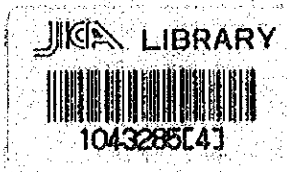
REPORT OF PRE-FEASIBILITY SURVEY ON REFORESTATION COOPERATION PROJECT IN MADANG AREA, PAPUA NEW GUINEA

MARCH 1976

JAPAN INTERNATIONAL COOPERATION AGENCY



Preface

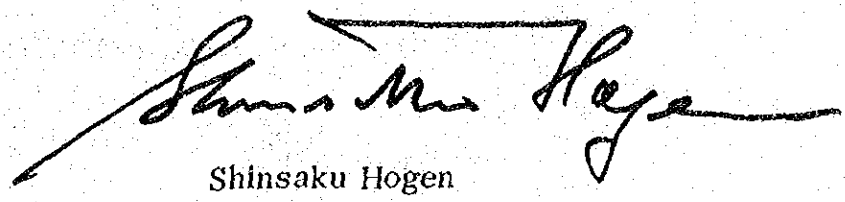
In response to the request of the Government of Papua New Guinea, the Government of Japan decided to undertake a basic development study on the reforestation project in Madang Area and Japan International Co-operation Agency has executed the study.

The Agency dispatched a survey team consisting of six experts headed by Mr. Shoichi Fukuda, President of the Forest Development Corporation, to Papua New Guinea for 25 days from July 16 to August 9, 1975. The survey team conducted the field investigation and exchanged views with authorities concerned of Papua New Guinea Government.

This report is a summary of the results of the survey. I hope this report will be used efficiently for the successful implementation of the project and promote further friendship and cooperation between Papua New Guinea and Japan.

Finally I would like to express my appreciation to all the staff who participated in this study and also to express my heartfelt gratitude to the authorities concerned of Australia and Papua New Guinea for their kind cooperation.

March, 1976



Shinsaku Hogen

President
Japan International Cooperation Agency

TABLE OF CONTENTS

I PURPOSE OF THE SURVEY 1

II MEMBERS OF THE SURVEY TEAM 2

III RESULTS OF THE SURVEY 3

1 OUTLINE OF FORESTRY IN PAPUA NEW GUINEA 3

1-1 FORESTRY 3

1-2 SILVICULTURAL TECHNIQUES 5

2 OUTLINE OF MADANG AREA 6

2-1 LOCALITY FOR FORESTRY 6

2-2 LOCAL ADMINISTRATION 9

2-3 FOREST MANAGEMENT 10

IV GENERAL DESIGN OF THE REFORESTATION PROJECT 12

1 PURPOSE OF THE PROJECT 12

2 BASIC GUIDELINES FOR THE PROJECT 12

3 PROBLEMS AND COUNTERMEASURES FOR IMPLEMENTATION OF THE PROJECT 13

3-1 SPECIES FOR INTENSIVE REFORESTATION 13

3-2 TECHNICAL IMPROVEMENT FOR SEEDLING 13

3-3 METHOD OF REFORESTATION 14

3-4 EXTENSION PROGRAM TO THE PEOPLE 14

4 PROCEDURE OF REFORESTATION 15

V IMPLEMENTATION BODY FOR THE PROJECT 16

VI TENTATIVE PLAN 19

I PURPOSE OF THE SURVEY

Forest products are the major exporting materials of Papua New Guinea (referred to as PNG hereafter), which achieved the independence on the sixteenth day of September, 1975, and PNG Government has attached considerable importance to expanding the forestry production from her rich resources owing to favorable climate for growing trees.

Although systematic utilization of the forest resources has started not long ago, production and exportation of the forest products are expanding yearly, especially the exports to Japan.

PNG Government is making every effort for establishing healthy economy through utilizing natural resources including forest resources and very eager for reforestation for the purpose of achieving the sustained yield.

Referring to the very area, Madang, a joint venture, an affiliate of a Japanese paper manufacturing company, is conducting felling and chip production operations. PNG Government is very eager to start in the comprehensive forest development project including reforestation in the area and intends to make this Madang Project as a pioneer model for forest development projects in PNG.

The formal request of PNG Government on the reforestation cooperation project in the Madang area was conducted by H. E. Mr. Bruce R. Jephcott, Minister for Natural Resources in the Ministry of Foreign Affairs, Tokyo, Japan, on the fourth day of September 1974.

The survey team visited PNG in response to the above request. The purpose of the team was to formulate the basic design of this project through exchanging views with PNG governmental authorities concerning her forestry policy in general, policy for the project in particular including the formation of new implementation body, and through the field survey.

II MEMBERS OF THE SURVEY TEAM

The team was composed of six members, headed by Mr. Shoichi Fukuda, former Director General of the Forestry Agency, Government of Japan. The survey was conducted from July 16 to August 9, 1975. Its itinerary is annexed to this report.

(Member of the Team)

FUKUDA, Shoichi ;	Director, Forest Engineering Consultants (now President, Forest Development Corporation)
HACHIYA, Kinji ;	Head of Silviculture Division, Government Forest Experiment Station, Ministry of Agriculture and Forestry
HAYASHI, Ryoji ;	Senior Officer, Planning Division, Forestry Agency, Ministry of Agriculture and Forestry
ITOH, Nobuo ;	Deputy Chief, Forest Products Division, Forestry Agency, Ministry of Agriculture and Forestry
NISAWA, Yasuhiko ;	Chief of Financial Cooperation Unit, International Cooperation Division, Ministry of Agriculture and Forestry
UESUGI, Takashi ;	Deputy Chief, Development Division, Forestry Development Department, JICA

III RESULTS OF THE SURVEY

1 OUTLINE OF FORESTRY IN PAPUA NEW GUINEA

1-1 FORESTRY

The forest area of PNG accounts for 85% of the total Land area, and occupies around 40 million ha, of which one third are considered as potential commercial forests.

Forest industries have a large potential to contribute to both PNG economy and world forest products supply.

One of the characteristics of forests in PNG is the scarcety of Dipterocarpus spieces, which are common in Southeast Asian forests. There is the abundance of other broad-leaf species. Potentially commercialized species among them are said to be around two hundreds, of which a quarter are now actually used.

From the commercial point of view, forests in PNG would be categorized into two types. One is the tropical lowland rain forest up to 1,000m above the sea level. Another type is the montane forest between 1,000m and 3,000m of altitude. Main spieces in the tropical lowland rain forest are Taun (Pometia spp.), Kamarere (*Eucalyptus deglupta*), Kwila (Intsia spp.), while the main species in the montane forest are Hoop Pine (Araucaria cunninghamii), Klinkii Pine (Araucaria hunsteinii), New Guinean Beech (Nothofagus spp.), and New Guinean Oak (Castanopsis accuminatissima).

Development of forest industries has been slow owing to unfamiliar species to the world market and insufficient infrastructures such as roads and harbors. The forestry development, however, has been getting active with the increasing demand from abroad, since the PNG

Government established the policy toward forest development in view of the leveling up the living standard of people and providing people with jobs.

Timber production was 1,080 thousand m^3 in 1974, which was twice as much as that of 1970. Forest product are now fifth in all exporting items in amount and expected to be next to Copper Ore in future. It earned 20,389 thousand Australian dollars in 1974, which was 3 times as large as that of 1970.

Considering the recent development of forest industries, importance of forest resources in national economy, and Eight-Point National Aims proposed by then Chief Minister in March 1973, PNG Government proclaimed Eight-Point Aims in Forestry version. In addition to that, National Forestry Policy was formulated and submitted to the National Assembly by the Minister for Natural Resources in April, 1975. These PNG Government's efforts to develop forestry should be paid high regards.

Forest products processing industry and reforestation are two most important factors of development to implement the ideal of the forestry policy. Development of forest products processing industry is effective not only for utilization of forest resources but also for increase of employment opportunity of the local people. In order to promote forest product processing industry, priority should be put on the expansion of the domestic market over exportation.

PNG Government highly recognizes the importance of reforestation for maintenance of forest resources and environmental effects in this early stage of development of the resources and makes every kinds of efforts for it.

PNG Government is promoting reforestation and afforestation activities aiming at the forest development, so far until 1974 the area of man-made forests is around 14,000 ha. Most of the man made forests

are located in the mountainous area, with Araucaria spp. and Pinus spp. dominant. The silvicultural techniques in this respect are developing steadily.

Some reforestation and afforestation activities are being carried out, but no large scale plantation exists.

Many things such as implementation body, systematization of the techniques, and land tenure problems should be carefully solved to succeed in large-scale forestation activities.

1-2 SILVICILTURAL TECHNIQUES

Suitable species for planting in the tropical rain forest would be Tectona grandis (Teak), Ochroma lagopus (Balsa), Eucalyptus deglupta (Kamarere), Eucalyptus tereticornis, Terminalia brasii, Acasia auriculaefornis, and Anthocephalus chinensis.

Tectona grandis, best suited for the monsoon type climate, could have good growth in the tropical rain forests, but some problems remain to be solved for the wood quality. Ochroma lagopus grows well on the fertile and drained soils, although there would be some problems of marketability.

One of the most suitable species for the tropical rain forests in PNG would be Eucalyptus deglupta which grows well on the well drained lowland such as Keravat, East New Britain. Its growth rate ranges: from 25 m^3 to 40 m^3 per year per ha. The wood of Kamarere is suited for pulp chip and old matured timber can be used for sawn wood too.

Terminalia brassii and Eucalyptus tereticornis are suited for plantation on the wet soils. Their plantations are increasing.

Plantation of Anthocephalus and Acasia spp. are on the initial stage of experimentation.

As for conifers, Pinus caribaea var hondurensis is being introduced for plantation.

For such species as Eucalyptus deglupta with rich experiences in planting, basic techniques of collecting seeds and caring for seedlings have been achieved.

Provenance tests, tests for plant density, thinning, and harvesting have been already carried out, though no specific results are obtained because of the recent initiation of experiments. Since these experiments are confined to small scale plantation, establishment of the suitable system of techniques for large scale plantation should be sought.

The establishment of natural regeneration techniques are also important in the tropical rain forests in PNG since there are many areas suitable for natural regeneration or extensive reforestation.

As in South East Asian countries with forests of Dipterocarpus spp., some kind of natural regeneration techniques can be seen, PNG with its different vegetation and climate, would be able to develop its own system.

2 OUTLINE OF THE MADANG AREA

2-1 LOCALITY FOR FORESTRY

(1) Natural Conditions

The District of Madang is located on the central part of the north coast of the Island of New Guinea. The area is around 28,000 km^2 with the population of 180,000. Topographically the area has many mountains including the Bismark Ranges; there is a plain along the Ramu River.

Madang area, which is the location of the intended forestation project, is devided into four sub-areas; North Coast, north

to the city of Madang, Gum to the west of the city, Gogol and Naru in the Gogol and Naru River basins.

These four areas comprise of lower slopes and the hilly areas adjacent to that, on the foot of the Adelben Ranges, narrow coastal planes caused by the lifted corals, sedimental plane along the Gogol River and other smaller rivers. The main feature is the flat land susceptible to floods.

Gogol and Naru sub-areas, which are located along the Rivers of Gogol, Naru and Kokun, comprise of mainly low sedimentary flat land. Some parts, however, are foothills and hilly lands, the highest altitude of which is 700 meters above the sea level.

The vegetation of the Gogol-Naru sub area varies from grass lands to the forests at climax stage in accordance with the difference of the degree of human activities, floods, fires, and surface soils. The climax forest in the area is tropical rain forest.

Dominant forests at present are secondary, mainly composed of such fire resistant species as Intsia bijuga and Intsia palembanica, with less resistant Pometia spp. scarce. The number of species would be more than 200.

This area belongs to the humid tropical climate with annual rainfall of around 3,500 mm. Although from December to May it rains more, there are not the so-called rain and dry season.

This area lacks the inorganic nutrient and leached. Soils on the slope and higher elevations have made sedimentary materials as their parent materials and are abundant of clay.
They have the high water holding capacity.

Drainage exerts much influence on tree growth, therefore,

with the fact that there are rather abundant wet soils in the area. Careful preparation should be done for the reforestation project in the area.

(2) Socio-Economic Conditions

In Madang Area there are two kinds of living way of people; one type of the people live mainly on the coastal areas such as the City of Madang, engaging in secondary and tertially industries, while another type of the people is engaging in subsistance agriculture, mainly in the mountains. At the present time the former prevailing.

As for education, it is recently expanding resulted in 100 primary schools, some high schools and vocational schools. The education would contribute much to the socio-economic development in the area.

The main industries of the area are agriculture and forestry. As for agriculture, production of copra is dominant, followed by cattle raising and subsistance agriculture.

As for forestry, felling operations by JANT Co. in the Gogol Valley, chipping factory by JANT Co. in the City of Madang and the saw-milling by Wewak Timber Co. are developing in the area.

As for fisheries, subsistance fishing is dominant while small commercial fisheries are developing in the area.

As for manufacturing and mining, tobacco factory, joinery factory and gold mine are active in small scale.

As for transportation, road network around the City of Madang is good. Its future expansion could be expected.

The Port of Madang is one of the best ports in PNG. It is playing an important role in domestic and international trade, especially in the trade with Japan as it is located on the north coast.

The area of Madang is about 1.5 times larger than Shikoku Island, a fourth largest island of Japan. It has the population of 180,000, which is less than 1/20 of that of Shikoku Island. In other words, the possibility of future development in this area could be big.

The land tenure problem is one thing to be mentioned as far as the development of agriculture and forestry in PNG is concerned.

Most of the land in PNG are owned by villages or clans, and every person in the village has the right to cultivate, to hunt, and to do other land-using activities. The heritage and distribution of the right is different by region. This customs of land-ownership is same in Madang area too. About 4,000 people living in Gogol-Naru area own the land by 243 different villages.

Considering the above conditions of the area, forestry and forest products processing industry in the Madang Area is restricted to a certain area because of the transportation and land-tenure problems.

Therefore, such suitable area as Gogol Valley, where the land tenure problem could be solved and transportation is not a big problem, forestry activities should continue in the future. In this respect, reforestation in this area is very important.

2-2 LOCAL ADMINISTRATION

Since 1972 for the purpose of advancing and coordinating the forest development activities in Madang area, Madang Timber Committee (referred to as MTC hereafter) has been set up as a section of Madang District Coordinating Committee.

Main functions of MTC are as follows; coordinating the activities of concerned Government Offices and coordinating the activities of the

Government Offices, local people, and the private companies.

MTC has been promoting the reforestation project, since August 1974, when the land use plan of the area was approved by the Cabinet of Central Government. Ever since, MTC has been playing an active role with close cooperation with JANT Co. in formulating the implementation body, performing public relation activities for the local people, securing land for plantation, and designing the total structure of the project.

MTC, headed by the District Commissioner of Madang, consists of seven representatives from the local people and the heads of local offices of the following governmental organizations.

- Department of Forests
- Department of Agriculture, Stock and Fisheries
- Department of Lands, Surveys and Mines
- Department of the Prime Minister and Development Administration

2-3 FOREST MANAGEMENT

The forest management exist with certain scale in Gogol, Naru, North Coast and Gum area.

The felling operations for chipping wood, has been conducted by JANT Co. in Gogol and its adjacent Naru area, where the cut areas are about 2,000 ha by the end of August 1975 and felling rate would be 3,000 ha per year hence after.

Wewak Timber Co. is conducting felling operations for sawn wood in the North Coast, as a sub-contractor of the JANT Co. No felling operation is going on in Gum area.

PNG Government has been preparing for reforestation project on cut-over area to secure the continuation of forest management in the area and set the Gogol-Naru area as first choice among areas.

MTC had made several Land Use Plans in Gogol-Naru area after consulting with the local people. One of them, the Land Use Plan called Scenario 3 B, was authorized by the Cabinet of Central Government on August, 1974, which is based mainly on topographical factors and should be basically taken in for implementing the reforestation. It is important that the local people approves it.

The reforestation of 1,000 ha on the cut-over areas is now going on by JANT Co. since local people, who are land owners, gave consent to plant there. 200 ha out of these 1,000 ha is to be planted under the loan from JICA.

IV GENERAL DESIGN OF REFORESTATION PROJECT

1 PURPOSE OF THE PROJECT

The purpose of the project is to do reforestation or afforestation, through either plantation or natural regeneration, on the cut-over area or open grassland to secure the continuing supply of the chipping wood, wood for playwood, sawnwood or other forest products in harmony with the conservation of land, water, and scenery with the due consideration being paid to the climate, topography, geology, soils and vegetations of the area.

The infrastructure benefitial both to the project and to the local people should be developed to contribute to the socio-economic development of the area.

Expansion of the job opportunity of the local people through the project and other related activities should be also one of the purposes. Thus, technical training to improve the quality of labor would be important.

2 BASIC GUIDELINES FOR THE PROJECT

It was concluded after the discussions with MTC and the field survey that the following guidelines would be appropriate to promote the project.

a. The first stage of the reforestation should be done in Gogol and Naru areas.

b. The Land Use Plan, called Scenario 3 B, should be taken into consideration in implementing the project.

c. The first stage of the reforestation should be done through intensive reforestation.

d. For the period of 2 years beginning 1975, 1,000 ha of experimental reforestation agreed between PNG Government and JANT Co. should be carried out. After that 20,000 ha of large scale reforestation should be carried out.

e. Large scale reforestation should be carried out by the new implementation body described later.

f. As for the extensive reforestation, several problems such as selecting the appropriate species and appropriate method of natural regeneration, and deciding the suitable system of other necessary activities should be established through experiments and research, while the intensive reforestation would be being carried out.

3 PROBLEMS AND COUNTERMEASURES FOR IMPLEMENTATION OF THE PROJECT

3-1 SPECIES FOR INTENSIVE REFORESTATION

Most suitable species for intensive reforestation would be Eucalyptus deglupta (Kamarere), Eucalyptus tereticornis, Terminalia brassii, Acasia auriculaeformis, and Albizzia falcata,

Few Kamarere grows naturally in the area with high water table like Gogol-Naru so that various experiment should be necessary to find out site conditions of planting. Terminalia would be good as test species since it is considered to grow better on the wet land than Kamarere.

Uniformed plantation with single species would be considered susceptible for deseases and insects. Therefore diversification of planting species would be important to protect them. In this sense Intsia spp., Anthocephalus chinensis, which grow naturally in the area, and Pinus caribaea or other species of tropical pines would be considered as the planting species.

3-2 TECHNICAL IMPROVEMENT FOR SEEDLING

PNG had few experience for large-scale reforestation or afforestation. Cultivation of seedlings in the tropics has the merit of using

smaller areas because of the shorter growing period and at the same time the demerits of propensity to produce irregular sized seedlings and of producing the unbalanced quantity.

Therefore, the following points should be taken into consideration.

a. Organization of seedling supply.

It includes establishment of the seed orchards and seed store facilities.

b. Mechanization of growing seedlings.

It includes automatization of watering, pot seedlings, and an attempt to make smaller the pots.

c. Standardization of seedlings.

It includes the reconsidering the seedling standard in line with the future large-scale reforestation.

3-3 METHOD OF REFORESTATION

Suitable system of reforestation should be established with due consideration to the employment opportunity for the local people.

Well balanced planning should be arranged beforehand since land preparation gives deep influence on the efficiency of the following works. Tendering the planted trees should be done in its early stage of growth. Tree density of planting and thinning should be decided on the purpose of reforestation. Various experiments would be necessary to find out what are the best method on certain stands.

It would be better to use the results of the past small-scale refores tation activities for the time being.

3-4 EXTENSION PROGRAM TO THE PEOPLE

It would be very much important for the local people to recognize that the reforestation project contributes enormously into the socio-

economic development of the area.

This is also beneficial for securing the land for planting, protection and setting up the countermeasure to the forest fires.

4. PROCEDURE OF REFORESTATION

Steps of implementation of the reforestation project to solve the various problems could be considered as follows;

a. First Stage; experimental planting of various species should be done in order to compare the growing conditions of concerned species under the different density, number of thinning and the amount of fertilizers.

b. Second Stage; systematization of the techniques should be carried out.

c. Third Stage; large-scale reforestation should be carried out under the principles of multiple use of forests and sustained yield. Management and technical systems suitable for large scale reforestation including the methods to prevent deseases and insects and forest fire protection should be established.

V IMPLEMENTATION BODY FOR THE PROJECT

The reforestation project would be better to be carried out through the new implementation body.

The preconditions of this implementation body are considered as follows;

a. Three parties, which are local people, PNG Government and JANT, should participate the body.

b. PNG Government should make arrangement with the local people to participate in the project and to secure the land for reforestation.

c. Certain annual income should be secured to the local people.

Taking account of the above preconditions, the following concept concerning the new implementation body would be considered.

a. The reforestation company would be set up with the investments from local people, PNG Government and JANT.

b. Local people would be able to invest in kind; that is providing the new company with the land use right.
PNG Government and JANT could invest by cash.

c. Shares held by the local people would be the preference shares, which guarantees the dividends but do not have the right to participate making decision of the company policies.

d. JANT would take the responsibility of managing the company which carries out all operations concerning the reforestation. Ownership of the planted tree would belong to the company.

e. JANT would provide the expenses into the reforestation company with loans and purchase the planted trees at the time of harvest. Therefore, JANT would make the loan-purchase contract with the reforestation company.

JANT would be able to mortgage the planted trees to secure the loans, and request to the PNG Government to guarantee the total or a part of the loans when the planted trees would not be able grow well to have harvest.

f. The company would pay the annual dividends to the local people and employ them with first choice.

g. PNG Government would exempt the company from paying the import tax when the company imports the necessary materials for the project. Every necessary tax arrangement would be given to JANT to make the loans possible.

In case if JANT would get the money from abroad as the resources for the loans, withholding tax against the interest would be exempted or lessoned.

There are several conceivable problems as follows to be solved to set up the new implementation body.

a. To clarify the provisions of PNG laws concerning the preference shares.

b. To arrange the way of appraising the land surface right, to decide the distribution of invested shares among the three parts.

c. To clarify legal system concerning the right of the planted trees and mortgage system.

d. To establish the insurance system for the planted trees.

e. To rearrange the tax preference system for the reforestation projects.

f. To make clear who should join the reforestation company among the local people.

g. To reconsider the favorable taxation system for the interest

income of the foreign companies.

h. To consider the profits-sharing system if the introduction of the preference shares is impossible.

VI TENTATIVE PLAN

The yearly plan for reforestation is tentatively figured out. This plan should be revised by the results of the forthcoming Development Planning Survey.

The areas for planting would be 200 ha in the first year, 800 ha in the second year and 1,000 ha in the third year. The final goal would be 2,000 ha planting annually so that reforestation of 20 thousand ha would be accomplished in 12 to 15 years.

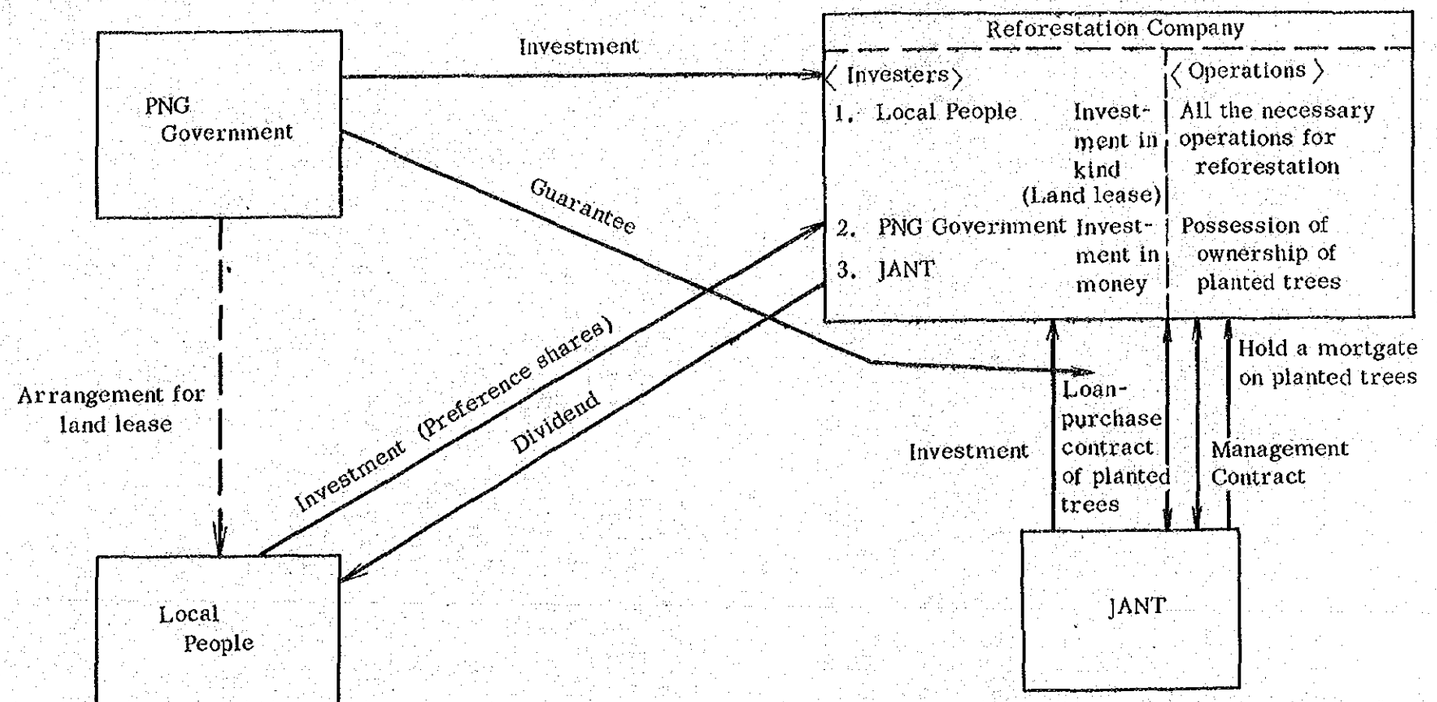
This plan could be carried out only if the above-mentioned conditions including the guarantee of funds would be solved.

SURVEY ITINERARY

Date		Place	Activity
July	16 (Wed.)	Lv. Tokyo	
	17 (Thur.)	Ar. Sydney Lv. Sydney Ar. Canberra	Conference with staffs concerned of Japanese Embassy. Conference with Australian Government.
	18 (Fri.)	Lv. Canberra Ar. Sydney	Conference with staff concerned of Japanese Consulate General Office.
	19 (Sat.)	Lv. Sydney Ar. Port Moresby	Consultation with Japanese Consulate General.
	20 (Sun.)		Visit to National Park.
	21 (Mon.)		Conference with Director of Forest Department and staff concerned. Conference with Executive Director of NIDA and staff concerned.
	22 (Tues.)		Conference with Minister for Natural Resources. Conference with staff concerned of Department of Foreign Affairs and Trade and Development Bank.
	23 (Wed.)	Lv. Port Moresby Ar. Rabaul	Conference with staff concerned of Department of Finance.
	24 (Thur.)		Briefing with Acting District Commissioner. Conference with Deputy Regional Forester.
	25 (Fri.)		Visit to Keravat District Forest Office and Plantations.
	26 (Sat.)	Lv. Rabaul Ar. Hoskins	Visit to Hoskins District Forest Office. Visit to Lumber Mill.

	Date	Place	Activity
July	27 (Sun.)	Lv. Hoskins via Lae Ar. Madang	Visit to Botanical Garden and University of Technology Department of Forestry
	28 (Mon.)		Conference with District Commissioner and other member of Madang Timber Committee.
	29 (Tues.)		Visit to Chipping Mill of JANT. Field Survey
	30 (Wed.)		Field Survey
	31 (Thur.)		Field Survey
August	1 (Fri.)		Field Survey Conference with Madang Timber Committee.
	2 (Sat.)	Lv. Madang Ar. Port Moresby	
	3 (Sun.)		Closed meeting of Survey Team.
	4 (Mon.)		Conference with Director of Forest Department and staff concerned of Department of Forests, Department of Finance, and Department of Foreign Affairs and Finance.
	5 (Tues.)	Lv. Port Moresby Ar. Sydney	
	6 (Wed.)		Consultation with Japanese Consulate General.
	7 (Thur.)	Lv. Sydney Ar. Canberra	Conference with staff concerned of Japanese Embassy.
	8 (Fri.)	Lv. Canberra Ar. Eden Lv. Eden Ar. Sydney	Visit to telling site.
	9 (Sat.)	Lv. Sydney Ar. Tokyo	

ANNEX 2 Organization Chart of Implementation Body for Reforestation



Annotation: Preference shares
(Dividends are guaranteed but have no voting right)

Annotation: Loan-purchase contract of planted trees
(Planted trees should be set as first mortgage and registered and PNG government would guarantee the invested money.)

ANNEX 3 Interim Report

August 5, 1975

His Excellency
Mr. Bruce R. Jephcott
Minister for Natural Resources
Government of Papua New Guinea

Subject: The Pre-Feasibility Survey for Reforestation Cooperation Project in Papua New Guinea (Interim Report on Field Survey by the Mission of Japan International Cooperation Agency)

Excellency,

We would like to present the summarized interim results of our pre-feasibility survey for reforestation project in the Madang area, papua New Guinea, which was conducted from July 19 to August 5, 1975, including field survey of the Government's reforestation at Keravat and forest development operation at Hoskins, both in New Britain.

Our visit was made upon the formal request of your Government which was conducted by your Excellency in the Ministry of Foreign Affairs, Tokyo, on the fourth day of September 1974.

The terms of reference of the mission were:

To exchange views on technical aspects and organizational aspects for implementation, in cooperation with your country, in the promotion of afforestation and reforestation;

and

To survey and study the technical and organizational feasibilities of a reforestation project in the Madang area.

This interim report is divided into three parts: the first part is on the technical aspects, the second is on the Madang area reforestation projects, and the last part contains additional comments.

1. Technical Aspects in General

We have noticed that the basic techniques of silviculture for Eucalyptus deglupta, Tectona grandis, Terminalia brassii and Ochroma lagopus seem to have been nearly established. For the further large-scale enterprise-size reforestation, however, the further study for a suitable system of techniques and management would be necessary.

2. Reforestation Projects in the Madang Area

We have, from July 27 to August 2, exchanged views with the Madang Timber Committee, and made a field survey. We were deeply impressed by the sincere and selfless efforts of the people of the Madang Timber Committee for the success of the project.

Concerning the 2,000 ha. experimental reforestation, JANT Company is to do 1,000 ha. of experimental reforestation with the agreement of the Papua New Guinea Government, and a part of it has already been finished, financed partly by JICA.

As for the 20,000 ha. required for the large-scale intensive reforestation, the detailed locations of the areas have not been finalized. So all parties concerned should make every effort for the success of the project.

We would consider that reforestation, except for the above-mentioned

experimental 1,000 ha., should better be conducted by the participation of 3 bodies: Papua New Guinea Government, the people who own the land within the timber permit area, and JANT. On the successful formation of the reforestation management body, this 1,000 ha. plantation would be taken over.

Among these three bodies, we consider it would be essential that a sufficient area of land for reforestation should be leased in long term planning, and before logging operation on it is commenced.

We have heard that the people like to get a certain amount of benefit at harvest time of the planted stumpage, as well as the annual land rentals.

As a result of our field survey of the existing Government experimental reforestation we would like to refer to the following:

1) The government experimental reforestation is well established and could provide useful data for large-scale reforestation projects.

2) Gogol/Naru area has a potential for large-scale reforestation, but the following should be taken into consideration:

   a) For large-scale reforestation the cost factor is very important. In order to keep costs down a simplified method of land preparation and tending should be considered. It is important to prepare the land for planting immediately after harvesting.

   b) The quantity of seeds and seedlings would necessarily be large, and so a well-planned production system is very important.

c) Even in the area which the local people can provide for reforestation some areas, such as wet site and ramp site, may require special techniques for plantation, which is difficult at the initial stage.

d) It is preferable to make the best use of the second growth of the useful species.

e) More study should be made of extensive reforestation, such as harvesting methods, suitable species for enrichment planting, and the methods of planting.

f) The Land Use Plan of the Papua New Guinea Government should be accepted in principle.

3) As regards finance, JICA has already provided a loan to the Honshu Paper Company (parent Company of JANT) for the 200 ha. experimental reforestation. Concerning the large-scale reforestation, we would considerin general that it also is an appropriate project for financing by JICA. However, before the project can materialize, further study is necessary to know the actual reforestation plan, the cost and so on. For this purpose we will recommend to the Japanese Government that another mission visit as soon as possible, no later than next March.

3. Others

There was a suggestion that an exchange of views on this project at government level would be useful; we will report this to the Japanese Government. We appreciate that this project is in the nature of a pioneer project, probably the first in the world, and therefore special consideration should be given for its success.

Besides the foregoing, we would like to report to the Japanese Government that you are requesting Japanese experts in the fields of silviculture and salvage logging as the government-to-government basis for technical cooperation.

We sincerely hope that the Papua New Guinea Government and JANT will make every effort for successful implementation of the project by actually designating the management body and the reforestation sites, as many as possible where the local people would be satisfied and would assist in this fruitful enterprise.

Papua New Guinea and Japan have kept good relations in general, especially in the forestry field, and in conclusion we would like to express our heartfelt desire to continue these good relations.

Respectfully yours,

SHOICHI FUKUDA

Head of
the Japanese Survey Mission
for Reforestation Cooperation