

## **Chapter 1**

### **Background of the Project**

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In Independent State of Papua New Guinea (PNG), the national diet that was established in 1964 paved the way for independence, which was eventually attained in 1975 when the country was granted diplomatic and self-defense rights from Australia and became a member of the British Commonwealth of Nations.

Japan established a consulate in Port Moresby in January 1975, started diplomatic relations to coincide with the establishment of national independence in September, and subsequently established an embassy in December the same year.

At the time, the main industry of Papua New Guinea was copper mining, which accounted for 20% of national tax revenue. In 1988, a compensation dispute arising from river and ocean pollution caused by copper ore mining deteriorated into the Bougainville independence issue and public riots, and the copper ore quarries were shut down as a result.

**Table 1-1 Mining industry and Population density of each province**

Name of Province	Name of the mine	Population density (person/km <sup>2</sup> )	Population (person)
Sandaun (West Sepik)	Ferida	5	185,741
East Sepik	Pogera	8	343,181
Madang	Ramu	13	365,106
Western	OK Ted	2	153,304
Eastern Highland	Kainantu	38	432,972
Morobe	Wafi Ede	16	539,404
Central (NCD)	Torukuma, Laloki	6	183,983
Milne Bay	Waporu, Woodlark, Misima	15	210,412
New Ireland	Simberi, Lihir	4.8	118,350
Noth Solomon	Panguna	15	175,160
East New Britain	Wild Dog	14	220,133
Gulf		3	106,898
Southern Highland		23	546,265
Enga		23	295,031
Western Highland		52	440,025

Name of Province	Name of the mine	Population density (person/km <sup>2</sup> )	Population (person)
Simbu		42	259,703
Manus		21	43,387
West New Britain		9	184,508
Northern (Oro)		6	133,065

The central government blockaded Bougainville Island in order to bring the situation under control, but this had disastrous consequences for the economy of Papua New Guinea.

**Table 1-2 Major Issues in PNG**

	1960	1965	1970	1975	1980	1985	1990	1995	2000
	▲ 64 : Establishment of the national diet			▲ 75 : Independence (British Commonwealth)		▲ 88 : Appearance of copper mine pollution and recurrence of the independence issue			
				▲ 75 : Establishment of the Japanese Embassy		▲ 88 : Closure of copper ore quarries			
						▲ 88 : Economic blockade of Bougainville			
Good results from the copper and timber industries (20% of tax revenue sustained from copper mining)						Devastation of the economy of Papua New Guinea			
						▲ 90 : Peace negotiations			
						Deterioration of civil order against a background of economic unrest			

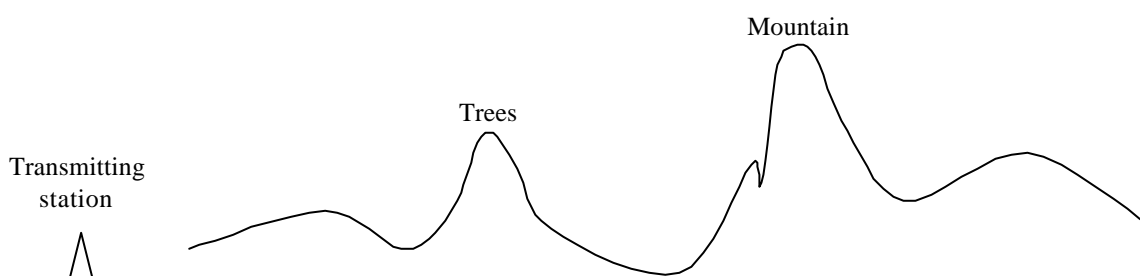
Around this time, groups of unemployed youths known as 'rascals' instigated a series of robberies, rapes and assaults, etc. mainly in the mountain areas. In this situation, the central government, raising economic reconstruction and improvement of the civil peace as top priority goals, in 1990 held peace negotiations with the Governor of North Solomons, relieved the blockade of Bougainville, and commenced medical and other public services in the area.

### 1-1-1 Issues and Countermeasures During Implementation of the Radio Broadcasting Station Improvement Projects in 1986/87

The Radio Station Improvement Project was implemented in 1986/87. This project, which aimed at installing equipment for providing Kundu broadcasting to aid local education and enlightenment in line with national policy, resulted in the supply of HF transmitters for 17 broadcasting stations under Japan's Grant Aid.

When Papua New Guinea requested the Japan's Grant Aid for the construction of Kundu broadcasting, it was necessary to resolve problems concerning expropriation of the project sites. Much of the land area (95%) of Papua New Guinea is occupied by customary land tenure with joint holding by tribe. Moreover, there are hardly any hereditary leaders in Papua New Guinea apart from a few exceptions, and persons with the greatest wealth and resources at the time usually become land leaders. Therefore, it is difficult to identify landowners, and this is a major obstacle to the acquisition of land and revisions to land uses implemented according to development policies.

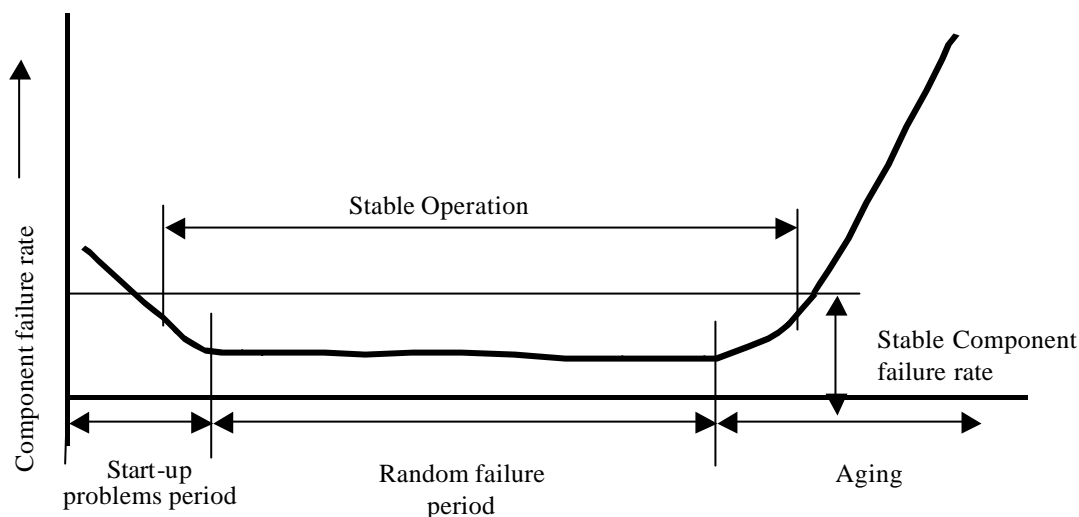
Concerning broadcasting stations, there was no other alternative but to construct Kundu broadcasting stations on project sites held by the central government, and when it came to building relay stations to serve remote mountain regions that was out of service area by MF and FM broadcasting, was necessary to resolve complicated disputes over vested rights. Here, NBC decided to adopt HF utilizing ionospheric layer reflection in order to cover all remote mountain areas.



FM	Good transmission	Mountain shadow	Increased shadow loss means that economic services are impossible	
MF	Good transmission		Problems of distance	Less ground conductivity
HF	Service area is determined by the launching angle of radio waves, however, in the case of HF broadcasting, this is around 400 km at 10 kW output			

## 1-2 Contents of the Project

Construction of Kundu broadcasting (HF) under Japan's Grant Aid stimulated education and enlightenment of the local inhabitants, however, 13 years have now passed since construction and deterioration of the broadcasting equipment over its economical lifespan causes increasing numbers of failures and maintenance expenses.



Meanwhile, based on the fiscal reform in Papua New Guinea in 1996, many public enterprises were incorporated, and operation and maintenance of Kundu broadcasting was transferred to the provincial governments. As a result, the wealthier provinces are widely utilizing Kundu broadcasting, but, the less wealthy provinces are not able to maintain its broadcasting such as replacing failed parts and are faced with difficult operation and maintenance condition.

With the advent of 21st Century, the tribal society of Papua New Guinea is facing major changes. As more and more young people concentrate in the cities, and cars, telephones, color photographs, CDs, FM and TVs, etc. flood into the tribal communities, all aspects of society are undergoing major shift from the quantitative to the qualitative. In particular, FM broadcasting is becoming increasingly popular among the younger generation for its stable and high sound quality. Otherwise, Kundu broadcasting cannot compete in term of sound quality due to its utilization of ionospheric layer reflection and determination of equipment, and it is thus faced with declining audience rates and increasingly ineffective education and enlightenment of local citizens.

Viewing with concern the decline in education and enlightenment activities for local inhabitants due to the falling audience rating for Kundu broadcasting, the Government of PNG issued a request to

the Government of Japan for the provision of Grant Aid to supply Kundu broadcasting equipment.

The request basically sought provision of the following equipment in order to replace HF broadcasting, which were suffering from deterioration and competition with private sector broadcaster, with MF broadcasting in eight provinces (Chimbu, West Highlands, Morobe, West New Britain, West Sepik, Enga, East Highlands and East Sepik) considered to be high priority areas because of high population concentration and so on.

No.	Requested Equipment	Quantity
1	10 kW MF transmitter	8
2	Transmitting antenna	8
3	Power supply	8
4	Transmitter shelter	8
5	Other related equipment	8

### 1-3 Study on the Project

Kundu broadcasting equipment was supplied to the said 17 broadcasting stations in 1988/89 under Japan's Grant Aid, however, since it past 13 years, equipment has become deteriorated, spare parts are difficult to secure and it has become difficult to continue broadcasting because of shrinking service areas and frequent interruption of on air.

Another major problem is funding issue of the NBC regional broadcasting stations in each province (19 provinces). The management scheme of NBC was changed following revision of the law in 1996. Funds for investment and personnel expenses are secured under the budget for NBC headquarters, however, operation and maintenance costs at provincial stations depend on funding by each provincial government. Under these conditions, operating conditions at provincial broadcasting stations can be divided into the following three main types:

Stations operated with strong support from the provincial government,

Stations sustaining operations by saving operating costs while maintaining cooperative relations with the provincial government, and

Stations which are unable to cover electric, water and telephone expenses and have suspended broadcasting in provinces where provincial government finances are very tight.

Concerning the eight stations contained in the original request, three stations (Lae, Mt. Hagen, Vanimo) fulfilled under type , two stations (Kimbe, Goroka) fell under type , and other three stations (Kundiawa, Wabag, Wewak) fell under type . This shows that, depending on budget conditions, operation and maintenance costs cannot be covered and station operation is difficult at some stations.

NBC continues to campaign the central government for the restoration of budgets for provincial stations to the control of NBC headquarters.

The Government of PNG has formulated and is now implementing the Medium Term Development Strategy 1997-2002, in which major issues are the enhancement of basic public health and sanitation, improvement of primary education, restoration of infrastructure, support of private sectors and raising of awareness regarding adherence to the law.

As a means of widely spreading these measures and achieving the above objectives, the Government of PNG intends to utilize radio broadcasting, and it aims to explain government measures, promote primary education and carry out enlightenment activities in remote areas by conducting Kundu broadcasting in local dialects and Pigeon English understood by local inhabitants.

NBC itself has formulated a long-term broadcasting plan for 2003-2007, however, the contents are limited to an outline description and do not refer to any plans for renewal of transmission equipment for Kundu broadcasting.