

Appendices

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1. Member List of the Study Team

(1) Basic Design Study

Name	Assignment	Preset Post
Mr. Katsutoshi KOMORI	Leader	Japan International Cooperation Agency
Mr. Hiroaki OTSUKA	Chief Consultant Management & Operation Plan	NHK Integrated Technology Inc.
Mr. Yoshihiro NOHARA	Transmitting Planer I	NHK Integrated Technology Inc.
Mr. Masatosi HAMADA	Transmitting Planer II	NHK (Japan Broadcasting Corporation)
Mr. Hiromu KAMIJO	Facility Planner	Nissoken Architects & Engineers
Mr. Toru URUWASHI	Cost Estimate/Procurement and Construction Planner	NHK Integrated Technology Inc.

(2) Explanation of Draft Basic Design Report

Name	Assignment	Preset Post
Mr. Katsuro SAITO	Leader	Japan International Cooperation Agency
Mr. Hiroaki OTSUKA	Chief Consultant Management & Operation Plan	NHK Integrated Technology Inc.
Mr. Yoshihiro NOHARA	Transmitting Planer I	NHK Integrated Technology Inc.
Mr. Hiromu KAMIJO	Facility Planner	Nissoken Architects & Engineers

2. Study Schedule

(1) Basic Design Study

			Official Member	Consultant Members							
			Katsutoshi KOMORI Team Leader	Hiroaki OTSUKA Chief Consultant/ Operation and Management	Yoshihiro NOHARA Training Planner-I	Masatoshi HAMADA Training Planner-II	Hiromu KAMIJO Facility Planner-I	Toru URUWASHI Procurement and Construction Planner/ Cost Estimator			
1	Oct. 23	Wed.	Dep. Narita								
2	24	Thu.	Cairns Port Moresby • Meeting with JICA PNG Office • Courtesy call to Embassy of Japan								
3	25	Fri.	• Courtesy call to Ministry of Information and National Broadcasting Corporation (NBC) • Discussion with NBC								
4	26	Sat.	• Explanation of Inception Report			Port Moresby Wewak • Courtesy to NBC and studio site survey					
5	27	Sun.	Port Moresby Lae • Courtesy call to Governor and survey at Morobe station			• Site survey at Wewak Station Courtesy call to Administrative of East Sepik					
6	28	Mon.	Lae Port Moresby Survey at NBC			Wewak Vanimo					
7	29	Tue.	• Discussion for the Minutes of Discussion with NBC			• Courtesy call to Governor of West Sepik					
8	30	Wed.				• Studio site survey					
9	31	Thu.	• Final Discussion for M/D			• Site survey at Vanimo Station Vanimo Port Moresby					
10	Nov. 1	Fri.	• Signing of the Minutes of Discussion • Report to JICA PNG Office and Embassy of Japan			• Meeting in team Port Moresby Lae • Site survey at Lae station					
11	2	Sat.	Port Moresby Cairns			• Data collection on P&C planning					
12	3	Sun.	Cairns Narita						• Site survey at Lae station Lae Port Moresby		
13	4	Mon.	• Detailed survey for NBC's budget, future plan and potentiality on operation and maintenance for facilities.						• Team meeting and arrangement of collecting data and information		
			Hiroaki OTSUKA Chief Consultant/ Operation and Management	Masatoshi HAMADA Training Planner-II	Hiromu KAMIJO Facility Planner-I	Yoshihiro NOHARA Training Planner-I	Toru URUWASHI Procurement and Construction Planner/ Cost Estimator				
14	5	Tue.	Port Moresby Goroka • Courtesy call to Governor of East Highlands and NBC			Port Moresby Rabaul • Courtesy call to NBC					
15	6	Wed.	• Site survey at Goroka station			Rabaul Kimbe • Site survey at Kimbe station					
16	7	Thu.	Goroka Chimbu • Courtesy call to Governor of Enga, and NBC			Dep. Rabaur Arr. Kimbe • Courtesy call to governor and NBC					
17	8	Fri.	• Site survey at Chimbu Station			Kimbe Rabaul • Courtesy call to governor					
18	9	Sat.	Chimbu Wabag • Site survey at Wabag Station			• Site survey at Kokopo Kenapot station					
19	10	Sun.	Wabag Mt. Hagen Site Survey at Mt. Hagen Station			Rabaul Port Moresby					
20	11	Mon.	Mt. Hagen Port Moresby • Data collection on P&C planning			• Data collection on P&C planning					
			Hiroaki OTSUKA Chief Consultant/ Operation and Management	Yoshihiro NOHARA Training Planner-I	Masatoshi HAMADA Training Planner-II	Hiromu KAMIJO Facility Planner-I	Toru URUWASHI Procurement and Construction Planner/ Cost Estimator				
21	12	Tue.	• Team meeting and arrangement of collecting data and information Basic Design (draft)								
22	13	Wed.									
23	14	Thu.	• Report to JICA PNG Office, and Embassy of Japan. • Discussion with NBC • Arrangement of Basic Design (Draft) Port Moresby Arr. Cairns								
24	15	Fri.	• Discussion and signing of supplemented minutes of discussion with NBC. • Report to JICA PNG Office and Embassy of Japan			Port Moresby . Brisbane (Survey on third country's procurement & transportation)					
25	16	Sat.									
26	17	Sun.	Port Moresby Cairns Narita			Brisbane Arr. Narita					

(2) Explanation of Draft Basic Design Report

		Official Member	Consultant Members		
		Katsuro SAITO Team Leader	Hiroaki OTSUKA Chief Consultant/ Operation and Management	Hiromu KAMIJO Facility Planner-I	Yoshihiro NOHARA Training Planner-I
2/16	1		<i>Dep. Narita</i>		
			<i>Cairns Port Moresby</i>		
17	2		<ul style="list-style-type: none"> • Meeting with JICA PNG Office • Courtesy call to DNP&RD and OIC • Explanation on Draft Basic Design Report to NBC 		
18	3		<ul style="list-style-type: none"> • Discussion on Draft Basic Design Report with NBC 		
19	4		<ul style="list-style-type: none"> • Discussion on Draft Basic Design Report with NBC 		
20	5		<p style="text-align: center;"><i>Port Moresby Goroka</i></p> <ul style="list-style-type: none"> • Meeting with Director of Mt. Hagen station for the site • Meeting with Administrator of Eastern Highlands province. <p style="text-align: center;"><i>Mt. Hagen Goroka</i></p>		
21	6		<ul style="list-style-type: none"> • Meeting and survey at Goroka station, site survey at Mt. Kiss. Goroka Kainantu for a survey of relay station. 		
22	7	<i>Port Moresby Goroka</i>	<ul style="list-style-type: none"> • Survey at Mt. Kiss site • Meeting with Governor of East Highlands province • Survey at Goroka Station. 		
23	8	<i>Goroka Port Moresby</i>	<ul style="list-style-type: none"> • Survey for Hafaru site. • Meeting with Goroka station. <p style="text-align: center;"><i>Goroka Port Moresby</i></p>		
24	9		<ul style="list-style-type: none"> • Team Meeting at JICA PNG office • Meeting with DNP&RD and NBC for the Minutes of Discussion. 		
25	10		<ul style="list-style-type: none"> • Signing of Minutes of Discussion at DNP&RD office. • Report to JICA PNG Office, and Embassy of Japan. 		
26	11		<i>Port Moresby Cairns</i>		
27	12		<i>Cairns Narita</i>		

3. List Parties Concerned in the Recipient Country

Ministry of Communication and Information

Minister	Hon Ben Semri, MP
Director General, Office of Information & Communication	Mr. Henao Iduhu
Assistant Director of Communication	Mr. Oria Gemo
Office of Information & Communication	Mr. Keiji Hayashi

Department of National Planning & Rural Development

First Assistant Secretary, Aid Coordination and Managing Division	Mr. Mosilayola Kwayaila
Aid Coordinator, Aid Coordination and Managing Division	Mr. John Kol
Project Formulation Adviser (JICA)	Mr. Atsuo SUSAMI
Aid Coordination Officer (Aus Aid)	Ms. Linda Taman
Senior Aid Coordination Officer (Japan Desk)	Mr. Noel Geti
AS Bilateral	Mr. Paul Enny

National Broadcasting Corporation

Managing Director	Dr. Kristoffa R. Ninkama
Deputy Managing Director	Mr. Posa Lari
Director Engineering & Technical Service	Mr. Isaac Marinjembi
Assistant Director Engineering & Technical Service	Mr. Demas Totil
Director Finance	Mr. Bennie Isaac
Director Kundu Service	Mr. Winterford Suharupa
Director Human Resources & Administration	Mr. Muli P. Kera
Assistant Director News Service	Ms. Dorah Massueng
NBC Radio East Sepik (Wewak), Regional Manager	Mr. Andrew Lunge
NBC Radio East Sepik, Station Technician	Mr. Jimmy Aris
NBC Radio West Sepik (Vanimu), Program Manager	Ms. Leonnie Ramram
NBC Radio West Sepik, Assistant Manager	Mr. Zacharias Navot
NBC Radio West New Britain (Kimbe), Director	Mr. Valuka Lowa
NBC Radio West New Britain, Assistant Director	Mr. Darius Gilime
NBC Radio West New Britain, Station Technical Officer	Mr. Mathias Marmar
NBC Radio West New Britain, Senior Program Officer	Mr. Daniel Endo
NBC Radio West New Britain, Senior Program Officer	Mr. Joseph Anut
NBC Radio West New Britain, Station Clerk	Ms. Scholly Tariah
NBC Radio East New Britain (Kokopo), Manager	Mr. John Wartovo
NBC Radio East New Britain, Engineer	Mr. Robin Lolo
NBC Radio East New Britain, Technician	Mr. Robin Vuvut
NBC Radio Eastern Highlands (Goroka), Manager	Mr. Tony Mill

NBC Radio Eastern Highlands, Engineer	Mr. Kiri Nige
NBC Radio Eastern Highlands, Assistant Manager	Mr. Dawnne Fova
NBC Radio Simbu (Kundiawa), Program Manager	Mr. Joen Bare
NBC Radio Simbu Assistant Manager	Mr. John Dusse
NBC Radio Western Highlands (Mt. Hagen), Assistant Program Manager	Ms. Anna Pundia
NBC Radio Morobe (Lae), Program Manager	Mr. Kekalem Meruk
NBC Radio Morobe, Editor	Ms. Dora Massueng
NBC Radio Morobe, Chief Staff of News	Mr. Mulai Robi
NBC Radio Enga (Wabag), Manager	Mr. Matpew Gole

Provincial Officers

East Sepik Province, Advisor Works and Transport Engineer	Mr. James Baloiloi
West Sepik Province, Governor Acting Administrator First Secretary	Mr. Patrick Lawrence Hon Carlos Yuni, MP Mr. Joseph Sungi Mr. Felix Rofsomana
Morobe Province, Principle Advisor	Mr. Malalu Angu
West New Britain Province, Deputy Administrator	Mr. Paul Smith Rame
East New Britain Province, Governor	Hon Leo Dion, MP
Eastern Highlands Province, Governor	Hon Mal Smith Kela, MP
Simbu Province, Governor	Hon FR Louis Ambane, MP
Western Highlands Province, Acting Provincial Administrator	Mr. Michael Wandil
Eastern Highlands Province, Station Commander (Goroka Police Station)	Mr. Inspector Wauwia

TELIKOM Officer

Station Manager Kainantu Station	Mr. Kara Kurang Kewe
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Embassy of Japan

Ambassador	Mr. Tatsuo TANAKA
Councilor	Mr. Koichi IHARA
First Secretary	Mr. Shunji SIMIZU

Japan International Cooperation Agency

Resident Representative	Mr. Katsuro SAITO
Assistant Resident Representative	Mr. Masato KOINUMA
JICA Expert (Education Media Centre)	Mr. Akinori ITO

4. Minutes of Discussions

(1) Basic Design Study (November 1, 2002)

**Minutes of Discussions
on the Basic Design Study
on the Project for Improvement of Broadcasting Equipment
for National Broadcasting Corporation
in Papua New Guinea**

The Government of Japan decided to conduct a Basic Design Study on the Project for Improvement of Broadcasting Equipment for National Broadcasting Corporation (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to the Papua New Guinea the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Katsutoshi Komori, an officer of the Third Project Management Division, the Grant Aid Management Department, JICA, and is scheduled to stay in the country from October 24 to November 17, 2002.

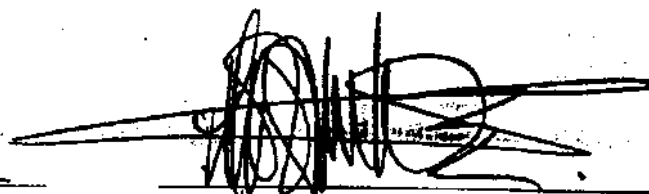
The Team held discussions with the officials concerned of the Government of Papua New Guinea and conducted a field survey at the study area.

In the course of discussions and field survey, both sides confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

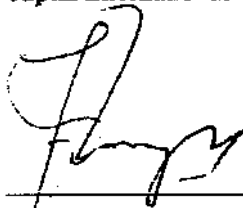
November 1, 2002

小森 克俊

Katsutoshi Komori
Leader
Basic Design Study Team
Japan International Cooperation Agency



Kristoffa Ninkama
Managing Director
National Broadcasting Corporation



Mosilayola Kwayaila
First Assistant Secretary
Aid Coordination and Management Division
Department of National Planning & Rural
Development



for Henao Iduhu
Director General
Office of Information & Communication
Ministry of Communication & Information

ATTACHMENT

1. Objective of the Project

The objective of the Project is to rehabilitate the Kundu Broadcasting Service through improvement of the Broadcasting Transmitting Equipment of the National Broadcasting Corporation (NBC).

2. Study sites

The study sites of the Project are eight (8) Kundu Broadcasting Stations (Kundiawa, Mt. Hagen, Goroka, Lae, Wabagu, Vanimo, Wewak and Kimbe), which is shown in Annex-1.

Both sides agreed to select Project sites out of eight (8) study sites based on the priority of each study area after the site survey is completed.

3. Responsible and Implementing Organizations

3-1. The Responsible Ministry is the Ministry of Communication & Information.

3-2. The Executing Agency is the National Broadcasting Corporation (NBC).

3-3. The organization chart of NBC is shown in Annexes 2.

4. Items requested by the Government of Papua New Guinea

After discussions with the Team, the following components were finally requested by the Papua New Guinean side;

- Improvement of Broadcasting Transmitting Equipment (including installation of antenna) for Project sites

JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5. Japan's Grant Aid Scheme

5-1. The Papua New Guinean side understands the Japan's Grant Aid scheme explained by the Team, as described in Annex-3.

5-2. The Papua New Guinean side will take the necessary measures, as described in Annex-4, for smooth implementation of the Project as a condition for the Japan's Grant Aid to be implemented.

6. Schedule of the Study

6-1. The consultant will proceed to further studies in Papua New Guinea until November 17, 2002.

6-2. JICA will prepare the draft final report in English and dispatch a mission to Papua New Guinea in order to explain its contents in the end of January 2003

6-3. In case that the contents of the draft final report is accepted in principle by the Government of Papua New Guinea, JICA will complete the final report and send it to the Government of Papua New Guinea by the end of April, 2003.

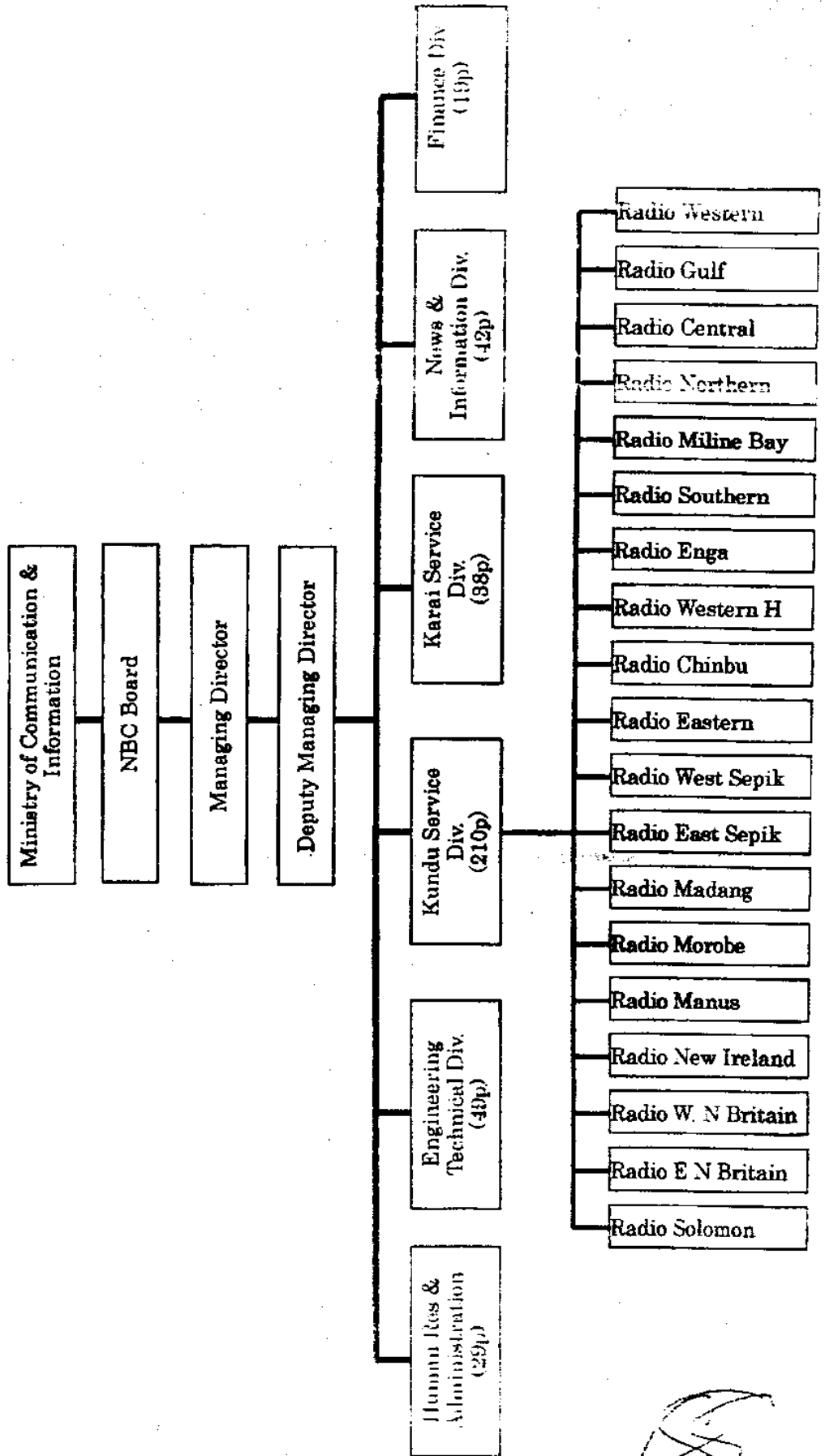
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7. Other Relevant Issues

- 7-1. The Papua New Guinean side shall provide necessary data and information for the study
- 7-2. The Papua New Guinean side shall secure personnel and budget necessary for the Project.
- 7-3. The Papua New Guinean side shall take all possible measures to secure safety of the concerned people during the study and implementation of the Project. Especially in the Mountain areas, the Papua New Guinean side shall make police escort Japanese people concerned the Project all the time at its expense.
- 7-4. The Papua New Guinean side shall secure the necessary budget for operation and maintenance cost of each Kundu Broadcasting Station in cooperation with a relevant Provincial Government.
- 7-5. The Team requested the Papua New Guinean side to consider the on air possibility of commercial programs in the Kundu Broadcasting Service to generate income and support the station's financial situation. The Papua New Guinean side shall prepare its opinion and reply to the Team in writing by 13th November, 2002.
- 7-6. The Team requested that if the new transmitters are procured by the Japan's Grant Aid, the Papua New Guinean side should replace them at its expense when they are depreciated and explained that the Japanese side takes it as one of the prerequisite conditions for the implementation of the Project. The Papua New Guinean side understands its importance and shall answer to the Team in writing by 13th November, 2002.
- 7-7. The Team requested the Papua New Guinean side to air a message to acknowledge Japanese assistance several times per day from stations where the transmitters are provided under this Project on condition that the Japan's Grant Aid is extended to the Project. The Papua New Guinean side shall prepare its opinion and reply to the Team in writing by 13th November, 2002.
- 7-8. The Papua New Guinean side shall secure adequate land for installation of a transmitting Equipment for each target station.
- 7-9. The Papua New Guinean side shall secure appropriate frequency for each target station.
- 7-10. The Papua New Guinean side shall take the following measures for each target station.
- 1) To clear, level and reclaim the lands
 - 2) To construct gates and fences
 - 3) To construct access roads
 - 4) To construct telephone trunk link
 - 5) To supply electricity

NBC Management Structure



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Japan's Grant Aid Scheme

The Grant Aid scheme 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. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

Japan's Grant Aid scheme is executed through the following procedures.

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

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 scheme, 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 (E/N) signed by the Governments of Japan and the recipient country.

Finally, for the smooth 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 (hereinafter referred to as "the Study"), conducted by JICA on a requested project (hereinafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

- Confirmation of the background, objectives, and benefits of the requested project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid scheme from a technical, social and economic point of view.
- Confirmation of items agreed upon by both parties concerning the basic concept of the Project.
- Preparation of a basic design of the Project
- 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.

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2) Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA selects (a) firm(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) 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.

2) "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) consulting 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 natural disaster, 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.

3) 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, contracting 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.)

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4) 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.

5) 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:

- a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.
- b) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
- c) To secure buildings prior to the procurement in case the installation of the equipment.
- d) 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.
- e) 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.

~~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.~~

6) "Proper Use"

The recipient country is required to operate and maintain 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.

7) "Re-export"

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

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8) 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 (A/P) issued by the Government of the recipient country or its designated authority.

9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and Payment commissions to the Bank.

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Major Undertaking to be taken by Each Government

No.	Items	To be covered by Grant Aid	To be covered by Papua New Guinean Side
1	To secure land.		●
2	To clear, level and reclaim the site when needed.		●
3	To construct gates and fences in and around the site.		●
4	To bear the following commissions to the Japanese bank for banking services based upon the B/A.		
	1) Advising commission of A/P		●
	2) Payment commission		●
5	To ensure unloading and customs clearance at port of disembarkation in recipient country.		
	1) Marine transportation of the products from Japan to the port of the recipient country	●	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		●
	3) Internal transportation from port of disembarkation to the project site	●	
6	To accord Japanese nations, whose service 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.		●
7	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imported in the recipient country with respect to the supply of the products and services under the verified contracts.		●
8	To maintain and use properly and effectively the facilities installed and equipment provided under the Grant Aid.		●
9	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the installation of the facilities as well as for the transportation of the equipment.		●

(B/A: Banking Arrangement, A/P: Authorization to Pay)

Basic Design Study (November 15, 2002)

MEMORANDUM
on the Basic Design Study
on the Project for Implementation of Broadcasting Equipment
for National Broadcasting Corporation
in Papua New Guinea

With reference to the Minutes of Discussions confirmed on November 1, 2002 by Mr. Katsutoshi Komori, Leader of Basic Design Study Team, Japan International Cooperation Agency and Dr. Kristoffa Ninkama, Managing Director, National Broadcasting Corporation, the study team continued field survey of eight project sites.

The summary of the field survey is attached hereto for determination of the priority order for recommendation to the Government of Japan.

As the result of the site survey, both parties confirmed that appropriate land for installation of antenna was not available at the three proposed project sites, namely Radio East Sepik, Radio Simbu and Radio Enga. Consequently, both parties agreed that these three radio stations should be excluded from the Project component and the topographical survey and sub-soil investigations should not be carried out at these three sites.

Port Moresby, November 15, 2002



Kristoffa Ninkama
Managing Director
National Broadcasting Corporation



Hiroaki Otsuka
Chief of Consultant
Operation/Management
Basic Design Study Team
JICA



Mosilayola Kwayaila
First Assistant Secretary
Aid Coordination and Management Division
Department of National Planning
& Rural Department

**Summary of Site Survey
for
Basic Design Study
on the Project for Improvement of Broadcasting Equipment
for National Broadcasting Corporation
in Papua New guinea**

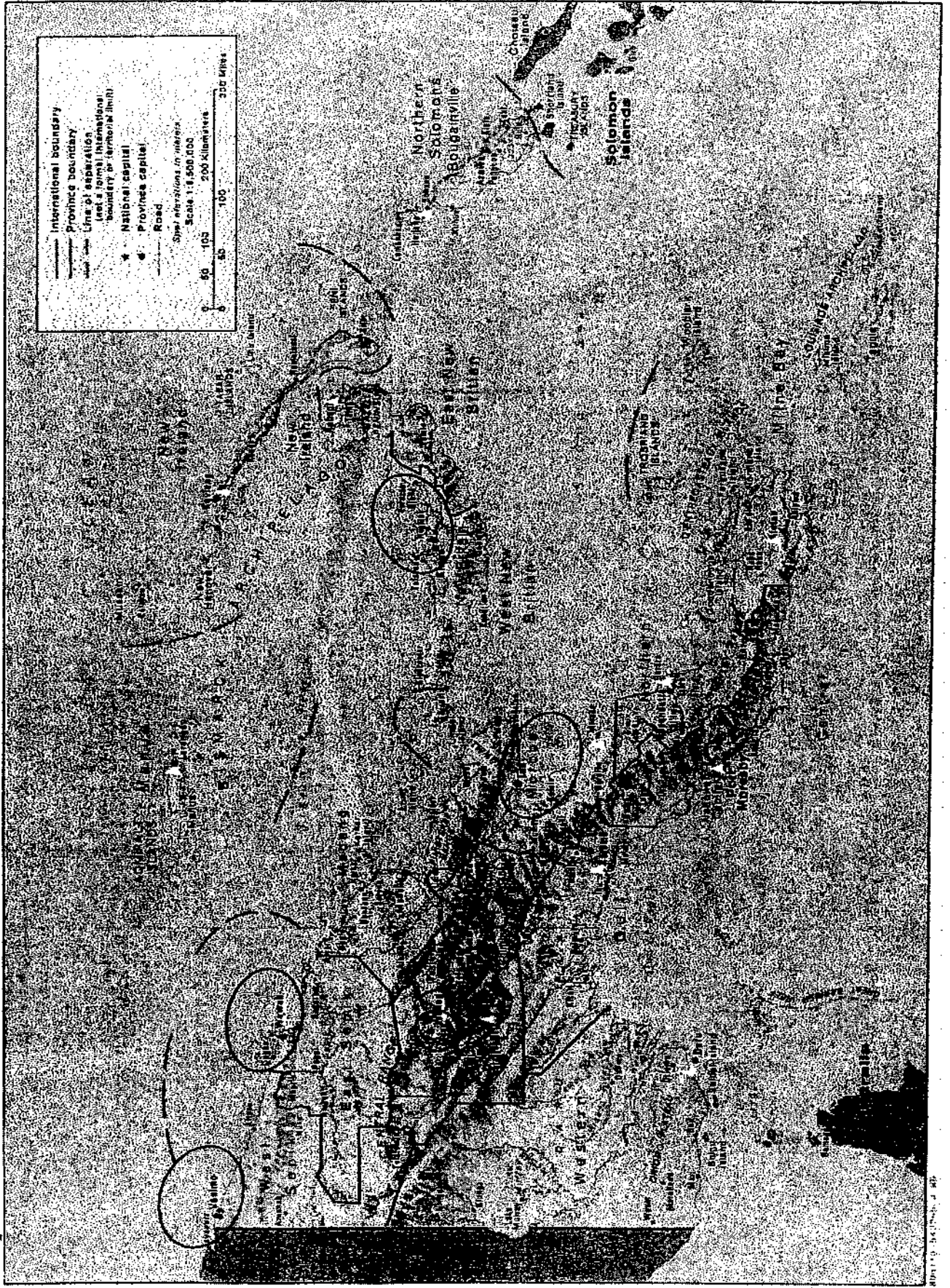
Nov. 2002

JICA Project Survey Team

W²

M. Ho

Papua New Guinea



W.E.

H. Ho

Basic Design Study
on the Project for Improvement of Broadcasting Equipment
For National Broadcasting Corporation in Papua New Guinea

- 1 Objective Station **Wabag, Enga Province**
- 2 Period of Survey **8th Nov, 2001**
- 3 Qualification Survey

(1) Project Site

The proposed site is very narrow and not appropriate for the MW Broadcasting.

The security condition of Wabag is not appropriate for the implementation of a new project due to tribal antagonism.

(2) Sustainability

The financial support of the Provincial Government is uncertain. The meeting with the Governor was cancelled without explanation. The Transmitting station of the Radio Enga is, at present, out of service mainly due to the accumulated electric power bill and partially due to some social disorder.

(3) Beneficial Effect

Total Population: 295,000

The beneficial population of this investment is yet to be studied because the site of the antenna can't be decided.

(4) Status of Station Building

The existing SW transmitter station building is a wooden one that exceeded its durability.

(5) Status of SW TX for Kundu Service

The SW Transmitter's status is usable with the electricity power supply. However, the existing SW Transmitter is judged to be replaced due to the deterioration of the parts such as connectors, circuit breaker, various contactors used for tuning, and Transmission Tube Socket.

(6) Measures to be taken by Papua New Guinean side

On condition that the Government of Japan approves the improvement of the existing SW Transmitting station of the Radio Enga, the Government of Papua New Guinea agreed to take necessary measures as follow.

- 1) Execution of the PNG's side work listed Annex-4 of the Minutes of Discussions on the Basic Design Study on the Project for Improvement of Broadcasting Equipment for National Broadcasting Corporation made November 1, 2002 between Mr. Katsutoshi Komori, Leader of Basic Design Study Team, Japan

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International Cooperation Agency and Kristoffa Ninkama, Managing Director,
National Broadcasting Corporation.

(7) Assigned Frequency

ITU assigned frequency for Kundu Service of Radio Enga is 585kHz.

(8) Power Supply

Surge Protector and Emergency Engine Generator are necessary for the protection from Lightning Surge, Fluctuation of Power Supply and sudden Power Stoppage.

(9) Status of Studio

In order to improve the quality and productivity of programme, it is necessary to improve studio equipment.

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Basic Design Study
on the Project for Improvement of Broadcasting Equipment
for National Broadcasting Corporation in Papua New Guinea

- 1 Objective Station Vanimo, West Sepik Province
- 2 Period of Survey 29th Oct to 30th Oct, 2002
- 3 Qualification Survey

(1)Project Site

The proposed site is located in the approximate distance of 500m in parallel to Vanimo airport. The area of the site is enough to install a new MW antenna for Kundu Service although Karai MW antenna and Kundu SW antenna have been installed.

(2)Sustainability

The financial support of the Provincial Government is enough. The Radio West Sepik has no immediate problem in securing the operation and maintenance expense.

It is judged that Radio West Sepik can maintain the Kundu Service by itself in consideration of the depreciation account if it is able to make commercial programme to support the operation funds.

(3)Beneficial Effect

Total population: 186,000.

The population is concentrated on the seashore in the West Sepik Province. Therefore, given the good propagation condition, the proposed service can cover about 60% (120,000) of total population.

Since the damage of the tidal wave, which has caused many victims, the Kundu Service is evaluated highly as an urgent disaster information transmission means by the local language.

(4)Status of Station Building

The existing SW transmitter station building is a wooden one that exceeded its durability.

It is judged that a Shelter is suitable as a station building.

(5)Status of SW TX for Kundu service

The existing SW Transmitter is judged to be replaced due to the deterioration of the parts such as connectors, circuit breaker, various contactors used for tuning, and Transmission Tube Socket.

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(6) Measures to be taken by Papua New Guinean side

On condition that the Government of Japan approves the improvement of the existing SW Transmitting station of the Radio West Sepik, the Government of Papua New Guinea agreed to take necessary measures as follows.

- 1) An application of the frequency assignment has been submitted to ITU, and NBC must acquire the approval before the end of December, year 2003. (A lower frequency in the medium wave band is preferable)
- 2) For the continuation of Kundu SW together with Kundu MW, the capacity of receiving NEB power shall be increased to 50kVA for the Radio Station.
- 3) The permission for the construction of 80m Guyed Mast shall be obtained from the Civil Aviation Authority by the end of March, year 2003.
- 4) Remove illegal residence from the proposed site by the end of March, 2003.
- 5) Leveling of the proposed site shall be carried out before the construction of the 80m Guyed Mast.
- 6) Secure the operation and maintenance expense incurred by the new equipment.
- 7) Prepare the future replacement plan based on the depreciation account of the new equipment.
- 8) Execution of the PNG's side work listed Annex-4 of the Minutes of Discussions on the Basic Design Study on the Project for Improvement of Broadcasting Equipment for National Broadcasting Corporation made November 1, 2002 between Mr. Katsutoshi Komori, Leader of Basic Design Study Team, Japan International Cooperation Agency and Kristoffa Ninkama, Managing Director, National Broadcasting Corporation.

(7) Assigned Frequency

It is to be confirmed with the authority that ITU assigned frequency for Kundu Service of the Radio West Sepik.

(8) Power Supply

Surge Protector and Emergency Engine Generator are necessary for the protection from Lightning Surge, Fluctuation of Power Supply and sudden Power Stoppage.

(9) Status of Studio

In order to improve the quality and productivity of programme, it is necessary to improve studio equipment.



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Basic Design Study
on the Project for Improvement of Broadcasting Equipment
For National Broadcasting Corporation in Papua New Guinea

- 1 Objective Station Mt. Hagen, West Highland Province
- 2 Period of Survey 9th Nov to 10th Nov, 2001
- 3 Qualification Survey

(1) Project Site

The proposed site is very narrow and not appropriate for the MW Broadcasting.

(2) Sustainability

The financial support of the Provincial Government is appropriate. The Radio West Highland has no immediate problem in securing the operation and maintenance expense.

Though the renewal of the studio equipment is necessary, the Radio West Highland is keen to start the full-scale commercial broadcasting in the future.

Although decaying, the Transmitter for Kundu Service is very well maintained by obtaining the parts from other equipment appropriately.

The official comments made by the District Manager of the Radio West Highland are positive for the continuation of financial support for Kundu Service by the Provincial Government.

(3) Beneficial Effect

Total population: 440,000.

The beneficial population of this investment is about 98%(430,000) of total population, if FM Broadcasting is allow applying in this area instead of MW Broadcasting.

The programmes for Kundu Service are on Education, Enlightenments, Agriculture, Tourism and so on.

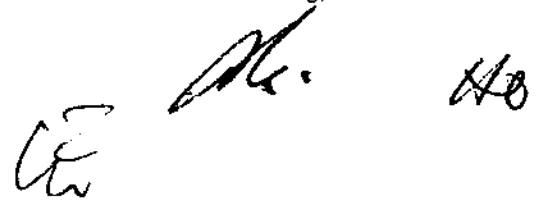
(4) Status of Station Building

The existing SW transmitter station building is a wooden one that exceeded its durability.

If the FM Transmitter is installed to the Radio West Highland, the room of the studio building can be used for the Transmitting room.

(5) Status of SW TX for Kundu Service

The existing SW Transmitter is judged to be replaced due to the deterioration of the parts such as connectors, circuit breaker, various contactors used for tuning, and Transmission Tube Socket.



(6) Measures to be taken by Papua New Guinean side

On condition that the Government of Japan approves the improvement of the existing SW Transmitting station of the Radio West Highland, the Government of Papua New Guinea agreed to take necessary measures as follows.

- 1) Leveling of the proposed project site
- 2) Completion of Gate and Fencing of the proposed project site
- 3) Installation, Test and Commissioning of Main Power Lines to TX Shelter
- 4) Installation, Test and Commissioning of Program Feed Lines to TX Shelter
- 5) Secure the operation and maintenance expense incurred by a new equipment
- 6) Prepare the future replacement plan based on the depreciation account of new equipment.
- 7) Execution of the PNG's side work listed Annex-4 of the Minutes of Discussions on the Basic Design Study on the Project for Improvement of Broadcasting Equipment for National Broadcasting Corporation made November 1, 2002 between Mr. Katsutoshi Komori, Leader of Basic Design Study Team, Japan International Cooperation Agency and Kristoffa Ninkama, Managing Director, National Broadcasting Corporation.

(7) Assigned Frequency

ITU assigned frequency for Kundu Service of Radio West Highland is 603kHz. However, an application shall be submitted to the authority for FM Broadcasting.

(8) Power Supply

Surge Protector and Emergency Engine Generator are necessary for the protection from Lightning Surge, Fluctuation of Power Supply and sudden Power Stoppage.

(9) Status of Studio

In order to improve the quality and productivity of programme, it is necessary to improve studio equipment.

Basic Design Study
on the Project for Improvement of Broadcasting Equipment
For National Broadcasting Corporation in Papua New Guinea

- 1 Objective Station **Kundiawa, Simbu Province**
- 2 Period of Survey **6th Nov to 7th Nov, 2001**
- 3 Qualification Survey

(1) Project Site

The proposed site is very narrow and not appropriate for the MW Broadcasting.

The CIS site proposed by NBC for MW is not appropriate because the broadcasting can't extend to the Kundiawa Town.

The Telecom's site for FM is also not appropriate because of soft ground and too narrow to construct a self-supporting tower.

(2) Sustainability

The financial support of the provincial government is inappropriate. However, the Governor promises the increment of operation funds of the station. Present status of the Kundu Service is off air due to the accumulated electric power bill.

(3) Beneficial Effect

Total population: 260,000.

The beneficial population of this investment is yet to be studied because the site of the new Transmitting Station is uncertain.

The programmes for Kundu Service are on Education, Enlightenments, Agriculture, Tourism and so on.

(4) Status of Station Building

The existing SW transmitter station building is a wooden one that exceeded its durability.

(5) Status of SW TX for Kundu Service

The existing SW Transmitter is judged to be replaced due to the deterioration of the parts such as connectors, circuit breaker, various contactors used for tuning, and Transmission Tube Socket.

(6) Measures to be taken by Papua New Guinean side

On condition that the Government of Japan approves the improvement of the existing SW Transmitting station of the Radio Simbu, the Government of Papua New Guinea agreed to take necessary measures as follows.

- 1) Execution of the PNG's side work listed Annex-4 of the Minutes of Discussions on the Basic Design Study on the Project for Improvement of Broadcasting

Equipment for National Broadcasting Corporation made November 1, 2002 between Mr. Katsutoshi Komori, Leader of Basic Design Study Team, Japan International Cooperation Agency and Kristoffa Ninkama, Managing Director, National Broadcasting Corporation.

(7) Assigned Frequency

ITU assigned frequency for Kundu Service of Radio Simbu is 1278kHz.

(8) Power Supply

Surge Protector and Emergency Engine Generator is necessary for the protection from Lightening Surge, Fluctuation of Power Supply and sudden Power Stoppage.

(9) Status of Studio

In order to improve the quality and productivity of programme, it is necessary to improve studio equipment.



Basic Design Study
on the Project for Improvement of Broadcasting Equipment
for National Broadcasting Corporation in Papua New Guinea

- 1 Objective Station **Lae, Morobe Province**
- 2 Period of Survey **1st Nov to 2nd Nov, 2002**
- 3 Qualification Survey

(1) Project Site

The Transmitting Station of the Radio Morobe is located in a swamp land located Northeast 11km from the Lae city. The proposed land is large enough to construct a new MW antenna. A distance to proposed site from the airport is about 13km down to Southwest.

(2) Sustainability

The financial support of the Provincial Government is enough. The Radio Morobe has no immediate problem in securing the operation and maintenance expense. It is judged that the Radio Morobe can maintain the Kundu Service by itself in consideration of the depreciation account.

(3) Beneficial Effect

Total population: 540,000.

The population is concentrated on the seashore and Markham/Busu River in the Morobe Provincial. The topographic feature of the province maintains the good propagation condition of MW. The proposed service can be made for about 60%(324,000) of total population.

(4) Status of Station Building

The existing SW transmitter station building is a wooden one that exceeded its durability.

It is judged that a TX Shelter is suitable as a station building.

(5) Status of SW TX for Kundu Service

The existing SW Transmitter is judged to be replaced due to the deterioration of the parts such as connectors, circuit breaker, various contactors used for tuning, and Transmission Tube Socket.

(6) Measures to be taken by Papua New Guinean side

On condition that the Government of Japan approves the improvement of the existing SW Transmitting station of the Radio Morobe, the Government of Papua New Guinea agreed to take necessary measures as follows.

- 1) For the continuation of Kundu SW together with Kundu MW, the capacity



of receiving NEB power shall be increased to 50kVA for the Radio Station.

- 2) The permission for the construction of 80m Guyed Mast shall be obtained from the Civil Aviation Authority by the end of March, year 2003.
- 3) Remove illegal residence from the proposed site by the end of March 2003.
- 4) Leveling of the proposed site shall be carried out before the construction of the 80m Guyed Mast.
- 5) Secure the operation and maintenance expense incurred by the new equipment.
- 6) Prepare the future replacement plan based on the depreciation account of the new equipment.
- 7) Execution of the PNG's side work listed Annex-4 of the Minutes of Discussions on the Basic Design Study on the Project for Improvement of Broadcasting Equipment for National Broadcasting Corporation made November 1, 2002 between Mr. Katsutoshi Komori, Leader of Basic Design Study Team, Japan International Cooperation Agency and Kristoffa Ninkama, Managing Director, National Broadcasting Corporation.

(7) Assigned Frequency

ITU assigned frequency for Kundu Service of Radio Morobe is 1215kHz.

(8) Power Supply

Surge Protector and Emergency Engine Generator are necessary for the protection from Lightening Surge, Fluctuation of Power Supply and sudden Power Stoppage.

(9) Status of Studio

Although Morobe Provincial Government since 1996 up to 2002 had provided a total of 2.6 million kina as financial grant to Radio Morobe, it is necessary to improve production capability of commercial programme.



Basic Design Study
on the Project for Improvement of Broadcasting Equipment
For National Broadcasting Corporation in Papua New Guinea

- 1 Objective Station Goroka, East Highland Province
- 2 Period of Survey 4th Nov to 5th Nov, 2001
- 3 Qualification Survey

(1) Project Site

The Project site is narrow and Karai service MW antenna has been constructed at the center of the proposed site. Therefore, there is no space to build a new antenna.

There is a consideration to build a common antenna for Karai and Kundu service using existing antenna site. But it is necessary to dismantle the existing Karai MW antenna and, consequently, to shut down the Karai Service for one year.

(2) Sustainability

The financial support of the Provincial Government is very limited at this moment. However, at the meeting with the Governor of East Highland Province, it is confirmed that the Provincial Government should supplement its financial support for the operation of Radio East Highland.

Though the renewal of the studio equipment is necessary, the Radio East Highland is very keen to start the commercial broadcasting in order to obtain the financial assistance to secure the operation of the Kundu Service.

(3) Beneficial Effect

Total Population: 433,000.

If FM band is used for Radio East Highland, 30%(147,000) of the total population can be covered from the newly proposed site by means of ERP 1kW at the height of 30m above ground.

The programmes for Kundu Service are on Education, Enlightenments, Agriculture, Tourism and so on.

(4) Status of Station Building

The existing SW transmitter station building is a wooden one that exceeded its durability.

A TX Shelter is recommendable for the installation of FM transmitter in the newly proposed site.

(5) Status of SW TX for Kundu Service

The existing SW Transmitter is judged to be replaced due to the deterioration of the

parts such as connectors, circuit breaker, various contactors used for tuning, and Transmission Tube Socket.

(6) Measures to be taken by Papua New Guinean side

On condition that the Government of Japan approves the improvement of the existing SW Transmitting station of the Radio East Highland, the Government of Papua New Guinea agreed to take necessary measures as follows.

- 1) Leveling of the proposed project site.
- 2) Completion of Gate and Fencing of the proposed project site.
- 3) Installation, Test and Commissioning of Main Power Lines to TX Shelter.
- 4) Installation, Test and Commissioning of Program Feed Lines to TX Shelter.
- 5) Removal illegal residence from the proposed site.
- 6) Secure the operation and maintenance expense incurred by new equipment.
- 7) Prepare the future replacement plan based on the depreciation account of new equipment.
- 8) Execution of the PNG's side work listed Annex-4 of the Minutes of Discussions on the Basic Design Study on the Project for Improvement of Broadcasting Equipment for National Broadcasting Corporation made November 1, 2002 between Mr. Katsutoshi Komori, Leader of Basic Design Study Team, Japan International Cooperation Agency and Kristoffa Ninkama, Managing Director, National Broadcasting Corporation.

(7) Assigned Frequency

ITU assigned frequency for Kundu Service of Radio East Highland is 585kHz.

However, if the FM Transmitter is installed to the Radio West Highland, an application shall be submitted to the authority for FM Broadcasting.

(8) Power Supply

Surge Protector and Emergency Engine Generator is necessary for the protection from Lightning Surge, Fluctuation of Power Supply and sudden Power Stoppage.

(9) Status of Studio

In order to improve the quality and productivity of programme, it is necessary to improve studio equipment.

