての課徴金
- (3) プロジェクトの実施に必要な運営費

#### Ⅳ プロジェクトの管理

- 1. INFOR 所長は、プロジェクト実施に係わる管理上の問題について全般的責任を負うものとし、日本人専門家はプロジェクトの実施に関し、技術的な助言及び指導を行う。
- 2. プロジェクトを円滑に推進するため、運営委員会を設置する。委員会は、定期的に少なくとも年2回、さらに必要に応じて開催される。委員会の主な業務は年間実行計画の作成、プロジェクトの進捗状況の評価並びに運営上の具体的問題点について協議することである。委員会の構成は付表Ⅳのとおりとする。

#### Ⅴ 日本人専門家に対する請求（クレーム）

ベルー共和国政府は、基本協定第7条に従い、日本人専門家のベルー共和国内における職務の遂行に起因し、又は、その遂行中に、又は、その遂行に関連してプロジェクトに従事する日本人専門家に対するクレームが生じた場合には、そのクレームに関する責任を負う。但し、日本人専門家の故意又は重大な過失により生ずるクレームについてはこの限りでない。

#### Ⅵ 相互協議

両国政府は、本実施細則に関連するいかなる主要事項についても、相互協議を行う。

#### Ⅶ 共同研究期間

本実施細則に基づくプロジェクトのための共同研究期間は、1981年10月9日から5年間とする。

付表1 プロジェクトの基本計画

1. プロジェクトの概要

プロジェクトは、研究情報と資料を収集し、林業技術普及のための展示林を造成することにより、アマゾン地域の熱帯降雨林の調和ある開発と保全をはかるうえで必要とされる効果的な更新技術体系を確立することを目的とする。

2. プロジェクトの内容

- (1) 位 置 ウカヤリ県コロネルボルデージ郡 カジェリーア地  
サンフレハンドロ村 アレクサンダー・フォン・ブノルト試験林
- (2) 試験面積 約700ha

- 人 工 更 新
- 天 然 更 新
- 展 示 林
- 苗 畑

(3) 上記試験を通ずるデータの収集

(4) その他

- 道 路 建 設
- 苗 畑 造 成
- 事務所、倉庫等の建設

3. プロジェクト実施機関

ペルー共和国政府	INFOR
日本国政府	JICA

付表Ⅰ 日本人専門家

1. リーダー

2. 次の分野における専門家

- 育苗
- 造林
- 森林生態

3. 業務調整員

但し 1. リーダーは、専門家の中から JICA によって任命される。

2. 上記専門家以外に短期専門家が必要に応じて派遣される。

付表Ⅱ 資機材のリスト

1. 森林造成事業のための機械、設備、部品及び物資
2. 調査及びトレーニングのための設備、器具、部品及び物資
3. 車両及びその部品
4. その他、相互に合意する必要な資機材

付表Ⅲ ベルギー人カウンターパート

1. プロジェクト・マネージャー
2. 専門家
  - 育苗
  - 造林
  - 森林生態
3. 事務員及び業務員

付表Ⅴ 土地、建物及び付帯施設

1. 土 地

- 苗 畑 用 地
- 試 験 林 用 地
- 事務所及び付帯施設用地

2. 建物及び付帯施設

- 事 務 所
- 実 験 室
- 機械及び設備用倉庫
- 物 品 倉 庫
- 作業場及びガレージ
- 日本人専門家及びベルー人カウンターパートのための現地宿泊設備
- そ の 他

付表Ⅱ 運営委員会の構成

ペルー側    INFOR 所長(委員長)  
              INFOR 計画局長  
              INFOR 調査局長  
              INFOR 総務局長  
              INFOR 国際技術協力部長  
              プロジェクト・マネージャー

日本側    リーダー  
              リーダーによつて指名された日本人専門家  
              業務調整員

註 次の者がオブザーバーとして委員会に出席することができる。

- a. 日本大使館員及び日本大使館により指名された者
- b. JICA の代表者
- c. ペルー共和国農務省の代表者
- d. ペルー国際技術協力関係当局の代表者

Ministerio de Agricultura y Fomento  
Oficina General de Asesoría Técnica

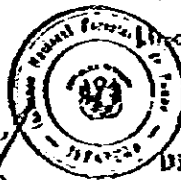


INSTITUTO NACIONAL FORESTAL Y DE FAUNA

**ACTA DE CONVERSACION ENTRE EL GRUPO JAPONES DE ESTUDIO  
DE IMPLEMENTACION Y EL INSTITUTO NACIONAL FORESTAL Y DE  
FAUNA SOBRE EL ALCANCE DE TRABAJO PARA EL PROYECTO DE ES-  
TUDIO CONJUNTO SOBRE INVESTIGACION Y EXPERIMENTACION  
EN REGENERACION DE BOSQUES EN LA ZONA AMAZONICA DE LA  
REPUBLICA DEL PERU**

El Grupo Japonés de Estudio de Implementación organizado por la Agencia de Cooperación Internacional del Japón (en adelante se le denominará "JICA"), encabezado por el Sr. Seichiro Otsuka Director de la División de Cooperación para el Desarrollo, Ministerio de los Asuntos Extranjeros, visitó la República del Perú en Octubre de 1981 con el propósito de completar los detalles del proyecto de estudio conjunto.

Como resultado de cuidadosos estudios y discusiones, el Grupo Japonés de Estudio de Implementación y el Instituto Nacional Forestal y de Fauna (en adelante se le denominará "INFOR"), acordaron recomendar a sus respectivos Gobiernos la implementación del Proyecto de Investigación y Experimentación en Regeneración de Bosques en el Área de Pucallpa, según el alcance de trabajo adjunto, a base del Acuerdo Básico sobre Cooperación Técnica entre el Gobierno del Japón y el Gobierno de la República del Perú (en adelante se le denominará "el Acuerdo Básico").



Lima, 9 de Octubre de 1981.

*S. Otsuka*

INSTITUTO NACIONAL FORESTAL Y DE FAUNA

Ing. JOSE L. PRATO MATHEWS  
Jefe



INSTITUTO NACIONAL FORESTAL Y DE FAUNA

**ALCANCE DE TRABAJO PARA EL PROYECTO DE ESTUDIO CONJUNTO  
SOBRE INVESTIGACION Y EXPERIMENTACION EN REGENERACION  
DE BOSQUES EN LA ZONA AMAZONICA DE LA REPUBLICA DEL PERU**

**I. ESTUDIO CONJUNTO ENTRE LOS DOS GOBIERNOS**

1. El Gobierno del Japón y el Gobierno de la República del Perú cooperarán para implementar efectivamente sin dificultad el Proyecto de Investigación y Experimentación en Regeneración de Bosques en el Área de Pucallpa (en adelante se le denominará "el Proyecto"), para el propósito de establecer un sistema de técnicas de regeneración que contribuyan al desarrollo armónico y la conservación del bosque húmedo tropical en la zona amazónica.
2. El Proyecto se implementará de acuerdo con el plan básico del Anexo I, sobre la base del Acuerdo Básico.

**II. ENVIO DE EXPERTOS JAPONESES**

1. De acuerdo con las leyes y reglamentos vigentes en el Japón, el Gobierno del Japón tomará medidas necesarias por intermedio de JICA para proveer, a su propio costo, los servicios de los expertos japoneses que se indican en el Anexo II.
2. Los expertos japoneses referidos en 1. orriba y sus familias gozarán en la República del Perú de los privilegios, exoneración y beneficios según el Acuerdo Básico.

**III. PROVISION DE MAQUINARIAS Y EQUIPOS**

1. De acuerdo con las leyes y reglamentos vigentes en el Japón y el párrafo (c) del Artículo II del Acuerdo Básico, el Gobierno del Japón tomará las medidas necesarias por intermedio de JICA para proveer, a su propio costo, las maquinarias, equipos y otros materiales necesarios para la ejecución del Proyecto como se indica en el Anexo III.
2. Los objetos referidos en 1. orriba serán utilizados exclusivamente para la ejecución del Proyecto, en consulta con los expertos japoneses referidos en el Anexo II y pasarán a ser de propiedad del Gobierno de la República del Perú - luego de la terminación del Proyecto.



INSTITUTO NACIONAL FORESTAL Y DE FAUNA

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-02-

IV. MEDIDAS ESPECIALES

A fin de asegurar la operación normal y eficiente del Proyecto, de acuerdo con las leyes y reglamentos vigentes en el Japón, el Gobierno del Japón tomará las medidas necesarias por intermedio de JICA para cubrir parte de los gastos del costo local de la ejecución de la infraestructura física tal como construcción de caminos en la selva y similares cuando surjan las necesidades.

V. SERVICIOS DE PERSONAL DE LA CONTRAPARTE PERUANA Y PERSONAL ADMINISTRATIVO

1. De acuerdo con las leyes y reglamentos vigentes en la República del Perú, el Gobierno de la República del Perú tomará las medidas necesarias para asegurar, a su propio costo, los servicios necesarios del personal, tanto de la contraparte peruana como administrativo que se indica en el Anexo IV.
2. Con respecto al personal de la contraparte peruana, el Gobierno de la República del Perú se esforzará para asignar el número necesario del personal calificado apropiado correspondiente a cada experto japonés que sea enviado por el Gobierno del Japón como se especifica en el Anexo II, para asegurar la transferencia efectiva y exitosa de tecnología bajo el Proyecto.

VI. MEDIDAS QUE SERAN TOMADAS POR LA REPUBLICA DEL PERU

1. De acuerdo con las leyes y reglamentos vigentes en la República del Perú y el Artículo V del Acuerdo Básico, el Gobierno de la República del Perú tomará las medidas necesarias para proveer, a su propio costo:
- 1.- Terreno, edificios y facilidades como se enumeran en el Anexo V;
  - 2.- Provisión o reemplazo de maquinarias, equipos, instrumentos, vehículos, herramientas, repuestos y cualesquier otros materiales necesarios para la ejecución del Proyecto que no sean suministrados por intermedio del JICA bajo III-1 arriba;
  - 3.- Medios de transportes y emolumentos viáticos para los expertos japoneses en los viajes oficiales dentro de la República del Perú;
  - 4.- Viviendas adecuadamente amueblados para los expertos japoneses y sus familiares;
  - 5.- Servicios médicos para los expertos japoneses.



INSTITUTO NACIONAL FORESTAL Y DE FAUNA

-03-

2.- De acuerdo con las leyes y reglamentos vigentes en la República del Perú y el Artículo IX del Acuerdo Básico, el Gobierno de la República del Perú tomará medidas necesarias para cubrir:

- 1.- Gastos necesarios para la transportación dentro de la República del Perú de los objetos referidos en III-1 arriba así como para la instalación, operación y mantenimiento correspondientes;
- 2.- Derechos aduaneros, impuestos internos y cualesquier otros cargos fiscales, impuestos en la República del Perú sobre los objetos referidos en III-1 arriba;
- 3.- Gastos corrientes necesarios para la implementación del Proyecto.

VII. ADMINISTRACION DEL PROYECTO

- 1.- El Jefe del INFOR asumirá la responsabilidad total sobre los asuntos administrativos para la implementación del Proyecto, y los expertos japoneses proporcionarán consejos técnicos y orientación para la implementación del Proyecto.
- 2.- A fin de asegurar una operación normal y eficiente del Proyecto, se establecerá un Comité Directivo. Las sesiones del Comité se efectuarán regularmente por lo menos dos veces al año o siempre que sea necesario.

Sus tareas principales serán las de formular el plan anual de operación, evaluar los progresos del Proyecto y tratar de asuntos específicos relacionados al Proyecto. La composición del Comité se especifica en el Anexo VI.

VIII RECLAMACIONES CONTRA EXPERTOS JAPONESES

De acuerdo con el Artículo VII del Acuerdo Básico, el Gobierno de la República del Perú se hará cargo de las demandas contra los expertos japoneses, si alguna surgiera en el curso de la ejecución del Proyecto, o conectados con el cumplimiento de sus funciones oficiales en la República del Perú con excepción de las demandas que surgieron por mala conducta y negligencia de los expertos japoneses.

IX. CONSULTA MUTUA

Los dos Gobiernos se consultarán mutuamente sobre cualquier asunto que pueda surgir del presente Alconce de Trabajo o en conexión con él.

X. TERMINO DE ESTUDIO

La duración de estudio conjunto para el Proyecto bajo el presente Alconce de Trabajo será de (5) años desde el 09 de Octubre de 1981.



INSTITUTO NACIONAL FORESTAL Y DE FAUNA

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-04-

ANEXO I. PLAN BASICO DEL PROYECTO

1.- RESUMEN DEL PROYECTO

El Proyecto de Investigación y Experimentación de regeneración en el Area de Pucallpa, se diseña para obtener informaciones y datos de investigación y para establecer un bosque demostrativo para desarrollar las técnicas efectivas en regeneración natural y artificial conducentes al desarrollo armonioso y la conservación del bosque húmedo tropical en la zona amazónica

2.- CONTENIDO DEL PROYECTO

- (1) Ubicación: Dpto. Ucayali; Provincia Coronel Portillo; Distrito Calleria; caserío San Alejandro. Estación Experimental Forestal del bosque Alexander Von Humboldt.
- (2) Area Experimental: Alrededor de 700 hect.
- Regeneración Artificial
  - Regeneración Natural
  - Bosque para Demostración
  - Viveros
- (3) Colección de Datos mediante los Experimentos arriba mencionados.
- (4) Otros
- Construcción de Caminos
  - Establecimiento de Viveros
  - Construcción de Oficinas, Almacenes, etc.

3.- ENTIDADES QUE IMPLEMENTAN EL PROYECTO

Por el Gobierno de la República del Perú : INFOR

Por el Gobierno del Japón : JICA

ANEXO II. EXPERTOS JAPONESES

1. Jefe
2. Expertos en los siguientes campos :
- Viveros
  - Silvicultura
  - Ecología Forestal





INSTITUTO NACIONAL FORESTAL Y DE FAUNA

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-05-

3. Funcionario de Coordinación

Nota. 1. El Jefe será nombrado por JICA de entre los expertos.

2. Cuando sea necesario, se enviarán a la República del Perú por plazo corto expertos aporte de los arriba especificados.

ANEXO III. LISTA DE EQUIPOS Y SUMINISTROS

1. Maquinarios, equipos, repuestos y materiales para las actividades de reforestación.
2. Equipos, instrumentos, repuestos y materiales para investigación y entrenamiento.
3. Vehículos y sus repuestos.
4. Otros equipos necesarios, herramientas y materiales que se acuerden mutuamente.

ANEXO IV. CONTRAPARTE PERUANA

1. Jefe del Proyecto
2. Expertos :
  - Viveros
  - Silvicultura
  - Ecología Forestal
3. Empleados y Personal de Servicio

ANEXO V. TIERRAS, EDIFICIOS Y FACILIDADES

1. Tierras:
  - Terrenos para viveros
  - Terrenos para bosque experimental
  - Terrenos para las Oficinas del Proyecto y facilidades relacionadas
2. Edificios y facilidades
  - Oficinas del Proyecto
  - Laboratorios
  - Cobertizo para maquinarios y equipos
  - Almacenes para materiales
  - Taller y garage
  - El terreno para alojamiento de los Expertos japoneses y para la Contra-

"Ases Interdisciplinarios de la Reducción de la Vulnerabilidad  
de Sığro Anuro y Mielada Párida"



INSTITUTO NACIONAL FORESTAL Y DE FAUNA

-06-

parte Peruana.  
Otros

#### ANEXO VI. COMPOSICION DEL COMITE DIRECTIVO

##### Parte Peruana

Jefe del INFOR Presidente del Comité, Directores Generales de Investigación, Programación, Administración, Director de Cooperación Técnica Internacional y Jefe del Proyecto.

##### Parte Japonesa

Jefe

Los expertos japoneses designados por el Jefe

Funcionario de coordinación

Nota: Los siguientes representantes pueden asistir al Comité como observadores:

- a. Un funcionario de la Embajada del Japón y cualquier persona designada por la Embajada del Japón.
- b. Representantes de JICA.
- c. Representantes del Ministerio de Agricultura de la República del Perú.
- d. Representantes de la autoridad competente peruana de la Cooperación Técnica Internacional.



*[Signature]*

*[Signature]*

9. フィジー・林業開発調査 S/W

RECORD OF UNDERSTANDING

The Japanese Discussion Team and the Staff of Fijian Forestry Department discussed the cooperation work of "The Survey For Forest Development In FIJI" on 7 July, 1980.

The both parties have agreed in principle to conduct the survey based on the "Scope of Work" attached herewith.

Date: 7th July, 1980

Signature: Masao Fukutake  
Head of Japanese Discussion Team

Signature: K.A.A. Henderson  
for Secretary for Foreign Affairs

Signature [Signature]  
Committee of Experts

## SCOPE OF WORK ON THE SURVEY FOR FOREST DEVELOPMENT IN FIJI

### I. INTRODUCTION

In response to the request from the Government of Fiji, the Government of Japan has decided to undertake the survey for forest development in Fiji, in accordance with laws and regulations in force in Japan.

Under the assignment of the Government of Japan, the Japan International Cooperation Agency (hereinafter referred to as JICA), the official agency responsible for implementation of technical cooperation program of the Government, has decided to carry out this survey, which should be conducted in collaboration with the Government of Fiji.

### II. OBJECTIVE

The survey will be performed mainly by means of inventories of forest, mapping and site assessment for the purpose of providing necessary data and informations for Forest Development.

### III. LOCATION

The survey area covers about 2000 ha of Sasaqa and Koroutari in Vanua Levu and about 7000 ha of Nukurua in Viti Levu, (See Appendix I)

### IV. OUTLINE OF THE WORK

#### 1. Inventories of Forest

##### 1.1 Forest inventory on 2000 ha pine plantation at Sasaqa and Koroutari

- a) Division by forest compartments
- b) Classification of forest types by photo-interpretation
- c) Preparation of photo volume table
- d) Preparation of stereogramme
- e) Preparation of forest inventory note

##### 1.2 Forest inventory on 7000 ha plantation of hard-wood at Nukurua

- a) Division by forest compartments
- b) Classification of forest types by photo-interpretation
- c) Preparation of photo-volume estimation cards
- d) Preparation of stereogramme
- e) Preparation of forest inventory note

2. Mapping (15000 ha of Nukurua)
  - 2.1 Collection of necessary data for making a base map covering Nukurua
  - 2.2 Pricking of control points
  - 2.3 Setting of control points
  - 2.4 Aerotriangulation survey
  - 2.5 Preparation of base map covering Nukurua
3. Site Assessment (7000 ha plantation of hard-wood at Nukurua)
  - 3.1 Soil survey
  - 3.2 Vegetation research
  - 3.3 Topographic analysis
  - 3.4 Judgement of forest productivity on hardwood species at Nukurua
4. Report
 

JICA will submit the report (30 copies) and the following data to the Government of Fiji

  - 4.1 Data of Sqaqa and Koroutari
    - a) A map of division by forest compartments on a scale 1:10000 1 set
    - b) A classification map of forest on a scale 1:10000 1 set
    - c) A photo volume table 1 set
    - d) A stereogramme 1 set
    - e) A forest inventory note 1 set
  - 4.2 Data of Nukurua
    - a) A base map on a scale 1:10000 1 set
    - b) A result of aerotriangulation survey 1 set
    - c) A detail table of control points 1 set
    - d) A map of division by forest compartments on a scale 1:10000 1 set
    - e) A classification map of forest on a scale 1:10000 1 set
    - f) Photo-volume estimation cards 1 set
    - g) A stereogramme 1 set
    - h) A forest inventory note 1 set
    - i) Detail data of forest productivity 1 set

## **V. CONTRIBUTION**

### **1. Japanese Side**

- 1.1** To dispatch a Japanese expert team in order to conduct the work mentioned in Paragraph IV.
- 1.2** To provide the services, materials and equipments required for the work.

### **2. Fijian Side**

- 2.1** To provide data and informations required for the work.
- 2.2** To make necessary arrangement for the field work.
- 2.3** To permit the team to take out data required for the survey from Fiji.
- 2.4** To exempt from taxes and duties for materials and equipments necessary for the work.
- 2.5** To allow the team free movement.
- 2.6** To provide sample trees for test (if necessary), and to permit cutting hindering trees.
- 2.7** To arrange vehicles, boats, interpreters, guides, labourers, lodging, and offices for the team, if required.
- 2.8** To assign Fijian counterparts to the Japanese team during the working period.
- 2.9** To provide medical services for the team during their stay in Fiji.
- 2.10** To undertake to bear claims, if any arises, against the Japanese team members engaged in the survey resulting from, occurring in the course of, or otherwise connected with, the discharge of their official functions in Fiji except for those claims arising from the willful misconduct or gross negligence of the Japanese team members.

## **VI. WORKING SCHEDULE:**

See Appendix II

The Government of Fiji and JICA  
agree that condition V 2.9 of the Scope of  
Work means that the Government of Fiji will  
provide medical services at any Fiji Government  
hospital for the team during their stay in Fiji.

Date: 7 July ,1980

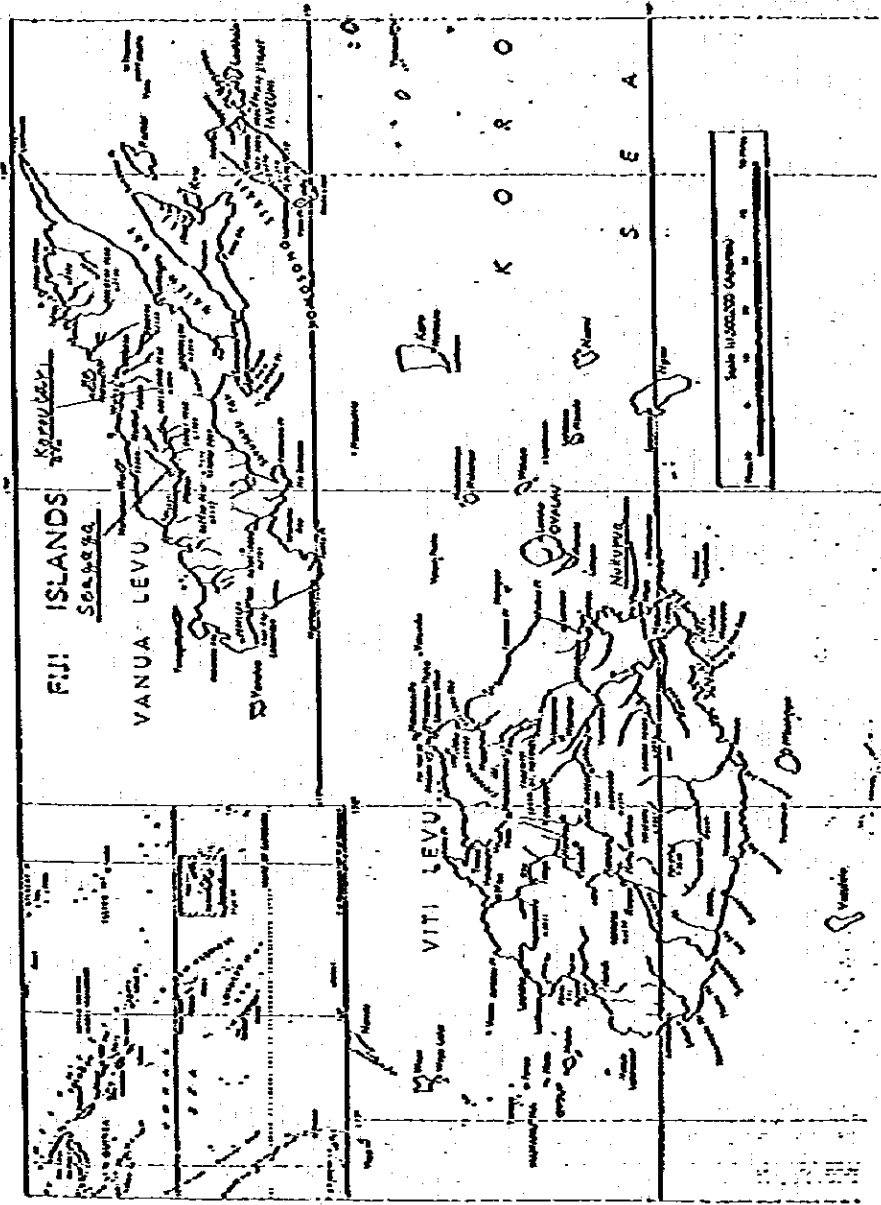
Signature: Masao Fukuhara

Head of Japanese  
Discussion Team

Signature: K.A.A. Henderson

for Secretary for Foreign Affairs

for JICA  
Consulate General



APPENDIX II		1941																		
1940		JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY.	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	
Inventory of Forest		IN FIJI at Seseqa																		
		IN FIJI at Nukunua																		
Mapping		IN FIJI																		
		IN JAPAN																		
Data analysis		IN JAPAN																		
		IN JAPAN																		
Report		IN JAPAN																		
		IN FIJI																		
Site Assessment		IN JAPAN																		
		IN JAPAN																		
Report		IN JAPAN																		
		IN JAPAN																		

10. ホンジュラス・ラ・モスキティア地区森林調査 S/W

MINUTES OF THE MEETING

OF

SCOPE OF WORK ON FOREST INVENTORY

IN

LA MOSQUITIA, HONDURAS, C. A.


The General Manager of the Forest Development Corporation of the Republic of Honduras, and the Japanese Team for scope of work on the forest inventory, organized by Japan International Cooperation Agency (JICA) and headed by Mr. Katsuhiro Kotari, Special Assistant to the President of JICA, discussed and exchanged their views concerning the cooperation work on the forest inventory in la Mosquitia.

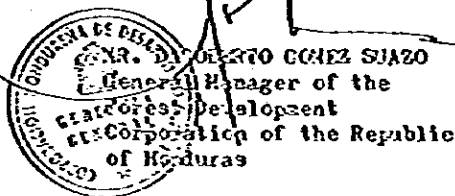
Both parties have agreed in principle to conduct the inventory based on the "Scope of Work" attached herewith.

September 22, 1980, in Tegucigalpa, Honduras, C.A.

MR. KATSUHIRO KOTARI  
Head of the Japanese Team  
for Scope of Work on the  
Forest Inventory

*Kotari*  
*Katsuhiro*

  
MR. DONATO GOMEZ SUAZO  
General Manager of the  
Forest Development  
Corporation of the Republic  
of Honduras



## **SCOPE OF WORK ON FOREST INVENTORY**

### **IN LA MOSQUITIA, HONDURAS, C.A.**

#### **I. INTRODUCTION**

In response to the request from the Government of Honduras, the Government of Japan has decided to undertake forest inventory for management of pine forests in La Mosquitia of Honduras (Hereinafter referred to as "the inventory").

Under the assignment of the Japanese Government, the Japan International Cooperation Agency, the official agency responsible for implementation of technical cooperation program of the Government, has decided to carry out the inventory, which should be conducted in coordination and collaboration with the Government of Honduras.

#### **II OBJECTIVE**

The objective of the inventory is to provide necessary data and information for the systematization of the forest management by means of aerial photographing, mapping, field survey and data-analysis in order to contribute to the socio-economic development in La Mosquitia.

#### **III LOCATION**

The inventory covers approximately 200,000 ha. in La Mosquitia, including 75,000 ha. of the intensive inventory area in the management unit of Ros Ros (See Appendix I).

#### IV. OUTLINE OF THE WORK

##### 1.- Aerial Photographing

- 1.1 To contract a company for taking aerial photographs.
- 1.2 Planning, including selection of flight course and work schedule, in cooperation with contracted company.
- 1.3 Setting up aerial photo targets.
- 1.4 Photographing on a scale of 1:20,000, which covers the area of approximately 200,000 ha.
- 1.5 Developing films and printing
- 1.6 Orientation of aerial photographs (See Appendix II).
- 1.7 Geodesic ground survey

##### 2.- Mapping and photo analysis.

- 2.1 Computation of aerial triangulation.
- 2.2 Preparation of physiographical contour maps and forest type maps on a scale of 1:20,000 (or 1:10,000 if possible).
- 2.3 Stratification of forest on the aerial photographs (See Appendix III).
- 2.4 Preparation of aerial volume tables.
- 2.5 Submission of final products.

##### 3.- Field Survey

- 3.1 The Field Survey will be carried out by means of appropriate sampling using aerial photos and will evaluate:
  - a) In the intensive management area (75,000 ha.):
    - Regeneration
    - Growing stock
    - Increment
    - Stand structures

- Site conditions

- Vegetations

- Qualities

b) In the extensive management area (+ 125,000 ha.) :

- Regeneration

- Growing stock

- Site conditions

- Vegetations

c) The survey will contribute to the technical transfer

by drawing up the soil map in the management area.

3.2 The forest inventory in the management unit should provide a permitted error of 10% of the commercial volume of trees with DBH o.b. 25cm and more, at the probability level of 95% (up to a limit of 15 cm. top diameter under bark).

3.3 Total volume, will be sampled of all trees with DBH o.b. 10 cm. and more, and commercial volume will be sampled up to a top diameter of 7.5 cm. under bark.

3.4 Preparation of volume tables and survey of commercial utilization will be carried out.

#### 4.- Computation of the results of the inventory

4.1 The INFO/AC codification will be used to calculate the results of the inventory.

4.2 Following information will be provided:

- Stand and stock tables

- Commercial volume tables

- Surface distribution of forest type or land use type, species, soil type, site class and diameter or age class.

4.3 The metric system will be used in all measurements and computations.

5.- Study of Forest Management

5.1 Evaluation of forest regeneration

5.2 Establishment of forest management guide lines concerning the following matters: silvicultural system, forest regulation method, nursery practice, forest roads and forest protection.

6.- Reports

JICA will submit the report (30 copies) in Spanish and the following data to the Government of Honduras:

a) Aerial Photographs

Negative Films	1 set
Contact prints	4 sets
Index maps	1 set
Enlarged photographs: X2	1 set

b) Contour Maps (Hyland) 1 set

c) Photo volume tables 1 set

V. CONTRIBUTION

1.- Japanese Side

1.1 To dispatch Japanese expert teams to conduct the work mentioned in Paragraph IV.

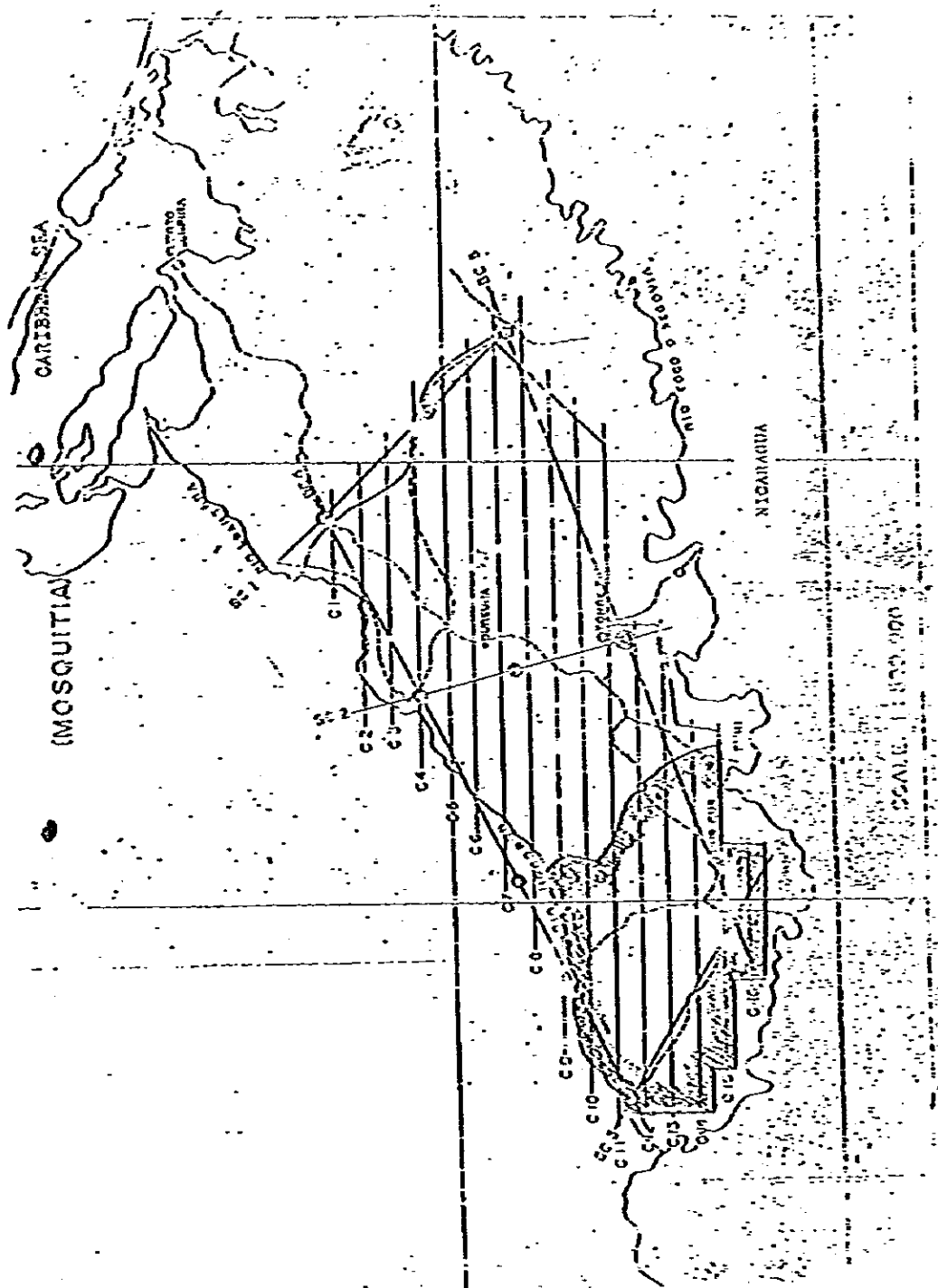
1.2 To provide the services, materials and equipments required for the work in Honduras.

2.- Honduran Side

- 2.1 To provide data and information required for the work  
(topographic maps 1:25,000 and 1:50,000 of the area of the project, if possible).
- 2.2 To make the necessary arrangements and permission for the flying and airplane employed by the team for the aerial photographing and the field work.
- 2.3 To permit the teams to bring the films, contact prints, and other data required for the survey from Honduras, to Japan for mapping and analysis.
- 2.4 To exempt from taxes and duties, materials and equipment necessary for the work.
- 2.5 To allow the teams free movement.
- 2.6 To provide trees for tests, if necessary, and to permit the cutting of hindering trees.
- 2.7 To arrange vehicles as far as possible, interpreters, guides, laborers, lodging, and offices for the teams, if required.
- 2.8 To assign Honduran counterparts to the Japanese Team during the working period.
- 2.9 To provide medical services for the team during their stay in Honduras, excluding medical expenses
- 2.10 To undertake to bear claims, if any arises, against the Japanese team members engaged in the survey resulting from, occurring in the course of, or otherwise connected with, the discharge of their official functions in Honduras, except for those claims arising from the willful misconduct or gross negligence of the Japanese team members.

VI      WORKING SCHEDULE

See Appendix IV



## APPENDIX II DETAILS OF AERIAL PHOTOGRAPHING AND PHOTOGRAPHS

- 1.- Planning should be comprised of selecting flying courses and making work schedules. Flying courses should be arranged and selected on the following basis:
  - a) Flying courses should be straight.
  - b) Flying courses should be arranged in such a way as to cover the proposed area with the minimum number of photos.
  - c) Flying courses should be limited inside the boundaries of Honduras.
  - d) Flying programs should be arranged so as to facilitate such work as the orientation of control points needed for aerial triangulation.

### 2.- Aerial Photo Taking

Aerial photographing will be carried out to cover the area of approximately 200,000 ha.

- Aerial photo scale : 1/20,000
- Photo overlap :  $60\% \pm 5\%$
- Photo sidelap :  $30\% \pm 5\%$
- Type : vertical, black & white panchromatic

### 3.- Development and printing

Development of panchromatic films should be processed in the following manner:

- a) Fixation should be conducted perfectly so as to avoid exposing.
- b) Films should be sufficiently washed so that no chemicals will remain.
- c) Films should be dried quickly and both ends of the films shall remain more than 1 m. before cutting.
- d) Special care should be given against shrinkage of the films.
- e) Marks of indicators should be printed clearly.
- f) The print size should be 23cm X 23cm

#### 4.- Orientation of Aerial Photos.

Aerial photos will be inspected based on the technical specification.

Special attention should be given to the following items:

- Sidelap and overlap
- Cloud Coverage
- Scale flight height
- Tilt and grabbing

Each principal point of the aerial photos shall be plotted on the index map.

If the sidelap is less than 25%, an additional flight run shall be done as an insertion of the aerial photo strip.

If every 5 serial photos have a cloud coverage of more than 3%, reflight shall be done.

## APPENDIX I I I

### A) Map of forest types and actual land use

#### Criteria

1. Coverage
2. Dominant species
3. Height
4. Density (# trees/ha.)
5. Age class
6. Stand origin
7. Accessibility
8. Forest plantation
9. Other plantation (permanent agricultural land)
10. Temporary agricultural land (shifting cultivation)
11. Savanna

### B) Physiographical Contour map

1. Contour lines
2. Control points
3. Hydrographic systems
4. Road systems
5. Urban centers

Appendix IV Tentative Work Schedule

	April 80	April 81	April 82	April 83	April 84
	1st Fiscal Year 80/81	2nd Fiscal Year 81/82	3rd Fiscal Year 82/83	4th Fiscal Year 83/84	
2/4 Mission	↔				
Aerial Photography		↔ in Honduras			
Mapping		↔ in Japan			
Field Survey		↔ in Honduras			
Preparatory Survey			↔ in Honduras		
Sampling Survey			↔ in Honduras		
Data Analysis				↔ in Japan	
Study of Forest Management				↔ in Honduras and Japan	
Reporting Mission				↔	

11. パラグアイ・北東部森林調査 S/W

MEMORANDUM

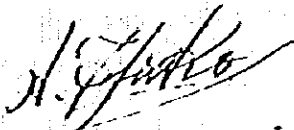
Regarding to the Scope of Works on Forest Inventory, the National Forest Service and the Japanese Mission come to the mutual consent as follows;

1. The procedure to take permissions for the aerial photographing will be carried out by the National Forest Service and Japanese experts will give counsel on this matter.
2. The reports and data produced by the Forest Inventory will be submitted to the Government of Paraguay through the Ministry of Agriculture and Livestock.
3. In advance of the field survey, the National Forest Service will give notices of entering and cutting trees, if required, to landowners whose land is located on a sampling plot.
4. The Paraguayan counterparts will have enough faculties to conduct the field survey in terms of forest mensuration.
5. The National Forest Service will arrange counterparts that consist of "Ingeniero" and "Técnico", able interpreter and "Capataz".
6. The National Forest Service will prepare the map that shows the location of available lodgings for the field survey.
7. In case of emergency risen by an accident or a disease among the field survey team members, the National Forest Service will take first aid without delay.
8. The National Forest Service will undertake to bear claims arising from injured employee of the survey team, and the

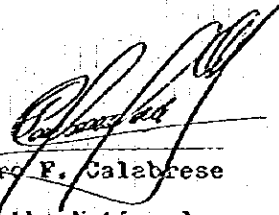
H.F.

Japanese team will take out an accident insurance for employees of the survey team.

Done on 30 June, 1980 in Asunción, Paraguay



Heizaburo Tezuka  
For the Japanese Mission



Pedro F. Calabrese  
For the National  
Forest Service


SCOPE OF WORKS ON FOREST INVENTORY  
IN NORTHEASTERN REGION OF PARAGUAY

The Japanese Scope of Works Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as JICA) and headed by Mr. Heizaburo Tezuka visited from 21st June to 1st July, 1980 for the purpose of working out the details concerning the Forest Inventory in Northeastern Region of Paraguay.

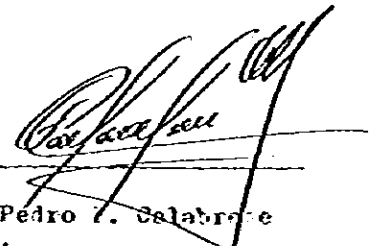
During its stay in Paraguay, the Team exchanged views and had a series of discussions with the Paraguayan authorities concerned in respect of the desirable measures to be taken by both Governments for the successful implementation of the above-mentioned Forest Inventory.

As the result of discussions, the Team and the Paraguayan authorities concerned agreed to carry out the matters referred to in the Scope of Works attached hereto.

Asunción, Paraguay, 30th June, 1980



Heizaburo Tezuka  
Leader  
Japanese Scope of Works Team  
Japan International Cooperation Agency  
Japan



Ing. Pedro C. Salabarré  
Director  
National Forest Service  
The Republic of Paraguay

SCOPE OF WORKS ON FOREST INVENTORY  
IN NORTHEASTERN REGION OF PARAGUAY

**I. INTRODUCTION:**

In response to the request from the Government of Paraguay, the Government of Japan has decided to undertake Forest Inventory in northeastern Region of Paraguay (hereinafter referred to as "the Inventory"), in accordance with laws and regulations in force in Japan.

Under the assignment by Japanese Government, the Japan International Cooperation Agency, the official agency responsible for implementation of technical cooperation program of the Government, has decided to carry out this survey, which should be conducted in collaboration with the Government of Paraguay.

The Inventory, through providing necessary data and information for exploitation of forest resources in the inventory area, is expected to contribute to the systemization of management of forestry and forest industries, the vision of the land use, and the rationalization of the investment of social capital therein.

**II. OBJECTIVES**

The objectives of the Inventory will be:

- (1) to prepare a forests distribution map with a classification by different forest types
- (2) to estimate total growing stock of forest
- (3) to establish guideline of forest exploitation

**III. LOCATION**

The Inventory covers the part of each department of Asuncion, Concepción, San Pedro, and Canendiyu, which amounts to approximately 15 thousand Km<sup>2</sup>.

(See Appendix I.)

#### IV. OUTLINE OF THE WORK:

##### 1. Aerial Photographing

- 1.1 Planning, including selection of flight course and work schedule.
- 1.2 Photographing on a scale 1:20.000 which covers the area of approximately 15.000 Km<sup>2</sup>.
- 1.3 Developing films and printing.
- 1.4 Orientation of aerial photographs.

(See Appendix II.)

##### 2. Field Survey

- 2.1 Collection of necessary data for the design of the sampling survey.
- 2.2 Examining ways and means to estimate the growing stock of forests.
- 2.3 Selecting sample plots.
- 2.4 Measuring tree volume of sample plots.

##### 3. Photograph Analysis

###### 3.1 Analysis on LANDSAT's data

- 3.1.1 Geodetic analysis of LANDSAT photographs.
- 3.1.2 Classification of land use.
- 3.1.3 Classification of forest types.
- 3.1.4 Mapping.

###### 3.2 Analysis on aerial photograph

- 3.2.1 Making a map of forests distribution with a classification by different forest types.  
e.g.) high forest, low forest,  
regenerating forest, etc.
- 3.2.2 Making photointerpretation card.
- 3.2.3 Estimation of total growing stock of forests.

Handwritten signature and initials, possibly 'J. F.' or similar, located on the left side of the page.

#### 4. Study of Forestry Development-plan

4.1 Evaluation of forest exploitation.

4.2 Establishment of a guideline of forest exploitation.

#### 5. Report

JICA will submit the report (30 copies) and the following data to the Government of Paraguay.

a) LANDSAT photograph	
positive films	1 set
printed maps	1 set
b) Aerial photograph	
negative films	1 set
contact prints	1 set
index map	1 set
uncontrolled mosaic	1 set
c) A distribution map of forests	1 set
d) Standard photointerpretation card	1 set
e) The detailed data of estimation of total growing stock	1 set

#### V. CONTRIBUTION

##### 1. Japanese Side

1.1 To dispatch a Japanese expert team to conduct the work mentioned in Paragraph IV.

1.2 To provide the services, materials and equipments required for the work.

##### 2. Paraguayan Side

2.1 To provide data and information required for the work.

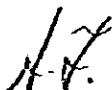
2.2 To make necessary arrangement for the aerial photographing and the field work.

2.3 To permit the team to take out the films, contact prints, and other data required for the survey from Paraguay.

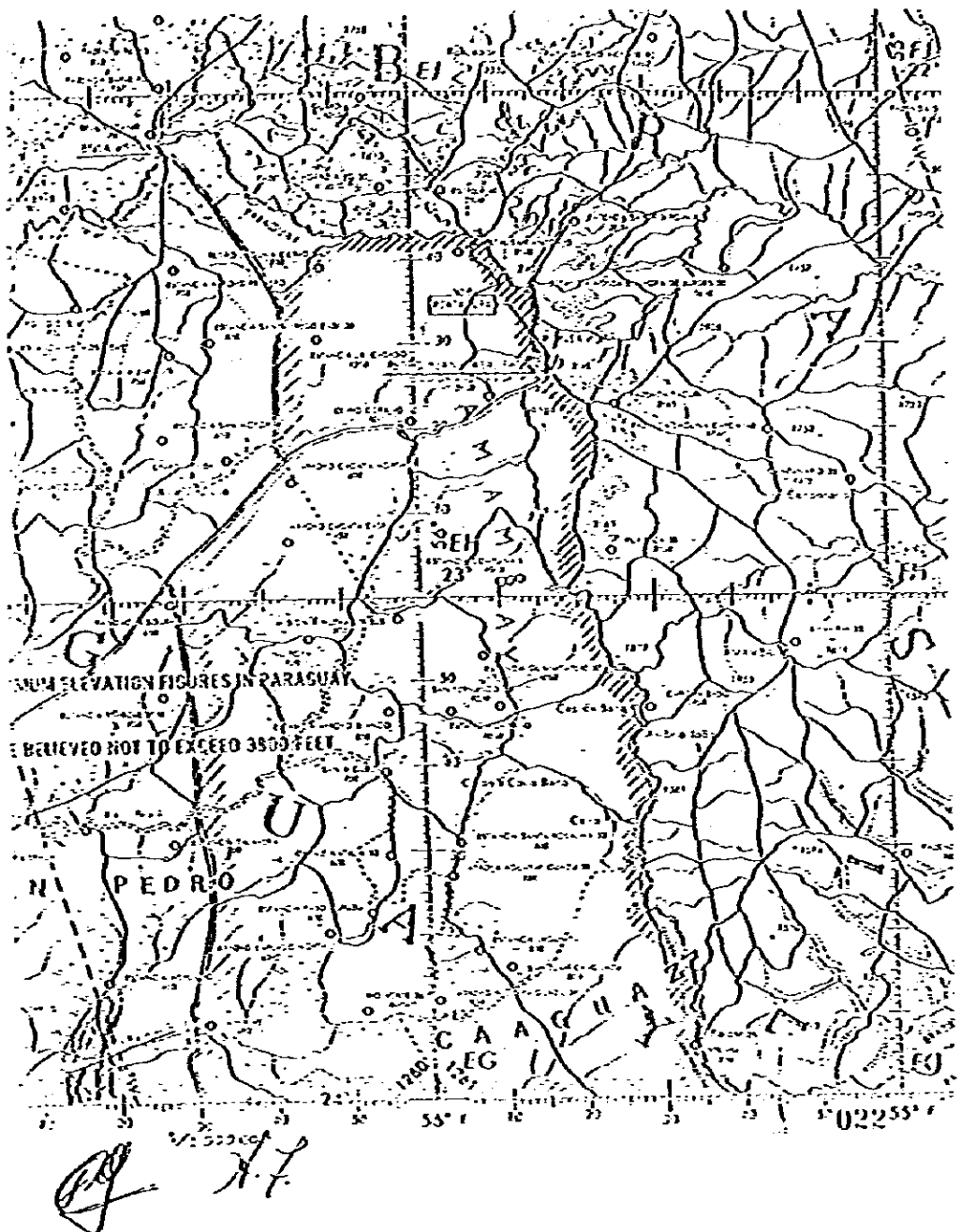
- 2.4 To exempt from taxes and duties for materials and equipments necessary for the work.
- 2.5 To allow the team free movement.
- 2.6 To provide trees for test, if necessary, and to permit cutting hindering trees.
- 2.7 To arrange vehicles, interpreters, guides, labourers, lodging, and an office for the team, if required.
- 2.8 To assign Paraguayan counterparts to the Japanese team during the working period without charging any cost to the team.
- 2.9 To provide medical services for the team during their stay in Paraguay
- 2.10 To undertake to bear claims, if any arises, against the Japanese team members engaged in the survey resulting from, occurring in the course of, or otherwise connected with, the discharge of their official functions in Paraguay except for those claims arising from the willful misconduct or gross negligence of the Japanese team members.

VI. WORKING SCHEDULE:

See Appendix III



Appendix I. Location Map



## Appendix II. Detail of Aerial Photograph

### 1. Aerial Photography:

1.1 Planning, comprises selecting flying courses and making work schedule. Flying courses should be arranged and selected on the following basis.

- a. Flying courses be straight.
- b. Flying courses be arranged in such a way to cover prospected areas with the minimum number of photos.
- c. Flying programs be arranged so as to facilitate such works as the orientation of control points needed for aerial triangulation imaging the requirement of it in the future.

### 1.2 Aerial Photo Taking

Aerial photographing will be carried out to cover the area of approximately 15.000 Km<sup>2</sup>.

- Aerial photo scale : 1/20.000
- Photo overlap : 60%  $\pm$  5%
- Photo sidelap : 30%  $\pm$  5%
- Type : vertical, black & white panchromatic.

### 1.3 Developpment and Printing

Developpment of panchromatic films should be processed in the following manner.

- a. Fixation be conducted perfectly so as to avoid exposing.
- b. Films be sufficiently washed so that no chemicals will rezain.
- c. Films be dried quickly and both end of films shall remain more than 1 M before cutting.
- d. Special care be given against shrinkage of films.
- e. Marks of indicators be printed clearly.

*[Handwritten signature]*  
*[Handwritten initials]*

f. The print size be 23 cm X 23 cm.

#### 1.4 Orientation of Aerial Photos

Aerial photos will be inspected based on the technical specification.

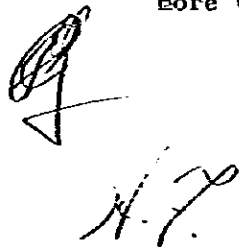
Special attention shall be given to the following items.

- Sidelap and overlap
- Cloud coverage
- Scale/flight height
- Tilt and grabbing

Each principal point of the aerial photos shall be plotted on the index map.

If the sidelap is less than 25%, an additional flight run shall be done as an insertion of the aerial photo strip.

If every 5 serial photos are covered with cloud more than 3 %, reflight shall be done.

Handwritten signature and initials, possibly 'A. F.', located at the bottom left of the page.

Appendix III

	1st year 80/81	2nd year 81/82	3rd year 82/83	4th year 83/84
Aerial Photographing	<u>in Paraguay</u>	<u>in Paraguay</u>		
Analysis on LANDSAT's Data	<u>in Japan</u>	<u>in Japan</u>		
Field Survey				
Propagatory Survey	<u>in Paraguay</u>		<u>Paraguay</u>	<u>in Japan</u>
Sampling Survey		<u>in</u>		<u>in Paraguay and Japan</u>
Data Processing				
Study of Forestry Development-plan				