

別添資料

MINUTES OF DISCUSSIONS
ON
PREPARATORY STUDY ON THE PROJECT FOR REHABILITATING AFFORESTATION
FOR COPING WITH DESERTIFICATION IN DRY ZONE
IN THE UNION OF MYANMAR

In response to a request from the Government of the Union of Myanmar (hereinafter referred to as Myanmar), the Government of Japan decided to conduct a Preparatory Study on the Project for Rehabilitating Afforestation for Coping with Desertification in Dry Zone (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (JICA).


JICA sent the Preparatory Study Team (hereinafter referred to as "the Team") to Myanmar, which is headed by Mr. Takashi Yoshida, Director of Planning Division, Regional Department II, JICA, and is scheduled to stay in the country from July 4 to July 28, 2000.

The Team held discussions with the officials concerned of the Government of Myanmar and conducted a field survey in the study area.

As a result of discussions and field survey, both parties have confirmed the main items described on the attached sheets. Subject to the decision by the Government of Japan, JICA will conduct a Basic Design Study on the Project.



Mr. Takashi Yoshida
Leader
Preparatory Study Team
Japan International Cooperation Agency

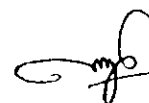
Yangon, July 13, 2000


For Director General
U Soe Myint
Deputy Director General
Dry Zone Greening Department
Ministry of Forestry
The Union of Myanmar

Witness:



U Shwe Kyaw
Deputy Director General
Forest Department
Ministry of Forestry
The Union of Myanmar



ATTACHMENT

1. Objective of the Project

The objective of the Project is to establish model plantations to support the Dry Zone Integrated Plan that aims at greening, enhancing soil productivity, restoring the environmental services, and providing basic needs for local people in the Dry Zone Area in the Central Myanmar.

2. Project Area

The project area is located in and around the Myethindwin Protected Public Forest area, Nyaung Oo District, Mandalay Division. A map indicating the location of the area is shown as Annex-1.

3. Responsible and Implementing Agency

Dry Zone Greening Department (DZGD), Ministry of Forestry is responsible as implementing agency for establishment, maintenance and protection of the plantations under the Project until it is transferred to Forest Department (FD). Forest Department, in collaboration with DZGD, will take responsibility for the future management of the plantations. The organization charts of DZGD and FD are shown in Annex-2a and -2b.

4. Main Items Requested by the Government of Myanmar

After discussions with the Team, the items described in 4-1 and 4-2 below were confirmed as the request. JICA will assess the appropriateness of the request and will report the findings to the Government of Japan.

4-1. Plantation Establishment

Raising of seedlings, planting and tending works are requested for the establishment of the plantations approximately 3,000 ha.

4-2. Facilities and Equipment

Main facilities and equipment necessary for the establishment of the plantations, maintenance and management are listed in Annex-3.

4-3. Category of Facilities and Equipment

Myanmar side understood the following explanation made by the Team about the category of facilities and equipment.

- (1) Facilities and equipment, which are necessary for the maintenance and management works to be done by Myanmar, are considered to be procured under the Grant Aid. Myanmar side should have operational plans, budget and operating personnel to use such facilities and equipment.
- (2) Facilities and equipment, which are procured by the Japanese contractor for the establishment of plantations, are only for temporary use.

5. Japan's Grant Aid Scheme

5-1. Japan's Grant Aid Scheme

Myanmar side understood the Japan's Grant Aid Scheme explained by the Team, as described in Annex-4.

5-2. Major Undertakings to be Taken by Each Government

Both sides agreed that each government would take the necessary measures as described in Annex-5 for smooth implementation of the Project, as a condition for the Japan's Grant Aid implementation.

6. Other Relevant Issues

6-1. Criteria for Selecting Plantation Sites

Plantation sites are selected from the project area based on the criteria shown in Annex 6.

6-2. Organizational Framework for Implementation

Organizational framework for the implementation stage is necessary to be considered based on the chart shown in Annex -7.

6-3. Maintenance and Management of the Plantations

Maintenance and protection of the plantations up to five years after planting will be carried out by DZGD, and management after five years is to be conducted by FD through Community Forestry Instructions or by direct control of FD on those plantations meant for environmental conservation. The well-defined management system for the plantations under the Project should be adopted before implementation in order to conduct appropriate planning as well as smooth transfer of the responsibility from DZGD to FD.

6-4. People Participation

Both sides recognized that involvement of local community in planning, implementation and management of the plantation establishment is important for the success of the Project.

6-5. Contribution to the Mitigation of Climate Change

Both sides acknowledged that forests are contributing to the mitigation of global climate change, and that forests are recognized as carbon sinks and reservoirs.



Annexes

- 1. Location Map**
- 2a. Organization Chart of DZGD**
- 2b. Organization Chart of FD**
- 3. List of Main Facilities and Equipment Necessary for the Establishment of Plantation and Extension Works**
- 4. Japan's Grant Aid Scheme**
- 5. Major Undertakings to be Taken by Each Government**
- 6. Criteria for Selecting Plantation Sites**
- 7. Organizational framework**

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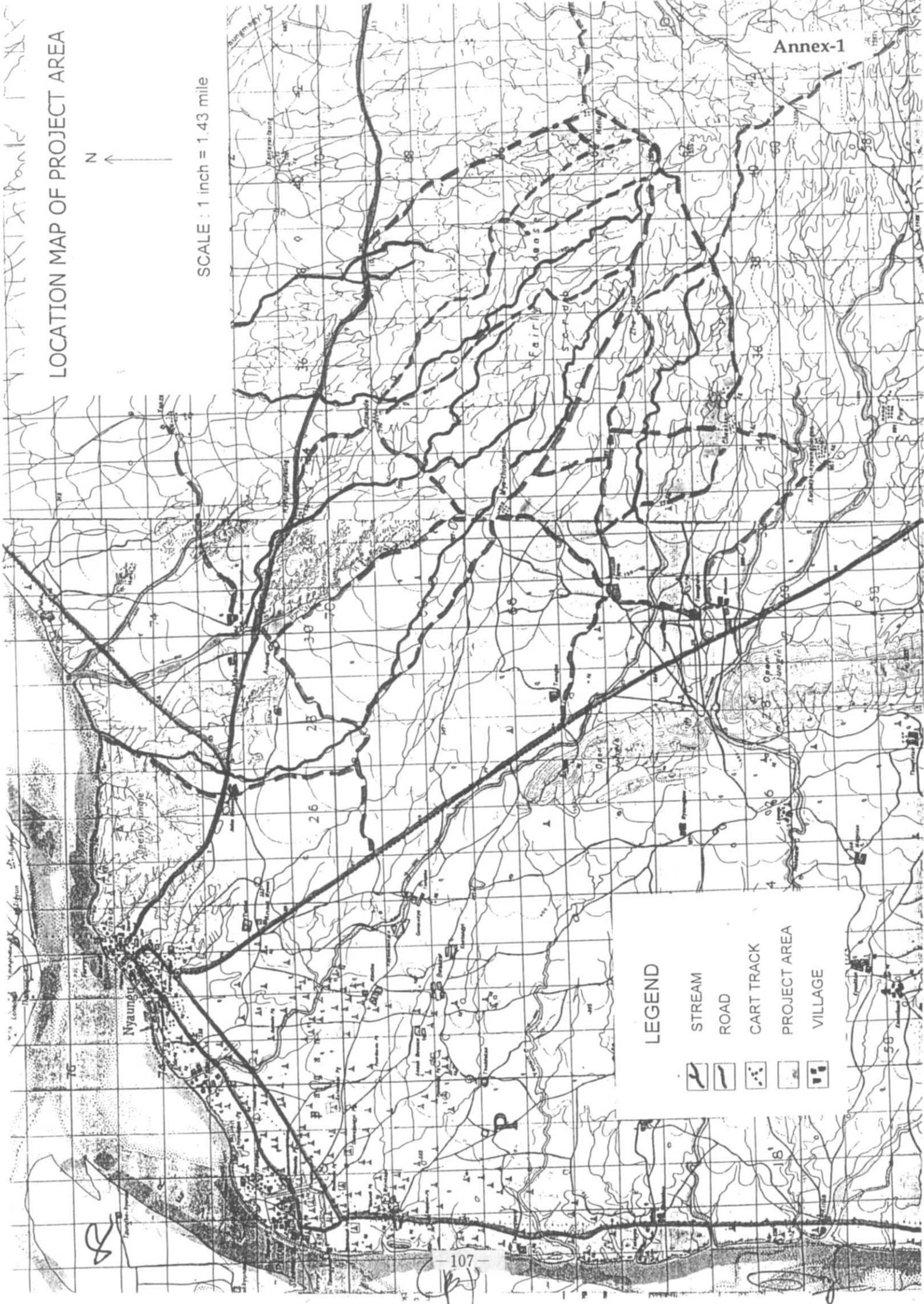


LOCATION MAP OF PROJECT AREA



SCALE : 1 inch = 1.43 mile

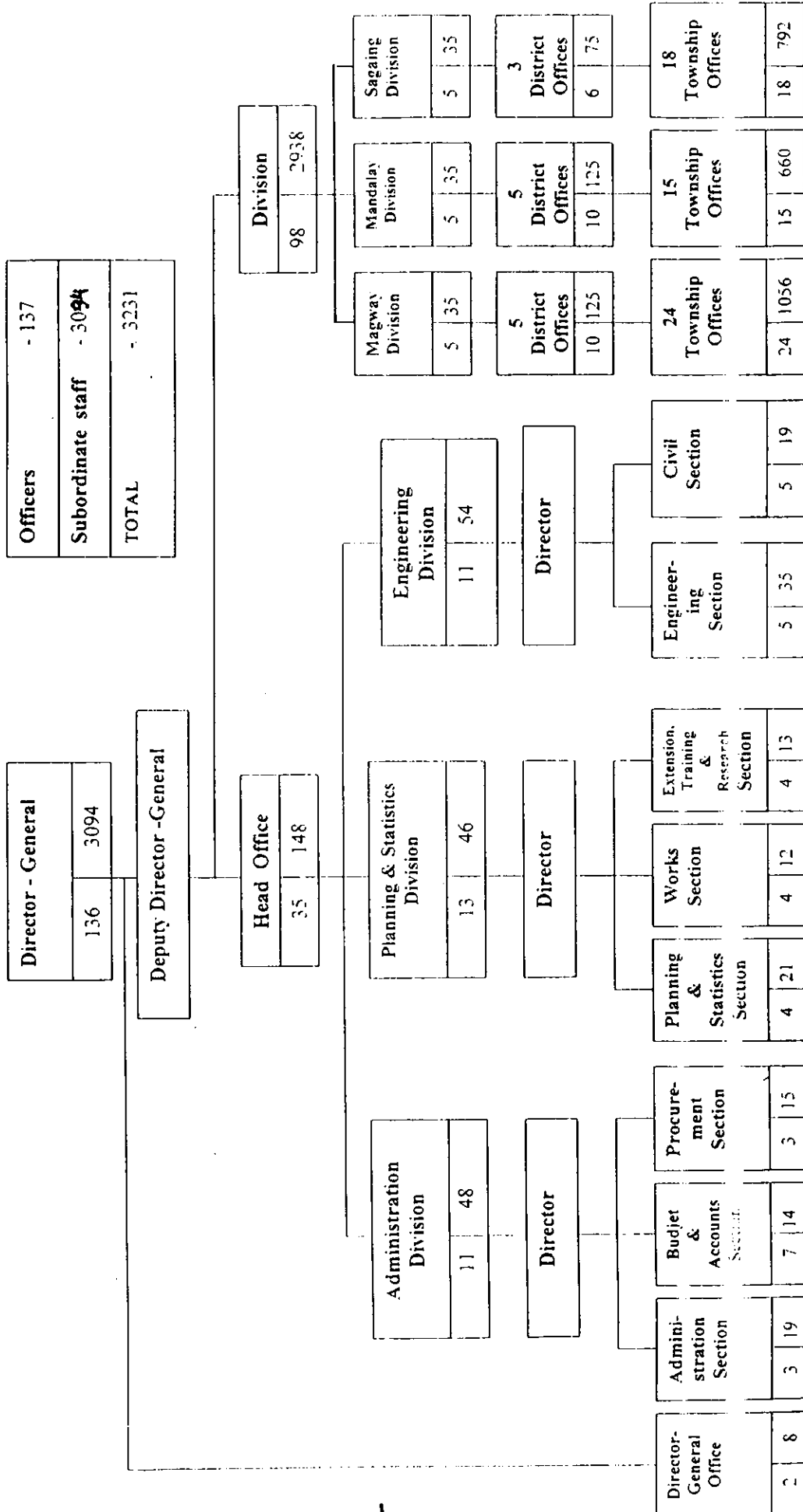
Annex-1



LEGEND

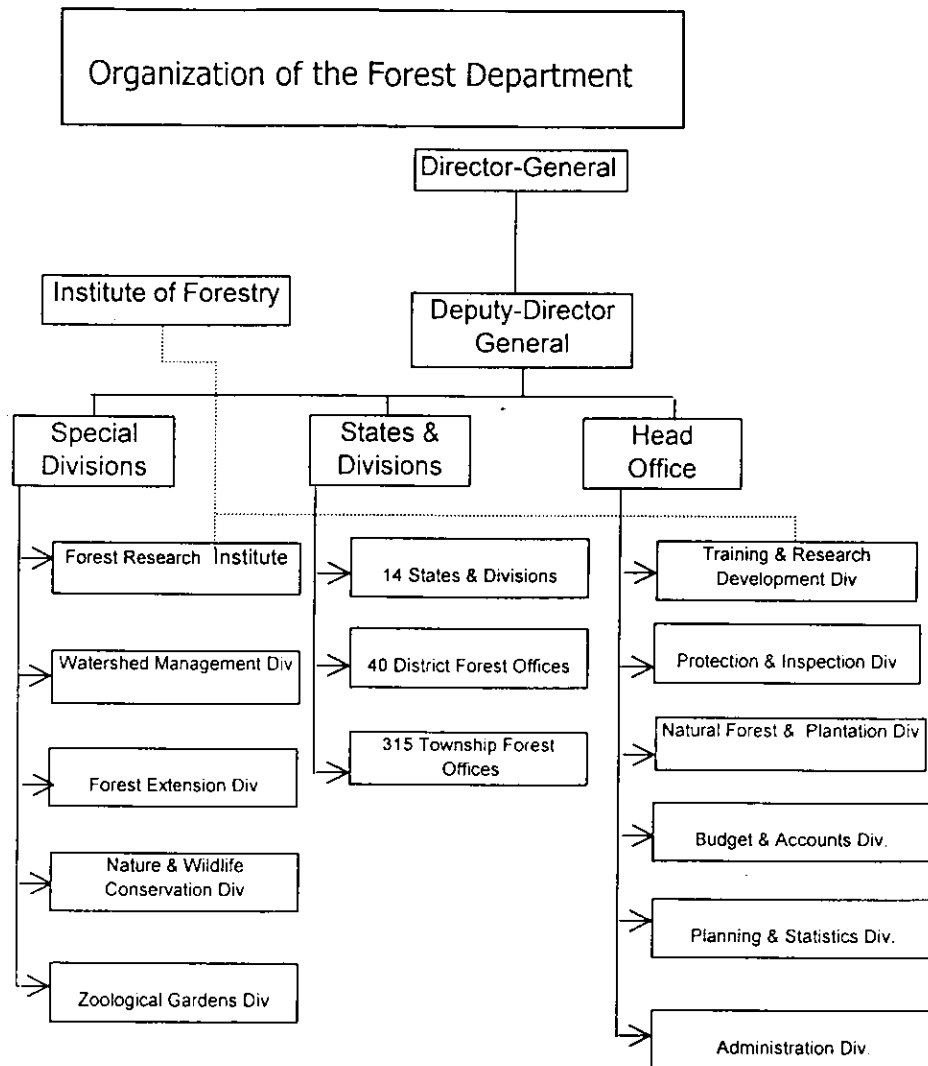
-  STREAM
-  ROAD
-  CART TRACK
-  PROJECT AREA
-  VILLAGE

ORGANIZATION OF THE DRYZONE GREENING DEPARTMENT



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| Particulars | Officer | Subordinate Staff | Total |
|-----------------------|------------|-------------------|---------------|
| (1) | (2) | (3) | (4) |
| Head Office | 117 | 1,320 | 1,437 |
| Special Div.s | 111 | 2,555 | 2,666 |
| States & Div.s | 28 | 1,032 | 1,060 |
| Districts | 72 | 1,008 | 1,080 |
| Townships | 147 | 8,361 | 8,508 |
| Institute of Forestry | 50 | 138 | 188 |
| Total | 525 | 14,414 | 14,939 |

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**LIST OF MAIN FACILITIES AND EQUIPMENT
NECESSARY FOR THE ESTABLISHMENT OF
PLANTATION AND EXTENSION WORKS**

| | Description | Quantity |
|---|---------------------------------------|----------|
| 1 | Nursery Works | |
| | Water pump 4 H.P. | 20 |
| | Generator | 20 |
| | Compressor | 10 |
| | Sprinkler set with pipe and nozzle | 20 |
| 2 | Plantation Works | |
| | Water bowser (1200 Gal) | 3 |
| | Utility track (6.5t) | 2 |
| | Fuel bowser | 2 |
| | Seedling container track | 5 |
| | Fire fighting equipment & Accessories | 4 |
| | Farm tractor with accessories | 10 |
| | Crawler tractor(160 H.P) | 2 |
| | Dump track (5t) | 4 |
| | Inspection vehicles(4X4) | 5 |
| 3 | Camp Construction | |
| | Generator (5 Kv/ A) | 10 |
| | Water pump (4 H.P) | 10 |
| | Spare Parts for Heavy Machine | 1 lot |
| 4 | Buildings | |
| | Permanent nursery office | |
| | Staff Office | |
| | Rest house | |
| 5 | Extension Works | |
| | Audio visual equipment | |
| | Field survey equipment | |
| | Water supply system | |

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JAPAN'S GRANT AID SCHEME

1. Grant Aid Procedures

1) Japan's Grant Aid Program is executed through the following procedures.

- Application: Request made by a recipient country
- Study: Basic Design Study conducted by JICA
- Appraisal & Approval: Appraisal by the Government of Japan and Approval by Cabinet
- Determination of Implementation: The Notes exchanged between the Governments of Japan and the recipient country

2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereafter referred to as "the Study"), conducted by JICA on a requested project (hereafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

- a) Confirmation of the background, objectives, and benefits of the requested Project and also

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institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.

b) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view.

c) Confirmation of items agreed on by both parties concerning the basic concept of the Project.

d) Preparation of a basic design of the Project

e) Estimation of costs of the Project

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA select (a) firms(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

The consulting firm(s) used for the Study is(are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

1) What is Grant Aid ?

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant



laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

3) "The period of the Grant Aid" means the one fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed.

However in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

4) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However the prime contractors, namely, consulting constructing and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

5) Necessity of "Verification"

The Government of recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

6) Undertakings required of the Government of the Recipient Country

In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the following:

(1) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior

to commencement of the construction.

(2) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.

(3) To secure buildings prior to the procurement in case the installation of the equipment.

(4) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.

(5) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.

(6) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

(7) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

(8) "Re-export"


The products purchased under the Grant Aid should not be re-exported from the recipient country.

(9) Banking Arrangements (B/A)

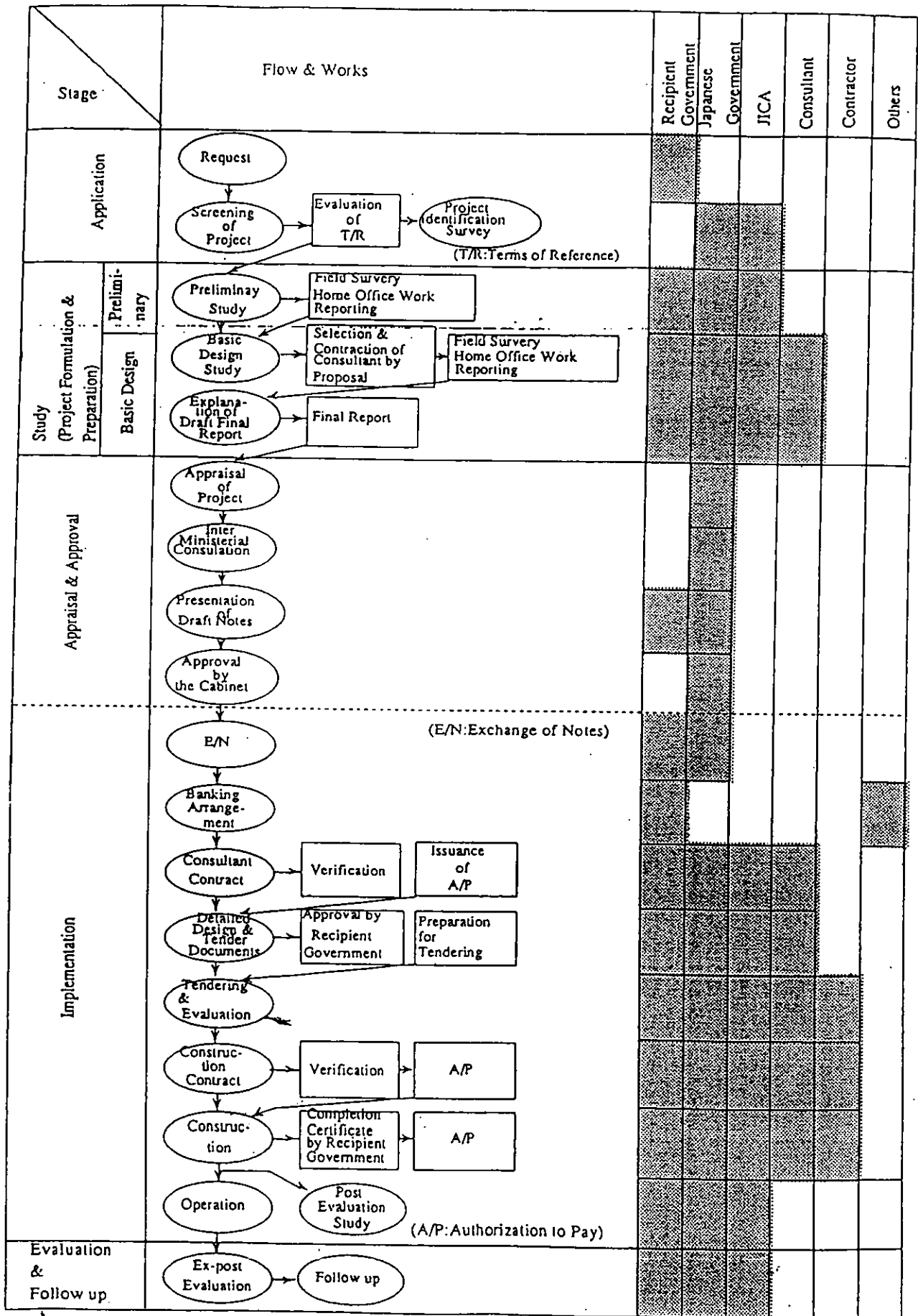
a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated authority.

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Flow Chart of Japan's Grant Aid Procedures



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MAJOR UNDERTAKINGS TO BE TAKEN BY EACH GOVERNMENT

| No | Items | To be covered by Japanese side | To be covered by Myanmar side |
|----|--|--------------------------------|-------------------------------|
| 1 | To secure land for afforestation, nursery, and other facilities under the project. | | X |
| 2 | To bear the cost for planting works | X | |
| 3 | To bear the cost for nursing works including production and purchase of planting stocks | X | |
| 4 | To bear the cost for tending works | (X) | (X) |
| 5 | To bear the cost for maintenance and management, of the established plantation and extension activities | | X |
| 6 | To bear the cost for access roads 1) Construction of operation roads inside of the project area 2) Maintenance of the existing roads to access the project area | X | X |
| 7 | To bear the following commissions to a bank of Japan for the banking services based upon the Banking Arrangement (B/A) 1) Advising commission of the Authorization to Pay (A/P) 2) Payment commission | | X X |
| 8 | To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country 1) Marine(Air) transportation of the products from Japan to the recipient country 2) Tax exemption and customs clearance of the products at the port of disembarkation 3) Internal transportation from the port of disembarkation to the project site | X (X) | X (X) |
| 9 | To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work | | X |
| 10 | To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract | | X |
| 11 | To bear all the expenses necessary for the project implementation, other than those to be borne by the Grant Aid | | X |

CRITERIA FOR SELECTING PLANTATION SITES

1. Criteria for sites to be excluded from plantations within the project area

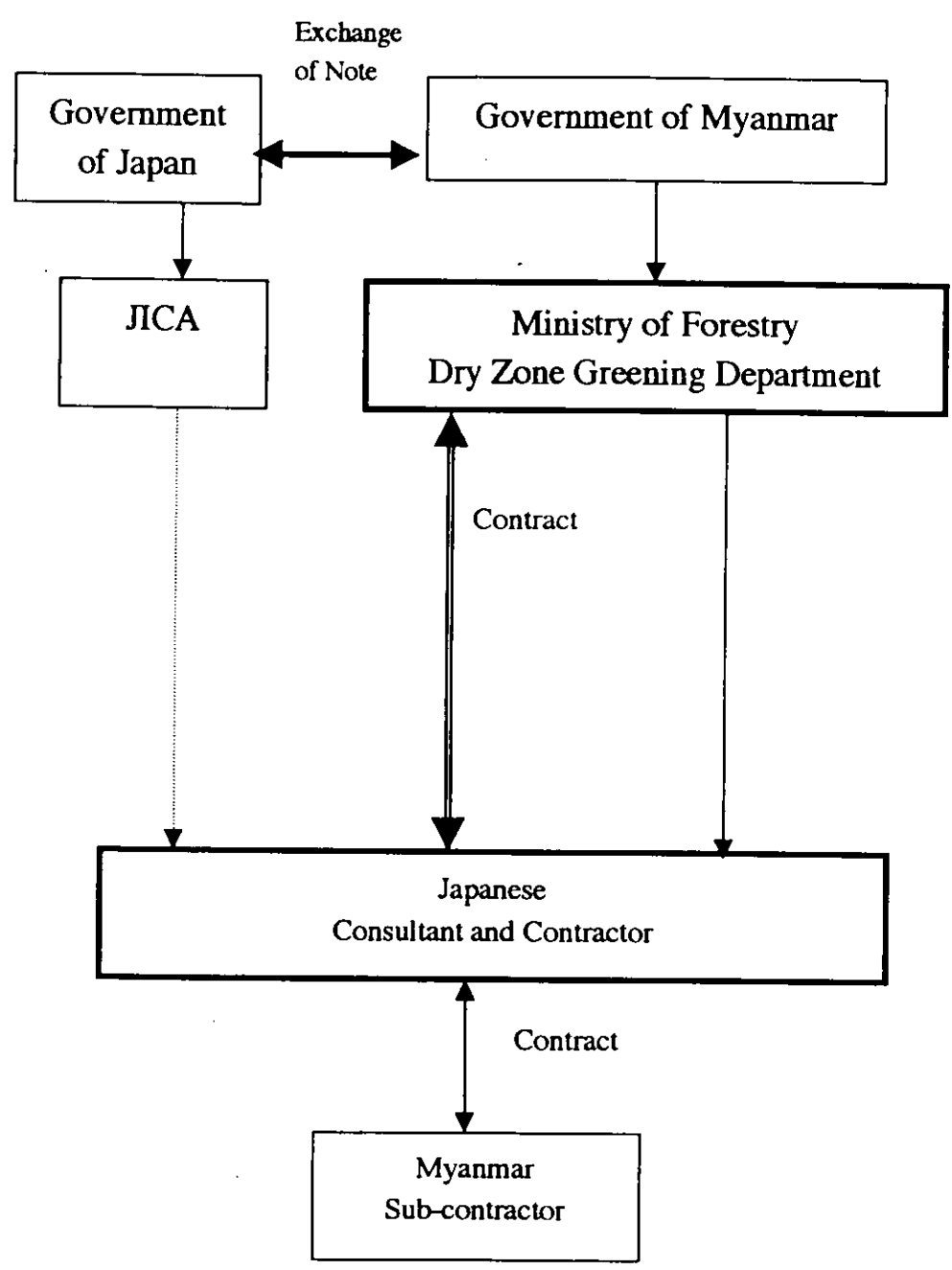
- (1) Topographical conditions such as steep slopes around water run way which is not appropriate for afforestation
- (2) Customary ownership and land use conditions which cause difficulties in maintenance of the plantations such as permanent cultivation area demarcated by boundary trees

2. Criteria for sites to be selected for plantation within the project area

- (1) High possibility in successful management and maintenance of the plantations
- (2) Possibility in gaining participation of farmers for plantation establishment and regulated utilization of planted trees
- (3) Effectiveness in promotion as model plantations in terms of silvicultural technique and management method
- (4) Effectiveness in application of existing techniques
- (5) Efficiency in transportation of equipment and materials for planting works



ORGANIZATIONAL FRAMEWORK



8-

THE GOVERNMENT OF THE UNION OF MYANMAR
MINISTRY OF NATIONAL PLANNING AND ECONOMIC DEVELOPMENT
FOREIGN ECONOMIC RELATIONS DEPARTMENT
OFFICE OF THE MINISTERS
YANGON

D.O.No. Na Sa /Za/2 (0391)

Dated, the 14 February 200

H.E. Mr. Kazuo Asakai
Ambassador
Embassy of Japan
Yangon

Excellency,

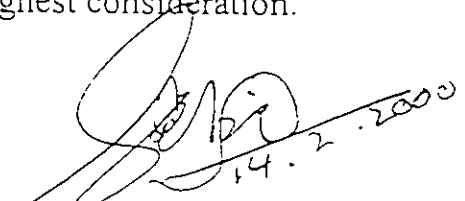
I have the honour to have Excellency's kind favour to the fact that the Ministry of Forestry would like to implement the Rehabilitating Afforestation for Coping with Desertification in Dry Zone especially in Nyaung Oo Township, Mandalay Division with the Japanese Grant Aid.

The main objective of the project is not only to green and enhance soil productivity and restore the environmental services in the Dry Zone area in the Central Myanmar, but also to establish model plantations with active community participation and to provide the basic needs of local people in the Dry Zone.

In this connection , the Ministry of Forestry has requested us to make a formal request for the implementation of Rehabilitating Afforestation for Coping with Desertification in Dry Zone Project with Japanese Grant Aid of US\$ 4.6 million (Yen 500 million) for the period of year 2001 to 2005 .

We would be much grateful if your Excellency would kindly use your good office to trasmit the enclosed applicaton to the authorities concerned in Japan for favourable consideration.

Please accept Excellency , the assurances of my highest consideration.


(Soe Lin)
Director General

မိအုတ် - သစ်တောရေးရာဝန်ကြီးဌာန၊ မြန်မာနိုင်ငံတော် ဦးစီးဌာန၊ ဝန်ကြီးဌာန၊
၄-၂-၂၀၀၀ ရက်စွဲပါစာအမှတ်၊ ၁၀/၅/၂၀၀၀ (၃၁၀/၂၀၀၀) ကို
ရရှိရန် လျက်သိသာရန် ပေး ပို့အပ်ပါသည်။

APPLICATION FORM FOR JAPAN'S GRANT AID

GENERAL AND FISHERIES

1. Date of entry : month January year 2001
2. Applicant : Government of the Union of Myanmar
3. Project title : Rehabilitating Afforestation for Coping with Desertification in Dry Zone
4. Sector : Forestry Sector
5. Project type :
1. Equipment supply.
 2. Facilities construction.
 3. Plantation
6. Target site : (province/country name) : NyaungOo Township
: (city/town/village name) : NyaungOo District, Mandalay Division
: (from the metropolis) : About 14 hours drive from Yangon
: or 1 hour flight from Yangon

Ride/Flight

(Attach a map indicating the site location to reach from the metropolis and a site map covering the intended project site area.)

7. Requested amount : 4,600,000 USD
8. Desired fiscal year of implementation:
Survey : FY 2000-2001
Implementation : FY 2001-2002~ 2004-2005
9. Implementing agency : Dry Zone Greening Department (DZGD)
Ministry/Agency of Ministry of Forestry : Ministry of Forestry
Person in charge : (full name) Director-General
(affiliation) Dry Zone Greening Department

Address : Director-General, Dry Zone Greening Department, Patheingyi
Township, Mandalay Division, Myanmar

Telephone No. : 95-02-88716, 95-02-88717

10. Outlines of implementing agency

(Describe in detail the position in the government, authorities, data on principal projects, annual budget, staff members, etc., and its organisation chart in a separate sheet.)

The DZGD is an institution under the Ministry of Forestry, which is mainly responsible for the establishment of forest plantations (35,000 acres/year); protection and rehabilitation of existing degraded natural forests; development of woodfuel substitutes; and development of water resources.

(Annual budget and staff members of responsible department or section for the last three years and future prospects.)

Name of the department/section: Dry Zone Greening Department

| Year | 1996/97 | 1997/98 | 1998/99 |
|----------------------------------|---------|---------|---------|
| Annual budget (Kyats in Million) | - | 181.154 | 326.807 |
| Number of staff members | | 1372 | 1354 |

The DZGD was created in August 1997.

11. Background of the request.

(Provide detailed information on the importance, necessity, and urgency, and urgency of the requested project in terms of the current situation of the problems found the target sector, the current situations of and problems found in intended sites of the requested projects, etc. by referring to related statistics and data.)

The requested project is important and necessary in terms of soil conservation, soil fertility improvement, environmental conservation and greening of the presently harsh and dry area within the Centre Dry Zone of Myanmar.

The decline in the extent of forest cover in the Dry Zone of the Central Myanmar is primarily attributable to excessive cutting of fuelwood. The driving forces include population growth, inadequate supply and high cost of nonwood energy sources and inefficient utilization of woodfuel.

Due to serious deforestation, and consequently soil degradation, desertification is now taking place in the Dry Zone. People living in this area face a lot of hardships because of unfriendly environment and unproductive soils. Productivity

of agricultural land declines as a result of soil degradation. Thus, the development activities in the dry zone area should include a forestry component, which should be fully integrated with agriculture and livestock breeding to optimize land use.

Development of infrastructure and promotion of socioeconomic situation in and around the project site is significant for the ultimate goal of the DZGD.

Related statistics and data will not be available until and unless development survey has been conducted.

12. Relation with the government's development plan and other factor.

(1) Relation with the government's national development plan.

Name of the plan: Four - year plan

Period : from 1997 to 2000

The position occupied by the requested projected / sector in the above-mentioned plan.

= 14,170 ha

Under the Dry Zone four-year plan, a total of 35,000 acre are being annually planted. The proposed projected will become part of the regeneration plan currently being implement in the whole Dry Zone.

(2) Relation with the sector comprehensive / overall program.

Name of the program : Dry Zone Comprehensive Master Plan (307)

Period : from 2001-02 to 2030-31

The position occupied by the requested project in the program.

// 425,101 ha

Under the Dry Zone Comprehensive Plan, a total of 35,000 acres will be annually planted, reaching 1,050,000 at the end of the period of comprehensive master plan. The project will be considered as part of the Master Plan.

13. Objectives (Itemize as concretely as possible)

(1) Objectives / purpose of the project.

- To green the Dry Zone area in the Central Myanmar;

1 ha = 2.47 acre

- To enhance soil productivity and restore the environmental services of the Dry Zone;
- To provide the basic needs of local people. (i.e., better living conditions especially environment, food and fuel by maintaining plantations.)
- To establish model plantations with active people participation in the Dry Zone

(2) Overall goal / medium and long- term objectives.

- To establish forest plantations for greening and the promotion of socioeconomic status of local people at the project site
- To improve soil condition and to improve microclimate of the project site in particular and the Dry Zone in general.
- To promote the status of living standard of rural communities through the establishment of forest plantations.

14. Outline of the project and request (Itemise as concretely as possible.)

a. In the case of facilities construction project.

(Outline of requested facilities (such as the name and address of the project site, site- selecting criteria, supporting photographs, design drawings with dimensions and area, number of requested facilities, and desired materials to be used.)

Selected site is degraded, and thus

- needs to be greened, and accessible;
- needs to have adequacy of labour;
- requires adequate supply of water from the *Ayeyawady* River through pumping system or tube wells,
- to be continuous stretch of area for the development of model forests in the Dry Zone .

Nursery Works

| Sr. No. | Description | Quantity | Unit Price (US \$) | Total (US \$) |
|---------|------------------------------------|----------|--------------------|---------------|
| 1 | Water Pump (4 H.P) | 20 | 500 | 10,000 |
| 2 | Generator (5 KVA) | 20 | 2500 | 50,000 |
| 3 | Compressor | 10 | 1000 | 10,000 |
| 4 | Sprinkler set with pipe and nozzle | 20 | 150 | 3000 |
| | | | | 73,000 |

Camp Construction

| Sr. No | Description | Quantity | Unit Price (US \$) | Total (US \$) |
|--------|-----------------------------------|----------|--------------------|---------------|
| 5 | Generator (5 KVA) | 10 | 1500 | 15,000 |
| 6 | Water Pump (4 H.P) | 10 | 600 | 6,000 |
| 7 | Spare Parts for Heavy Machineries | 1 Lot | 500,000 | 500,000 |
| | | | | 521,000 |

Buildings

| Sr. No | Description | Quantity | Unit Price (US \$) | Total (US \$) |
|--------|--------------------------|----------|--------------------|---------------|
| 8 | Permanent Nursery Office | | | 100,000 |
| 9 | Staff Office | | | 100,000 |
| 10 | Rest House | | | 100,000 |
| | | | | 300,000 |

Extension Works

| Sr. No. | Description | Quantity | Unit Price (US \$) | Total (US \$) |
|---------|------------------------|----------|--------------------|---------------|
| 11 | Audio visual Equipment | 1 Lot | | 50,000 |
| 12 | Field Survey Equipment | | | 100,000 |
| 13 | Water Supply system | | | 156,000 |
| | | | | 306,000 |

b. In the case of equipment supply project.

(List of requested equipment (such as the name and address of the site to install the equipment, equipment- selecting criteria, name, specifications, quantity, unit price, total amount , etc. of the equipment).

Equipment Required for Plantation Works

| Sr. No. | Description | Quantity | Unit Price (US \$) | Total (US \$) |
|---------|--|----------|--------------------|---------------|
| 1 | Water Bowser (1200 Gal) | 3 | 45,000 | 135,00 |
| 2 | Utility Truck (6.5 ton) | 2 | 45,000 | 90,00 |
| 3 | Fuel Bowser (1600 Gallons) | 2 | 50,000 | 100,00 |
| 4 | Seedling Container Truck (4x4) 3.5 ton | 5 | 35,000 | 175,00 |
| 5 | Fire Fighting Equipments & Accessories | 4 | 25,000 | 100,00 |
| 6 | Farm Tractor with Accessories | 10 | 10,000 | 100,00 |
| 7 | Crawler Tractor (160 H.P) | 2 | 100,000 | 200,00 |
| 8 | Dump Truck (5 ton) | 4 | 50,000 | 200,00 |
| 9 | Inspection vehicle (4x4) | 5 | 20,000 | 100,00 |
| | | | | 1,200,00 |

c. Methods to operate, manage, and maintain the facilities or equipment, expected number of persons to be secured, together with their technical levels, and prospect to secure necessary budget.

Project Personnel (For 4 years)

| Sr. No. | Description | Total (US \$) |
|---------|---|---------------|
| 1 | CTA | 400,000 |
| 2 | One Secretary | 9,600 |
| 3 | International Consultants (Plantation and Forest Economics Experts) | 100,000 |
| 4 | Overseas study tour | 40,400 |
| 5 | Hired Labour | 100,000 |
| 6 | National consultants | 25,000 |
| 7 | Annual Workshop + 4 Trainings | 25,000 |
| | | 700,000 |

Duty Travel

| Sr. No. | Description | Total (US \$) |
|---------|---|---------------|
| 8 | Airfare for the study tour to foreign country | 100,000 |
| 9 | DSA for international experts | 100,000 |
| 10 | Airfare for international experts | 100,000 |
| | | 300,000 |

d. Financial sources for management and maintenance after completion of the requested project.

Fully borne by the government;

Partially borne by beneficiaries;

Fully borne by beneficiaries (estimated amounts and number of persons).

After the completion of the requested project, the DZGD will be responsible for management and maintenance of the established plantations and equipment. The expenditure will be fully borne by the government.

- (2) Breakdown of total amount of the facilities and equipment and supporting data.

| Sr. No | Facilities /Equipment /Personnel | US \$ (million) |
|--------|----------------------------------|-----------------|
| 1. | Nursery | |
| | Construction | 1.2 |
| | Plantation Activities | 1.2 |
| 2. | Equipment | 1.2 |
| 3. | Personnel | 1.0 |
| | Total | 4.6 |

- (3) Additional information.

- a. Existing facilities:

No

Yes Current situations of the existing facilities, specifications, supporting photographs, materials used, etc.

No existing facilities in the proposed project area.

- b. List of existing equipment covering the name, quantity, year purchased, country of origin of the equipment, together with the manufacturer's name and operating conditions (A= operable, B= partially operable, and C= not operable and the reason (s) for such inoperability.)

Also attach photographs of the equipment so that the current conditions can be grasped.

- c. Project site preparation (including expropriation)

Land :

Already secured

Name of the landowner: Government of Myanmar

Area Central Dry Zone Area

Not yet secured

Name of the landowner: _____

Area : _____

In this case, specify the prospect to secure it, procedures and time needed for expropriating it.

- Current situations of the project site, such as levelings, drainage, availability of power, water supply, telephone, etc.

The communication through telephone is possible in the township corresponding to the project. The project site is undulating having a good drainage. Electricity supply is not available at the project site. However, if the base camp is stationed in NyaungOo Township, electricity is available. Required water could be available through pumping water from nearby *Ayeyawady* River or Tube wells.

- Data on natural conditions.

Concretely specify the names, year prepared, and agencies published of such data.

The project site is covered by degraded shrub forests. The prevailing soil is sandy and is not good for agriculture at present. It is hoped that, after soil improvement activities the soil could be better and fertility could be restored.

- Security situation.

Give concrete information related to each project site, if more than one site is involved.

The project site is a single stretch of 3,000 ha and the security situation is excellent. The project can be implement without any disturbance.

- d. Related grant aid co-operation in the past.

FY _____

Title _____

Amount Y _____ million.

Target area: (specify the names of provinces, cuties, etc.)

Assessment on level of utilization of the project:

- A (Good)
- B (Passable)
- C (Bad)
- D (Not utilized)

15. Benefit and effects of the project.

(1) Area that will benefit from the project (specify the total area, if possible):

The project site lies within NaungOo District. The site is characterised by intense heat especially during the dry season. The project is expected to improve the present environment conditions and the microclimate better.

(2) Population that will benefit (directly and indirectly):

Population will benefit from the project in terms of high living conditions especially environment, and to some extent fuel wood supply from maintenance operations. The indirect benefit includes better soil condition, improved microclimate and better infrastructure.

To promote the status of living of rural communities through the benefits from the plantations.

(3) Expected social and economic effects (items concretely):

1. Improved health condition affected by favourable climatic conditions,
2. Better economic conditions due to increased income from agriculture thanks to better soil and climatic conditions, and
3. Increased awareness of the services of the forests.

16. Relation with technical co-operation, etc.

(1) Feasibility study:

Already effected/ being effected.

From month _____ year _____ to month _____ year _____

Conducted by : JICA

other agency (specify : _____)

Not yet effected.

(2) Technical co-operation.

Which of the following forms of assistance do you require?

(1) project-type technical co-operation : Central Forest Development Training Center Project Phase 2.

(2) long- term experts : _____ 1 _____ persons(Individual)

(3) short-term experts : _____ persons

(4) JOCV : _____ persons

(5) acceptance of trainees : _____ persons

(6) not needed

When the technical co-operation is underway,

Title: Central Forestry Development Training Centre (A/C)After -Care programme

Period: from month 4 year 1999 to month 3 year 2001

(1) project- type technical co-operation Central Forest Development Training Center Project Phase 2.

(2) long-term experts : _____ persons

(3) short- term experts : _____ persons

(4) JOCV : _____ persons

(5) acceptance of trainees : _____ persons

No technical co-operation is underway .

17. Request to other donors for same project.

No request has been made to other donors for the same project.

18. Aid by third countries or international organizations in the same or related fields.

| Name of donor | Period | Type | Amount | Outline (concretely) | Relationship with the present request |
|---------------|--------|------|--------|----------------------|---------------------------------------|
| | | | | | |
| | | | | | |
| | | | | | |

19. Other information with special remark (whether or not privatisation policy is effected. If yes, indicate the relationship with the requested project.)

Rough idea of tree planting activities for requesting grant aid

Purpose

To establish model forest in the Dry Zone

Area

Degraded forest reserve area in one of the 13 districts of Dry Zone Area.

Activities

- Tree planting in degraded forests and gap filling in existing natural forests;
 - Tending work in forest plantations.
- Development of nurseries to support community based tree-planting activities
- Construction of forest roads, water supply system and working sheds;
 - Construction of forest roads and feeder roads
 - Purchasing of equipment and machinery

Plan

Tree planting area : 3,000 ha, (7,500 acres)

Estimate fund : Yen 500,000,000.- (about US\$ 4,600,000)

Duration : Four (4) years

**Basic Data of MYAYTHINTWIN Protected Area
Dry Zone Greening Department, Nyaung Oo District.**

Climate data

620 mm

The annual rainfall in Nyaung Oo Township is 24.6 inches, with a total of (36) rainy days. The shower come twice a year usually the 1st in May and June and the second in September and October.

The highest rainfall usually occurs in September. That is 36-38 inches. The lowest rainfall is 10-25 inches.

The average annual temperature is 80' F. April is the highest with 110' F and the lowest in January with temperature of 70'F.

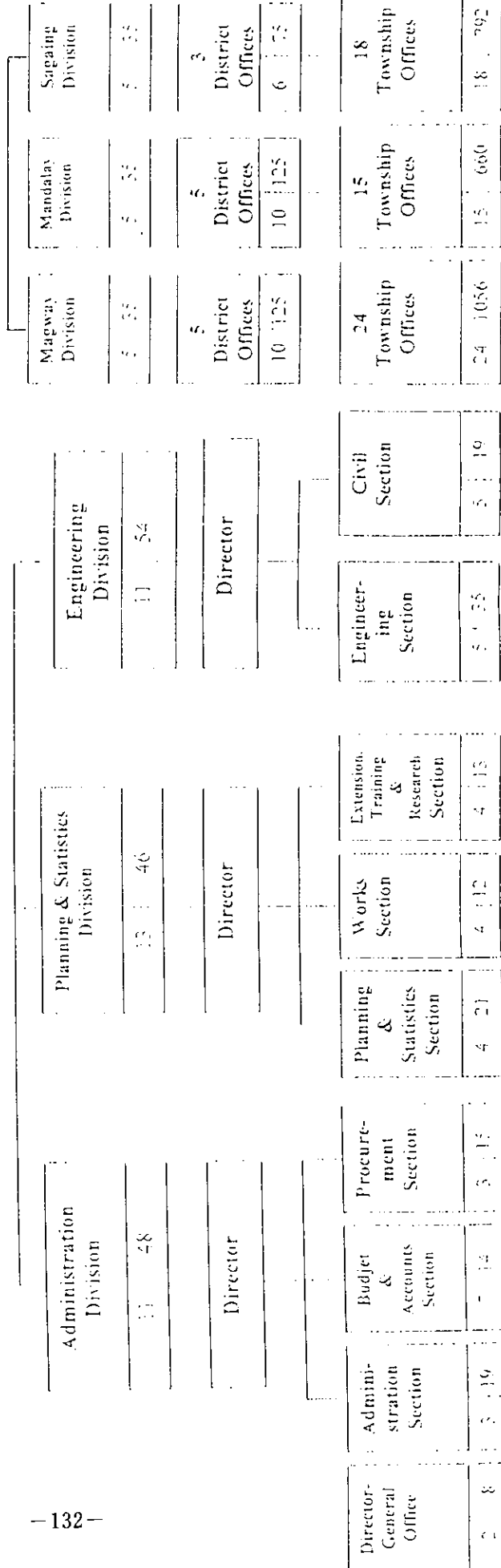
Relative humidity is 100% in the rainy season and 8% in hot season. The average annual R.H is about 70%.

ORGANIZATION OF THE DRYZONE GREENING DEPARTMENT

| | | |
|--------------------|----------|-------------|
| Director - General | 136 | 3094 |
| Subordinate staff | - | 3094 |
| TOTAL | - | 3230 |

| | | |
|---------------------------|--|--|
| Deputy Director - General | | |
|---------------------------|--|--|

| | | |
|-----------------|-----------|-------------|
| Head Office | 55 | 148 |
| Division | 98 | 2938 |



LOST OF TEAM MEMBERS

ミャンマー中央乾燥地砂漠化対処環境造林計画 予備調査 団員名簿

Preparatory Study for the Project for Rehabilitating Afforestation for Coping with Desertification in Dry Zone

| No. | Name | Job title | Occupation | Period (arr. - dep.) |
|-----|----------------------------------|--|---|-------------------------|
| 1 | 吉田 丘 Takashi YOSHIDA, Mr. | 総括 Leader | 国際協力事業団 アジア第二部計画課長 Director, Planning Div., Regional Dept. II, JICA | 2000/7/4- 2000/7/14 |
| 2 | 石原 英彦 Hidehiko ISHIHARA, Mr. | 技術参与 Technical Advisor | 林野庁国有林野部業務課販売企画官 Products Sales Promotion Officer, National Forest Dept., Forestry Agency | 2000/7/4- 2000/7/14 |
| 3 | 荊木 絵美子 Emiko IBARAKI, Ms. | 計画管理 Planning Management | 国際協力事業団 無償資金協力部業務第一課 Grant Aid Management Dept. JICA | 2000/7/4- 2000/7/14 |
| 4 | 田邊 眞次 Shinji TANABE, Mr. | 造林・森林管理 計画 Afforestation & Forest Management | (社)日本林業技術協会 国際事業部参事 Overseas Division Japan Forest Technical Association | 2000/7/4- 2000/7/28 |
| 6 | 宮崎 宣光 Nobumitsu MIYAZAKI, Mr. | 施設・機材計画 Facilities & Equipment Planning | (社)海外林業コンサルタント協会調査部長 Director of Evaluation, Japan Overseas Forestry Consultants Association | 2000/7/4- 2000/7/28 |
| 5 | 十津川 淳 Jun TOTSUKAWA, Mr. | 社会調査 Socio-economic Survey | 太陽コンサルタント(株) 海外事業本部技師 International Department Taiyo Consultants Co., ltd. | 2000/7/4- 2000/7/28 |

to commencement of the construction.

(2) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.

(3) To secure buildings prior to the procurement in case the installation of the equipment.

(4) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.

(5) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.

(6) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

(7) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

(8) "Re-export"

The products purchased under the Grant Aid should not be re-exported from the recipient country.

(9) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated authority.

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