

Papua New Guinea

“Agriculture Development Project”

Project Summary

Borrower:	Government of Papua New Guinea
Executing Agency:	Rural Development Bank of Papua New Guinea (then, Agriculture Bank of Papua New Guinea)
Exchange of Notes:	August 1988
Date of Loan Agreement:	November 1988
Loan Disbursed Period:	April 1999
Loan Amount:	¥2,682 million
Loan Disbursed Amount:	¥2,213 million
Procurement Conditions:	General Untied
Loan Conditions:	Interest Rate: 2.7% Repayment Period: 30 years (10 years for grace period)

<Reference>

1. Currency: Kina

2. Exchange Rate: (IFS annual average market rate)

Year	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
Rate	US\$/Kina	1.1538	1.1685	1.0467	1.0504	1.0367	1.0221	0.9950	0.7835	0.7588	0.6975	0.4859
	¥/US\$	128.2	137.0	144.8	134.7	126.7	111.2	102.2	94.1	108.8	121.0	130.9
	¥/Kina	147.9	160.1	151.6	141.5	131.3	113.7	101.7	73.7	82.6	84.4	63.6
CPI (1995:100)	63.3	66.2	70.8	75.7	79	82.9	85.3	100	111.6	116	-	

3. Fiscal Year: January 1 ~ December 31

4. Abbreviations

PNG: Papua New Guinea

ABPNG: Agriculture Bank of Papua New Guinea

RDB: Rural Development Bank

MIS: Management Information System

TSL: Two Step Loan

SAPI: Special Assistance for Project Implementation

5. Terminology

Two-step loan: Common name of financial intermediary loan. Financial intermediary loans are international loans to development financing institutions in the borrowing country designed to provide financial aid to small- and medium-scale companies, farms, and cooperative societies. Loan funds are lent to the development financing institution, which then provides sub-loans to end-users.

End-users: Final consumers of funds

Sub-project: Project covered by the loan

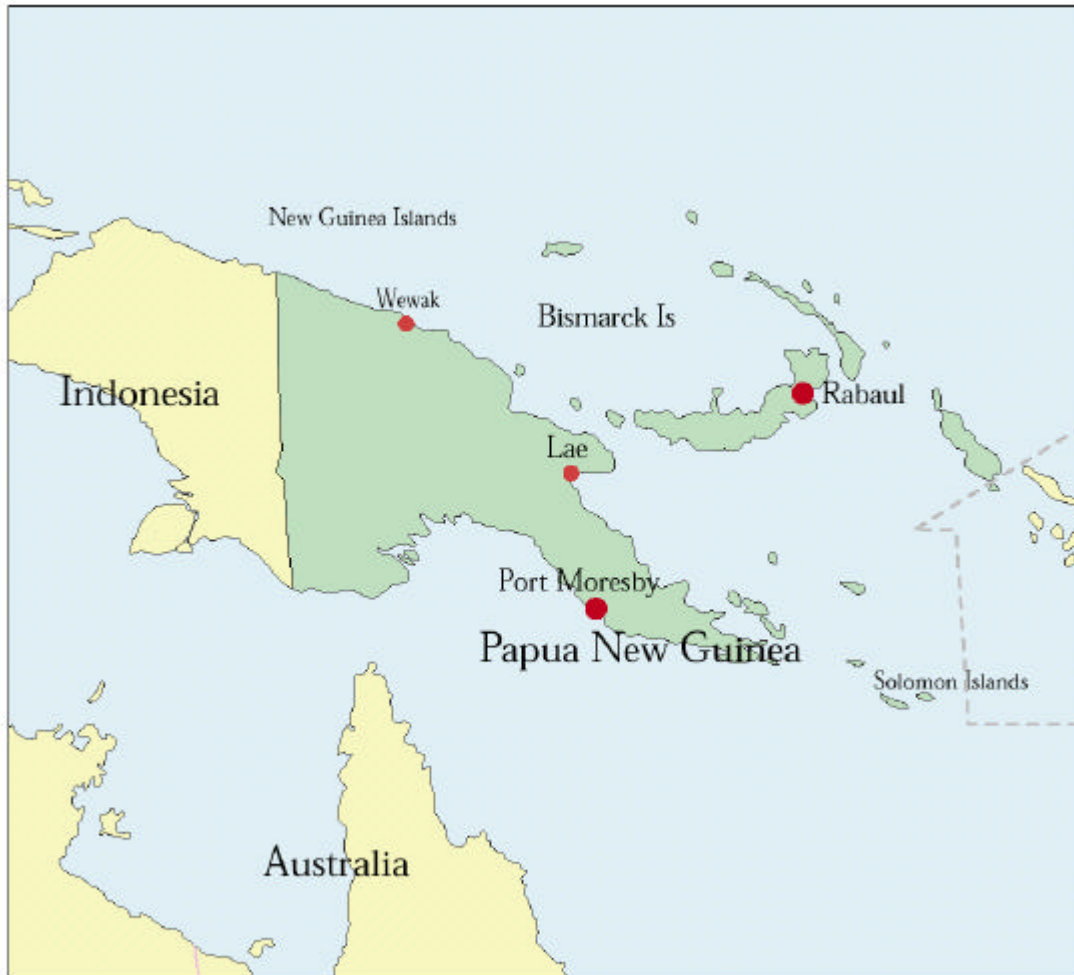
Sub-loan: Loan to end-users

Special account method: A loan disbursement method whereby the borrower withdraws loan funds according to the progress status of the project, based on a special calculation method developed for ODA loans.

1. Evaluation on Project Plan

1.1 Background and Need for the Project

1.1.1 Project Location



1.1.2 Objectives

The objectives of this project are to maintain the coffee and cocoa production standards and raise the quality of these products, as well as to contribute to the improvement of the international balance of payments by increasing agricultural income through the diversification of other agricultural products by providing sub-loans to small-scale farmers through the Agriculture Bank of Papua New Guinea (later, the Rural Development Bank, hereunder, RDB). This project also aims to strengthen the organizational capabilities of the Rural Development Bank of Papua New Guinea (later, RDB), and ultimately promote economic growth through the creation of a sound financial system.

1.1.3 Status of Agriculture in PNG

(1) The agricultural sector in PNG accounted for 30% of the gross domestic product (Table 1), and employed approximately 80% of the country's working population, thus representing the main sector of the PNG economy at the time of appraisal of this project. The weight of the mining sector was increasing, coffee and cocoa continued to be the principal cash crops, with the agricultural sector accounting for approximately 30% of the total export revenue of PNG, making it extremely important as source of foreign currencies.

Table 1 Transition in the GDP by Sector

	Unit: 1 million Kina							
	1988	Composite ratio	1993	1994	1995	1996	1997	Composite ratio
Agriculture, forestry and fishery industries	924	29.1%	1,335	1,532	1,693	1,832	1,874	28.2%
Mining industry	610	19.2%	1,381	1,366	1,927	1,791	1,318	19.8%
Manufacturing industry	294	9.3%	411	454	497	603	609	9.2%
Electricity, gas, water supply	46	1.5%	66	73	80	90	89	1.3%
Construction	133	4.2%	190	237	196	384	367	5.5%
Wholesale and retail industries	308	9.7%	417	477	521	607	648	9.7%
Transport, communications	152	4.8%	261	285	318	350	359	5.4%
Finance	172	5.4%	46	51	57	70	77	1.2%
Public services	485	15.3%	711	807	859	879	941	14.1%
Others	47	1.5%	198	249	294	342	369	5.5%
Total	3,170	100.0%	5,016	5,531	6,442	6,948	6,651	100.0%

Source: ADB, Key Indicators of Developing Countries

Table 2 Percentage of Labor Workers by Sector

	1960	1990
Agriculture, forestry and fishery industries	90%	79%
Service industry	6%	14%
Other industries	4%	7%
Total	100%	100%

Source: UN Development Programme, Human Development Report 1997

(2) The agriculture of PNG, especially the production of coffee and cocoa, are characterized by a large percentage of small-scale farmers and a weak production base. The undeveloped situation with regard to investments for product type innovations, replanting and land improvement, stood out, and declining productivity and quality were in the process of becoming increasingly severe problems. Moreover, although the consumption of cereals such as rice and vegetables was steadily increasing, PNG relied almost entirely on imports for these food categories (approximately 20% of total imports in terms of monetary value). Thus, expanding the domestic production of these products was becoming increasingly needed.

(3) At the time, it was vital for PNG to raise its international competitiveness and secure a given level of exports by maintaining and strengthening the production base for traditional cash crops such as coffee and cocoa and raising production quality. At the same time, PNG set as a medium- to long-term goal for agricultural development the promotion of agricultural product diversification in order to reduce its excessive dependence on specific agricultural products. Concretely, it aimed to promote oil palms (cardamon) and other new cash crops, as well as the domestic production of rice, vegetables, and livestock to reduce imports.

1.1.4 Status of PNG's Agricultural Credit

The agricultural loans and investments in PNG were limited to large-scale plantations through city banks and the only financial institution that small farmers had access to was the Agriculture Bank of Papua New Guinea (ABPNG). The lending share of the ABPNG at the time was 45%. Particularly for small-scale farmers widely distributed across rural agricultural villages, the ABPNG, which, in addition to medium- and long-term investment funds, also provided guidance ranging from how to draft investment plans to farming advice, was extremely important as a public institution in close contact with farming. From this viewpoint, the PNG government directed approximately 1/3 of its government spending to agriculture via the ABPNG, and institutional banking was positioned as a major pillar of agricultural policy.

1.1.5 Need for the Project

Institutional banking resources via the ABPNG came primarily from overseas borrowing. The World Bank and the ADB each provided loans three times in the past, but in the ensuing two years, the ABPNG did not draft a concrete funding plan for financing funds based on projected demand for funds. The request for this project arose from the viewpoint of continuing and expanding institutional banking and diversifying funding sources, and the necessity of providing ODA loans for strengthening the agricultural production base in particular was recognized for this project.

1.1.6 History

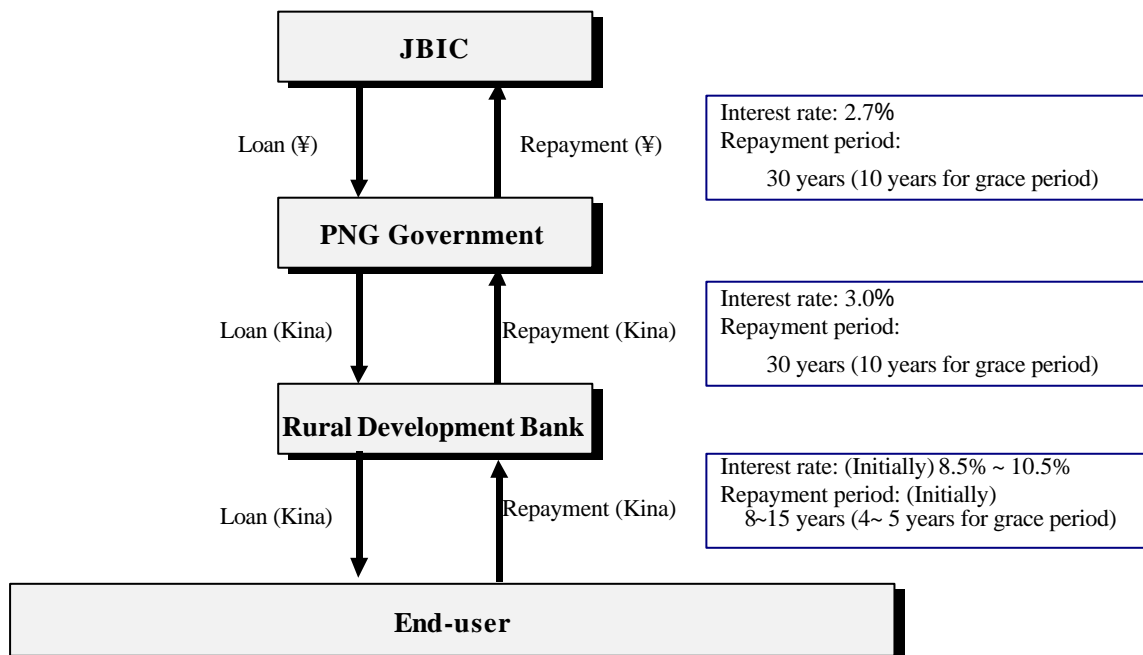
1987	June	Request for 1st Consultative Group (supporting countries' meeting) in Tokyo from government of Papua New Guinea (PNG)
1987	September	Request for ODA loan in relation to agricultural promotion and development by PNG government
1988	February	Dispatch of JBIC Appraisal Mission (26 February – 15 March)
1988	May	Expression of intent to provide loans amounting to a total of ¥11.136 billion, including this project, to the PNG government by Japanese government consultative group (supporting countries' meeting)**2
1988	August	Exchange of Notes
1988	November	Loan Agreement signing

1.2 Project Summary

1.2.1 Project Scheme

12.1.1 Summary of Project Scheme

Figure 1 Project Scheme



Loan Disbursement Period: Plan: 20 April, 1989 ~ 20 April, 1995
 Actual: 20 April, 1989 ~ 20 April, 1999

Loan Disbursement Method: Special Account Method

This project consists of a so-called two-step loan, with the funds lent by the JBIC channeled to the RDB, which is the executing agency for this project, via the PNG administration, and thereafter, sub-lent to end-users.

Loans between the JBIC and the government of PNG are yen-denominated, and loans between the PNG government and ABPNG (later, RDB) are kina-denominated. Therefore, there is no exchange risk between the ABPNG (later, RDB) and end-users under this scheme.

1.2.1.2 Summary of Executing Agency

1.2.1.2.1 Summary

The Agriculture Bank of Papua New Guinea (ABPNG), a national bank entirely owned by the government of Papua New Guinea, was initially established as the Papua New Guinea Development Bank in 1965. In 1985, the percentage of lending directed to the agricultural sector to support agricultural development finance of the government of PNG was increased, and the name of the bank was changed to the Agriculture Bank of Papua New Guinea. The bank's debit balance in fiscal 1988 was 87 million Kina (Table 4), with 65% of the executed loan value directed at the agricultural sector. At the time (1988), the interest rate on arrears was 12%. As of the end of December 1987, the bank had 387 employees, (176 at the head office, and 211 at branch offices), 10 branches, and 21 local offices. Thereafter, in 1994, the bank's business area was defined as rural agricultural village sector, and the bank name was changed to the Rural Development Bank of Papua New Guinea (RDB). In 1998, based on the Companies Act, the status of the bank was changed to that of a public corporation (official name: Rural Development Bank Pty Ltd).

1.2.1.2.2 Composition of Finances

Table 3 Financial Statements

Profit and Loss, and Surplus Statement		(Unit: 1,000 Kina)				
	<i>30/12/1986</i>	<i>31/12/1993</i>	<i>31/12/1994</i>	<i>31/12/1995</i>	<i>31/12/1996</i>	<i>31/12/1997</i>
	(Reference data at the time of appraisal)					
Interest received and commissions	7,426	7,996	8,260	11,063	12,964	12,232
Operating expenditure	6,966	10,114	9,894	10,288	9,119	10,303
Operating profit before providing loan losses	460	(2,118)	(1,634)	775	3,845	1,929
Provision for loan losses	485	1,630	4,957	4,015	5,806	5,638
Operating profit	(25)	(3,748)	(6,591)	(3,240)	(1,961)	(3,709)
Subsidies	887	1,196	1,297	1,588	1,139	2,241
Others	(580)	(580)	34	(2,101)	(343)	539
Profit for the term	282	(3,132)	(5,260)	(3,753)	(1,165)	(929)
Subsidies etc.	0	2,465	(255)	(1,599)	29,206	818
Increase and decrease of surplus funds	282	(667)	(5,515)	(5,352)	28,041	(111)

(Source: Annual Report)

Balance Sheet

(Unit: 1,000 Kina)

	30/12/1986	31/12/1993	31/12/1994	31/12/1995	31/12/1996	31/12/1997
(Reference data at the time of appraisal)						
Assets						
Liquid assets	566	21,942	17,409	20,477	34,016	39,128
Fixed assets	13,816	14,713	12,319	11,587	11,846	11,808
Loan	54,498	41,811	45,559	45,868	46,860	46,690
Total Assets	68,880	78,466	75,287	77,932	92,722	97,626
Liabilities, Equity and Reserves						
Current liabilities	7,055	9,346	11,530	16,388	5,976	6,990
Long-term loans payable	32,136	72,920	73,070	76,207	29,011	33,011
Capital	29,957	32,613	32,615	32,617	76,974	76,975
Surplus funds	(268)	(36,413)	(41,928)	(47,280)	(19,239)	(19,350)
Total Liabilities, Equity and Reserves	68,880	78,466	75,287	77,932	92,722	97,626

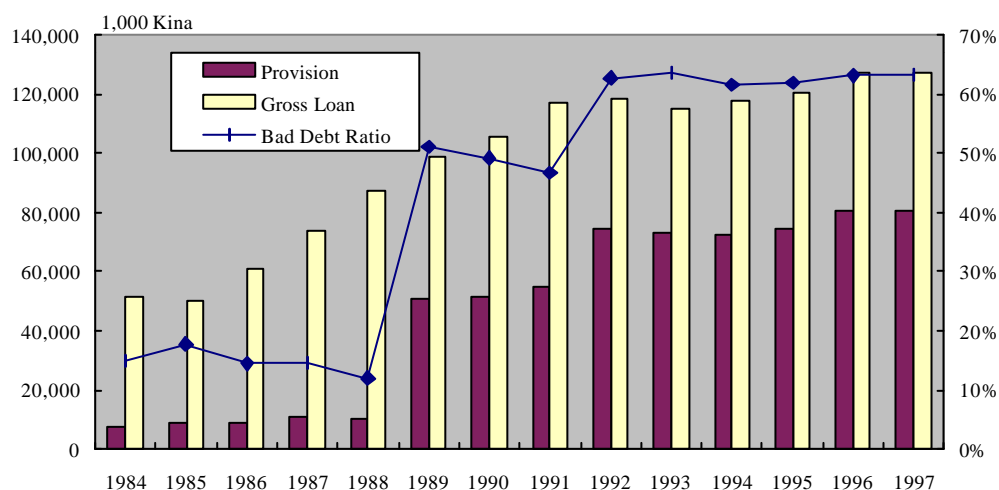
(Source: Annual Report)

Figure 2 Transition in the Credit Balance and Reserve Ratio

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
I Approved amount	28,074	25,983	16,579	16,154	13,412	12,953	19,309	9,605	15,088	16,576
II Loan amount	22,526	20,907	13,286	10,510	9,042	9,792	13,138	11,195	12,340	13,435
III Collection amount	17,761	17,580	16,661	13,100	12,727	13,547	14,640	15,609	14,238	19,747
IV Debit balance	87,345	99,030	105,268	117,208	118,691	114,752	117,876	120,525	127,068	127,043
Provided balance	10,500	50,650	51,760	54,685	74,411	72,941	72,317	74,657	80,208	80,353
Balance	76,845	48,380	53,508	62,523	44,280	41,811	45,559	45,868	46,860	46,690

(Source: Annual Report, Unit: 1,000 Kina)

Figure 2 Transition in the Credit Balance and Reserve Ratio



According to the ABPNG's fiscal 1986 annual report, the bank's net profit was 0.3 million kina, total assets 69 million kina, and net assets approximately 30 million kina for that year. Since the bank's lending amount was increasing at the time, it was nearing the profit and loss break point after deduction of operating expenses.

Thereafter in fiscal 1989, the ABPNG reserved funds for approximately 43 million kina in unrecoverable accounts receivables. As a result, current income became a net loss of 42 million kina, net assets fell to 15 million kina, and the financial condition of the bank took a rapid turn for the worse. Thereafter, from 1992, the ABPNG became insolvent.

In 1996, recapitalization by government of PNG got the bank out of insolvency, but thereafter the RDB was unable to stay profitable, it maintained a continuous deficit, and despite injections of large amounts of government aid, its loss carried forward as of 1997 was 19 million kina.

After the recapitalization of the bank in 1996, a recommendation to extend an additional loan to the bank from the government of PNG was put forth through Special Assistance for Project Implementation (SAPI), in order to improve the financial condition of the bank.

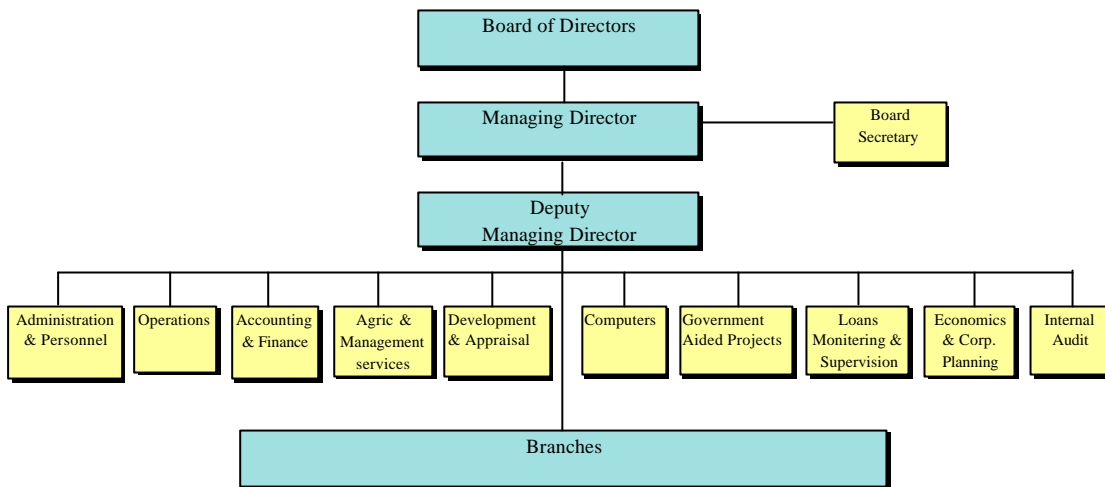
1.2.1.2.3 Implementation Capabilities

The ABPNG (later, the RDB) has had the experience of implementing projects involving loans from the World Bank and the ADB three times for each institution in the past, and simultaneously receiving technical guidance. Moreover, it has been promoting the creation of manuals covering implementation procedures in link with systematic education and training, so that no particular problems are believed to exist with its implementation capability.

1.2.1.2.4 Operations and Maintenance Scheme

Monitoring and agricultural business guidance for this project were implemented through ABPNG (later, RDB) branches at 32 locations throughout the country, and the field offices distributed at branches, etc., were in charge of providing guidance and advice to farmers regarding loans and agriculture in general. A system whereby small-scale farmers are visited once every two months was put in place. The vehicles procured through this project are used for transportation during these visits.

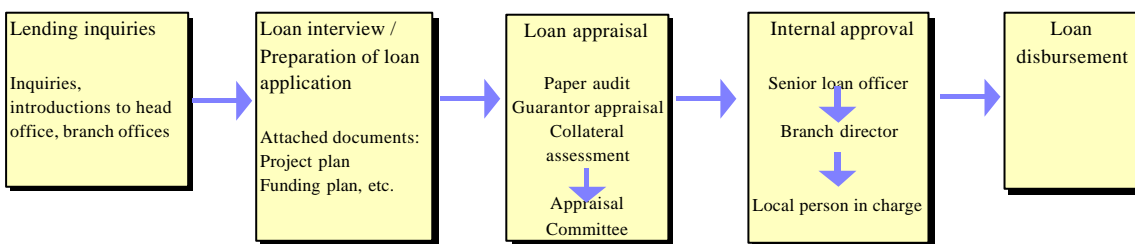
Figure 3 Organization Chart



The organization of the ABPNG when this project started, compared to the scale of lending, was finely divided into a large number of departments and sections, with the administrative and operation departments in particular hypertrophied. The ABPNG had 387 employees at the time of appraisal in 1987, and this number later grew to as high as 470 employees (1990). The bank was then reorganized and the number of employees was reduced. (See Project Effects and Impacts.)

Lending Procedure


















Figure 4 Lending Procedure Flow



The head office and branches of the ABPNG (later, RDB), upon receiving a loan inquiry, conduct a loan interview, and have the loan applicant prepare and submit a loan application along with a project plan, funding plan and other project-related documents. Then, a loan appraisal is conducted, but there was the possibility that, in the case of introductions etc., the appraisal would be biased. To prevent this, the appraisal system under which Appraisal Committee would be used was established, eliminating external pressure and ensuring appraisal objectivity and transparency. The appraisal process takes approximately 1 month, and internal settlement another 15 days, approximately.

1.2.2 Sub-Loan

Table 5 Target Projects and Loan Conditions

Code	Sub-project	Former Target Scope	New Target Scope	Loan Limit	Loan Period Year	Loan Interest %
A	Small-scale agriculture			Less than K10,000	8	8.5 ~ 10
B	Large-scale agriculture			K10,000 or more	15	1.5 ~ 12
C	Small-scale coastal fishing			Less than K10,000	8	8.5 ~ 13
D	Small-scale oil palms (not including new fields)			Less than K10,000	8	8.5 ~ 12
E	Small-scale oil palms (new fields)			Below K10,000	15	11 ~ 12
F	Transportation vehicles for agricultural products				2 ~ 3	20 ~ 22
G	Small-scale forestry				3 ~ 7	13 ~ 15
H	Livestock industry (culture and hunting of alligators etc.)				5 ~ 15	10 ~ 12
I	Processing of agricultural products				3 ~ 15	10 ~ 15
J	Large-scale fishery				2 ~ 7	14.5 ~ 22
K	Rural housing			Below K5,000	10	5 ~ 10
L	Small-scale loans for women and young persons			Below K5,000	2	8 ~ 10
M	Loans for disadvantaged underdeveloped areas			Below K10,000	12	5 ~ 8

Source: RDB, Head Office Circular

1.2.2.1 Sub-loan Target Scope

The sub-loan coverage included coffee, cocoa, and other agricultural products meeting the following criteria under the initial plan..

- New export cash crops Oil palm, cardamon, etc.
- Food crops for import substitution Livestock, rice, vegetables
- Products contributing to nutrition improvement Fishery products, livestock products

The Rural Development Bank added 9 new project categories as sub-loan targets based on the SAPI recommendation of December 1995. (See Table 5.)

Loan beneficiaries consist of small farmers of PNG nationality and PNG groups. The purpose of loans can be equipment purchases and operating funds required for agricultural production, except the purchase of land.

1.2.2.2 Loan Limit

The JBIC's loan limit is 70% of project funds. However, if this amount exceeds 500,000 kina,

prior approval by the JBIC is required.

1.2.2.3 Loan Period

(At the time of plan) Less than 10,000 Kina: Within 8 years (Repayment: within 4 years)
 10,000 Kina or more: Within 15 years (Repayment period: within 5 years)

(Actual) There were no large changes in the initial plan regarding loans for sub-projects.

1.2.2.4 Sub-loan rates

(During planning) Under 10,000 Kina: 8.5% per annual
 Over 10,000 Kina: 10.5% per annual

(Results) Although there were changes in interest rate conditions, there was negotiability compared to market rates even after interest rate changes were implemented. The following table is a comparison of the RDB's sub-loan rates and the loan rates of other banks with branches in PNG. The data in this table shows that actual loan rates of other banks were about 3% higher than the minimum loan rate of each bank, and that the RDB's rates were 5% or more lower than market rates.

Table 6 Actual Loan Rates of RDB and Minimum Loan Rates of Other Banks

	<i>Up to October 1995</i>	<i>After November 1995</i>
RDB		
Small agricultural loan	8.5%	10.0%
Large agricultural loan	10.5%	12.0%
Small-scale fishery loan	9 ~ 11.5%	10.0 ~ 13.0%
Small-scale oil palms replanting loan	11.0%	12.0%
<i>As of 27 October 1995</i>		
PNGBC	13.8%	
Westpack	15.0%	
ANZ	15.0%	
BSP	15.5%	
Indosuez	15.0%	
Maybank	13.0%	

(Source: Bank of PNG)

An analysis of loan interest revenue and lending costs based on the RDB's financial statements shows that the interest charged on RDB loans is lower than market interest, and costs are considerably exceeding on a chronic basis revenue from interest due to the fact that loss from bad loans exceeded the initially planned level. A negative spread was expected to some degree at the

time of appraisal, and financial compensation from the government was planned (Table 7), but the spread was larger than anticipated. This is due to the facts that (i) rural development based principally on agriculture involves many small-scale project sites in distant locations, resulting in large supervision and administrative expenses compared to large industrial loans, and (ii) a low claimable asset percentage for loans, preventing mortgage interest protection measures and leading to high bad debt losses.

Table 7 Lending Interest and Lending Cost

	<i>Plan at the time of appraisal</i>	<i>Actual (1997)</i>
Lending interest	8.5 ~ 10.5%	8.5 ~ 22%
Borrowing interest from the government	3.0%	3.0%
Transaction expenses (business expenses excluding bad debt depreciation)	6.6%	22.0%
	3.4%	12.1%
Total lending cost	13.0%	37.1%
Regular spread	-4.5 ~ -2.5%	-28.6 ~ -15.1%

1.2.2.5 Mortgage and Guarantee

The submission of different types of contracts, namely (i) mortgage setting, (ii) securing of joint guarantor, and (iii) land usage contracts, depending on the loan type is required for mortgage interest protection.

Compare to the coverage rate by mortgage for the loan value, which is 70% for industrial loans, this figure is just 30% for rural development loans such as for agriculture. This low mortgage coverage rate reduces the effectiveness of mortgage protection measures.

Through the original land ownership system¹ of PNG, land itself is rarely offered as collateral.

1.2.3 Procurement of Vehicles

Twenty cars were to be procured at a cost of 48 million yen in order to strengthen lending for projects in rural and remote areas and monitoring activities. Since end-users are located in remote areas and receive only small loans, the project monitoring load is much higher than for general commercial and industrial loans, and these vehicle procurements are a form of assistance for the intermediary financial institutions in consideration of the above.

1.2.4 Consulting Service

The plan was established to introduce specialists for agricultural resources development planning and financial institution lending as assistance for (1) sub-project investment plan drafting and

¹ Original land ownership system of PNG
Almost no one owns land in PNG, with 95% of the land being owned by the tribes.

agricultural guidance activities, and (2) sub-project monitoring activities, at a total cost of 66 million yen for 30 M/M in order to strengthen the implementation capabilities of the intermediary financial institutions,

2. Evaluation on Project Implementation

2.1 Implementation of Sub-loan

2.1.1 Loan Disbursement Extension

Sub-loan lending progress was slow due to various factors, amongst which the fact that the price stagnation for coffee, cocoa, and other agricultural products during the six years that have passed since the commencement of lending, and the fact that the project formation capabilities the ABPNG (later, RDB) were undeveloped (Figures 5 and 6). Moreover, the depreciation of the local currency (kina) contributed to a ballooning of the kina-denominated disbursement loan amount, which resulted in holding back the lending progress rate in yen terms.

Figure 5 Transition in the Loan Amounts

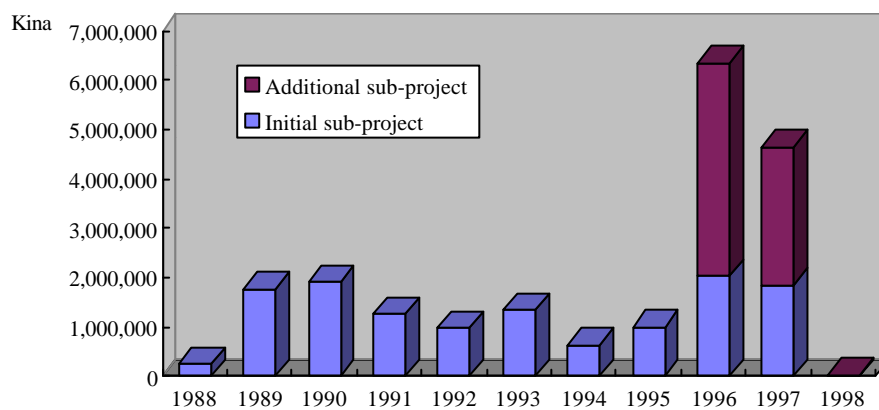


Figure 6 Transition in the Number of Loans

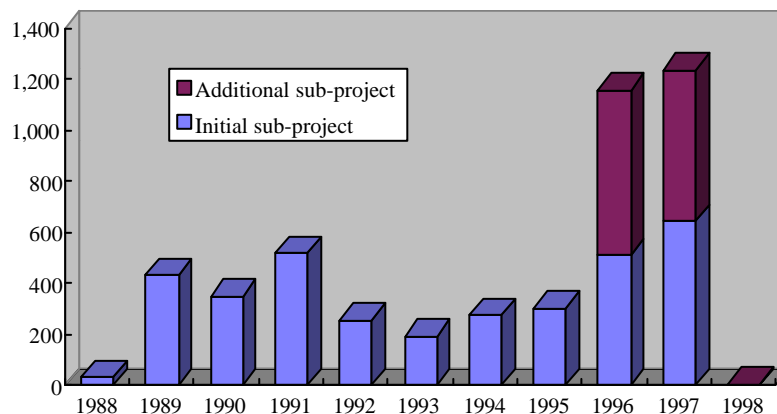
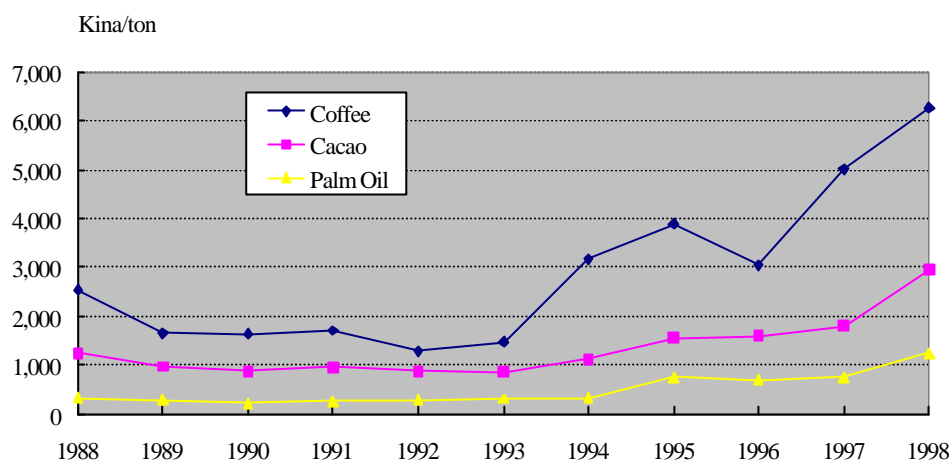


Figure 7 Transition in Commodity Exchange Prices



The price situation for coffee and cocoa worsened immediately after the commencement of this project, and has been stagnating since mid-1994. A recovery tone after 1995 has contributed to an increase in lending.

2.1.2 Execution of Special Assistance for Project Implementation (SAPI)

Since annual lending did not progress for several years following the commencement of this project, SAPI was introduced in 1993 to assist the implementation of this project. In addition to suggestions regarding the rationalization of lending operations, a revision of the lending scope has also been recommended. The major recommendations of SAPI and the resulting actions are listed below.

Recommendation	Action
Organization strengthening	
(i) Improvement (introduction) of business management information system	Introduction completed
(ii) Preparation of manuals and work regulations	Preparation completed
(iii) Training	Implementation in progress as required
(iv) Rationalization of branches and local offices	Implementation in progress
(v) Utilization of sales network	Implementation in progress
(vi) Procurement of long-term funds and loan recapitalization	Introduction completed
Expansion of lending scope and extension of loan execution period	
(i) Expansion of sub-project coverage	Completed
(ii) Extension of loan disbursement period	Completed

2.1.3 Extension of Loan Disbursement Period

This project was extended a total of 4 times, including two extension of the loan disbursement period.

In April 1995, a 3-year loan period extension was implemented. The reasons for this extension are as follows.

(i) Agricultural investments related to new sub-loans were sluggish due to sluggish international market conditions for coffee, cocoa, and other agricultural products, but as the background for the recovery of international markets, the provision of sub-loans for an amount corresponding to 3 years following the extension is considered to be possible.

(ii) This project is the only development assistance that provides aid for small-scale agriculture, and it promoted the creation of a system for the provision of sub-loans. This system is currently taking shape, and it is believed that it will enable the administration of a fair amount of sub-loans. In April 1998, a 1-year loan disbursement extension was again implemented. The reasons for this extension are as follows.

(i) The approval of sub-loans following the loan period extension was progressing, but although their financing had been approved, there still remained unimplemented sub-loans, and this extension was to allow these sub-loans to be implemented.

(ii) The other reason for this extension was to complete organization strengthening activities that were currently in progress.

Through this second loan disbursement extension, the loan amount almost reached the sub-loan provision amount that had been initially planned.

2.1.4 Sub-loan Scope Expansion

RDB formally petitioned JBIC for the addition of sub-projects in November 1995 based on SAPI recommendation and JBIC approved these additions in January 1996.

The reason for adding these sub-projects was suitable considering project objectives, and overall, it was rational from an economic development viewpoint, and the expansion of the scope of sub-projects is evaluated to have been appropriate.

For a comparison of new and old sub-products, refer to the sub-loan outline (Table 5).

As can be seen from Figure 5 and Figure 6, sub-projects eligible for loans expanded from 1996, but loans for products belonging to the new loan scope represented a huge percentage. The expansion of the lending scope in the end greatly contributed to raising the lending progress rate.

The loans for the transportation sector accounted for a particularly large sum amongst these loans, and the resulting development of the rural economy infrastructure had an indirect effect on other sub-projects.

2.1.5 Portfolio Analysis

2.1.5.1 Loan Status by Project and Product

Table 8 Loan Status by Project and Product

Project	Code	No. of loans	Loan amounts (1,000 Kina)	Composite ratio	Average loan amount (1,000 Kina)
Transport (passengers)	2	222	3,068,743	15.2%	13,823
Transport (goods)	4	49	991,318	4.9%	20,231
Forestry	33	17	162,645	0.8%	9,567
Piggery	47	7	15,362	0.1%	2,195
Cattle farming	48	95	1,356,866	6.7%	14,283
Gardening	49	62	413,360	2.0%	6,667
Poultry	50	418	1,473,106	7.3%	3,524
Peanut	51	53	39,548	0.2%	746
Cocoa	53	393	367,564	1.8%	935
Coffee	54	782	3,274,759	16.2%	4,188
Copra	55	1	30,449	0.2%	30,449
Oil palm	56	632	779,128	3.9%	1,233
Fruit	61	1	1,185	0.0%	1,185
Fishing	62	991	2,144,080	10.6%	2,164
Alligator	66	3	25,907	0.1%	8,636
Transport of produce	67	132	1,307,514	6.5%	9,905
Honey	70	32	133,938	0.7%	4,186
Housing	75	157	689,825	3.4%	4,394
Cocoa processing	76	485	1,093,815	5.4%	2,255
Coffee processing	77	6	175,007	0.9%	29,168
Copra processing	78	69	114,824	0.6%	1,664
Cocoa (addition)	83	25	838,398	4.2%	33,536
Coffee (addition)	84	120	1,651,903	8.2%	13,766
Others	90	4	19,562	0.1%	4,891
Total		4,756	20,168,806	100.0%	4,241

(Source: PCR)

Table 8 Comparison of Number of Loans by Project and Product

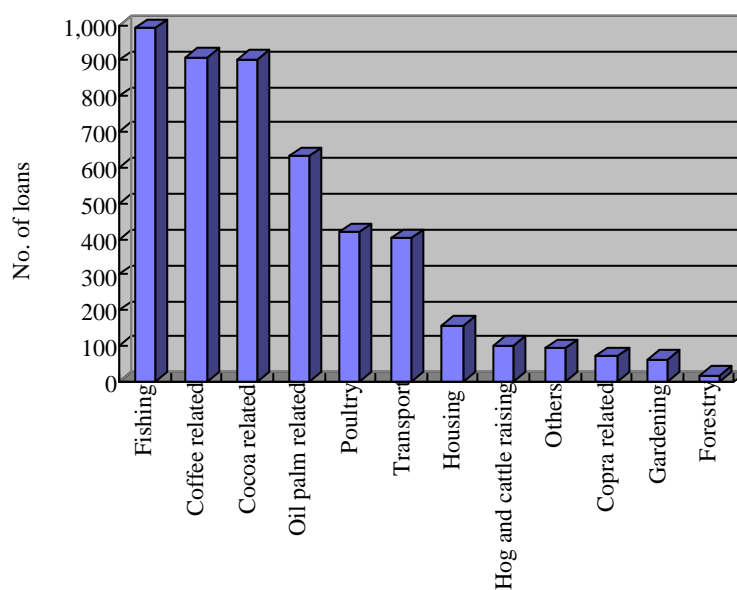
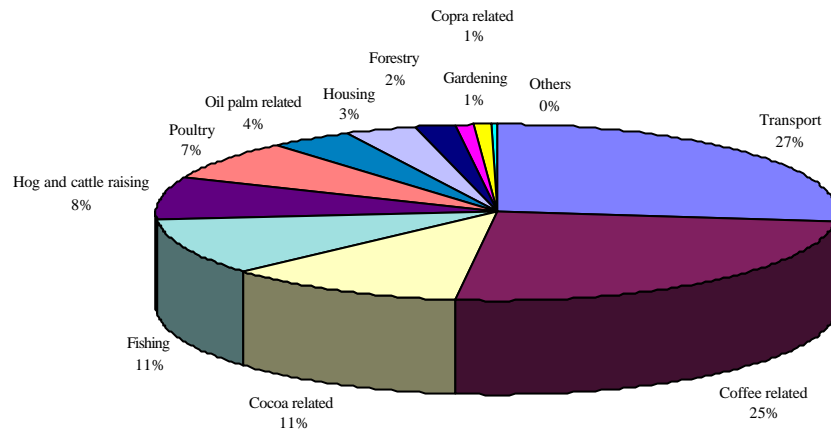


Table 9 Composite Ratio of Amount by Project and Product



An examination of loan content amounts shows that the greatest part of loans in terms of value is related to transportation projects, followed to coffee-related projects and cocoa-related projects. The largest number of loans is for fishing-related projects, followed by coffee-related projects and cocoa-related projects.

In terms of amount, the largest category is transportation-related projects involving the purchase of busses and trucks for transporting persons and goods. This is explained by the fact that the purchase of busses, trucks, and other transportation equipment requires comparatively large amounts of money, with an average loan amount of 14,982 kina. By contrast, loans for fishing-related projects are generally used for the purchase of fishing boats, boat engines, and fishing nets, and while the average loan amount is relatively low at 2,164 kina, the number of fishing-related project loans represents a large share of the total lending amount.

2.1.5.2 Loan Status by Region

Figure 10 Loan Amounts by Region



(Source: Annual Report, Unit: 1,000 Kina)

The highland region received the greatest total loan amount, followed by the Momase region looking by region only. The highland region has a lot of coffee-related projects, and the Momase region has a large percentage of sub-projects added as suitable projects, including transportation projects.

2.1.5.3 Classification of Claimable Assets Arising from Loans

Table 9 Classification of Credits

(As of 20 April, 1999, 1 million Kina)

	<i>Number of loans</i>	<i>Balance</i>
Normal credit	2,501	12.7
Credit of doubtful recoverability	428	2.7
Credit that is irrecoverable	184	0
Credit that has been recovered	1,643	0
Total	4,756	15.4

(Source: PCR)

A total of 1,643 loans out of 4,756 loans had been recovered in their totality as of 20 April, 1999, and 184 loans were irrecoverable (already written off and not entered on balance sheets). Of the remaining loans, 428 were in arrears, and the recoverability of these loans is in doubt at present (assets for which reserves are provided on balance sheets) based on the status of the project and the collateral of the borrower.

Table 10 Project Failure Causes (Multiple Answers)

<i>Sequence Cause</i>	<i>Number of loans</i>
1 Insufficient appraisal	258
2 Lack of project support services	236
3 Stagnant commodities markets	222
4 Lack of markets for agricultural products	211
5 Lack of laws and social order	189
<hr/>	
<i>Number of samples</i>	<i>444</i>
<i>Irrecoverable credit :</i>	<i>97</i>
<i>Credit of doubtful recoverability :</i>	<i>347</i>

(Source: RDB)

Table 10 shows the reasons the causes for failure in the case of projects for which loan recoverability is in doubt. Topping the list of causes are insufficient appraisal and lack of project support services. These causes concern aspects which were expected to be fulfilled by the ABPNG (later, RDB)'s functions as a financial institution. The ABPNG (later, RDB) enhanced its employee training, established Appraisal Committee, and introduced an incentive plan in order to raise its ability as an institutional banking institution, but these efforts will have to be continued to really bear fruit.

The PNG government launched purchases of products at a fixed price as a measure for the stagnation of commodities markets and the lack of sales channels for products. This was later discontinued due to the PNG government's financial problems, and as a result, did not efficiently fulfill its function. However, the drafting and implementation of suitable measures will be necessary in the future.

2.1.6 Revolving Fund Operation Status

The re-lending of sub-loans funds in the form of revolving funds was performed in order to enable the efficient utilization of project funds. The scope of lending and lending conditions for revolving funds are the same as for this project. The operation of revolving funds started from 1997 when a new MIS was established, and information processing and reporting of results related to revolving fund operation and maintenance became possible. The re-lending (approval) rate for cumulative sub-loan repayments (re-lendable amount) is 39.3% as of December 1998.

Table 11 Revolving Fund Operation Status

	(Unit: Kina)	
	Approved	Disbursed
Cumulative sub-loan repayment amount	5,655,768	5,655,768
Loan amount	2,221,172	1,600,983
Balance on 31/12/1998	3,434,596	4,054,785

(Source: PRD materials)

2.2 Procurement of Vehicles

The procurement of 20 vehicles with 48 million yen had been planned in order to strengthen lending activities and monitoring activities in rural areas. Actually, 35 vehicles were purchased for 73 million yen. This was due to the fact that while the loan disbursement period was extended, there were new requests for vehicles, and these requests were implemented changing the allocation of funds.

2.3 Consulting Service

The hiring of consultants to provide sub-project assistance and preparation of training materials were implemented in this project within the fund allocation for the consulting service. In addition, specialists for agricultural resources development planning and financial institution lending were hired for project implementation, preparation of reports, communications and coordination with related organizations, strengthening of credit management, etc. As a result, the implementation capabilities of the executing agency rose, enabling the smooth implementation and monitoring of sub-loans, and at the same time reports on project progress were made to the JBIC on a systematic basis.

On the other hand, the necessity of Management Information System (MIS) was strongly pointed out during this project, and the software and hardware of the system were purchased. The organization of the Management Information System (MIS) improved the information processing system of the RDB, which was behind the ages in this regard, and was performed in order to strengthen the project monitoring and business management systems. The host computer that was used belonged to the Papua New Guinea Business Bank (PNGBC, a state-owned bank), and the RDB purchased only the software and terminals.

The necessity of organizing Management Information System (MIS) was pointed out in the last SAPI report, and the concrete reason for the introduction of this system were as follows according to SAPI.

- (i) To cope with the increasing amount of information accompanying the expansion of lending in rural areas
- (ii) To raise the efficiency of interest calculations
- (iii) To raise the efficiency of arrearages management

(iv) To provide business management information in a timely manner

The organization of Management Information System (MIS) made it possible for the RDB to achieve more efficient lending operations and to collect the information required for management improvements. It also made possible the information processing of revolving fund and the foundation was established for revolving fund operation. Moreover, it contributed to the improvement of progress reports, making it possible to supply detailed reports to the JBIC in a timely manner. Thus the introduction of MIS for this project is deemed to have been appropriate.

2.4 Project Cost

Table 12 Comparison of Original Plan and Actual for Project Cost

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total	Plan	Difference
Sub-loan	150,150	340,880	206,638	118,547	50,015	271,320	62,077	340,499	380,233	103,247	5,744	2,029,350	2,557,000	-527,650
Purchase of vehicles			10,096						23,737	38,536		72,369	48,000	24,369
Consulting			951						65,390	27,218	17,953	111,513	66,000	45,513
Total	150,150	340,880	217,686	118,547	50,015	271,320	62,077	340,499	469,361	169,001	23,698	2,213,232	2,671,000	-457,768
Contingency													11,000	-11,000
Total project costs												2,213,232	2,682,000	-468,768

As the result of two extensions of the loan period, the loan amount ultimately reached ¥2,029 million, compared to the expected amount of ¥2,557 regarding sub-loans. The fact that loan disbursement was extended and the expected loan amount was not reached are explained by reasons that projects qualifying for a loan were not formed in large numbers due to the stagnation of commodities markets, and the kina-denominated loan amount swelled due to the strengthening of the yen and the weakening of the kina.

The project implementation period was extended due to the extension of the loan disbursement period, and additional vehicle purchases were made as needed. Therefore, project costs increased over the initially planned amount for vehicles.

The necessity of providing Management Information System (MIS) was strongly pointed out regarding consulting, adding to the initially planned sub-project assistance consulting. Therefore allocation of funds was changed, and the software (approximately 40 million yen) and terminals (approximately 7 million yen) needed to configure this system were purchased using part of the loan funds. As a result, the project cost for consulting services exceeded the initially planned amount.

2.5 Project Implementation Scheme

2.5.1 Project Implementation Capabilities of RDB

The loan disbursement period was initially planned to be 6 years, but in the meantime, there were

a number of unfavorable external factors including the stagnation of commodities markets. The loan disbursement amount was 1,015 million yen, or just 38% of the planned loan amount. The value of the yen rose against the kina and 8 million kina in loans resulted only in half of the planned kina-denominated amount on a kina basis.

However, the loan balance jumped up enormously in the extended four year period due to the expansion of the lending scope and the RDB's increased project formation capability.

The performance of RDB as a project implementation financial institution improved in parallel with the consultant employment, introduction of new MIS and purchase of vehicles.

2.5.2 Assistance Scheme of PNG Government

The government of PNG is the borrower of the ODA loan, but it is also making deep contributions to the implementation of this project. Concretely, the difference between the financing amount for the RDB's sub-projects and the financing amount the RDB receives from the JBIC is provided by the PNG government in the form of an advance (counter part fund) for sub-projects. Since the amount of funding provided by the JBIC is prescribed as 70% of the funds required for each sub-project, this measure was taken to promote loan disbursement. This counterpart fund amounted to 2.84 million kina as of April 1999. The assistance stance can be evaluated taking into consideration the financial status of the government of PNG.

2.5.3 Project Monitoring Scheme of JBIC

The following measures were executed by JBIC because the loan disbursement was extremely behind the schedule compared to the plan.

- (i) Introduction of Special Assistance for Project Implementation (SAPI)
- (ii) Study of scope of projects to be financed
- (iii) Extension of loan disbursement period by total of 4 years (first extension: 3-year extension from April 1995 to April 1998, second extension: 1-year extension from April 1998 to April 1999)
- (iv) Adjustment of loan interest according to RDB loan regulations

Through the implementation of the above measures, the loan disbursed amount almost reached the initially planned amount.

The consultants and external specialists were hired and a new MIS was introduced in order to strengthen the RDB's implementation capabilities. As a result of these measures, project implementation capabilities, obligation management capabilities, and reporting capabilities dramatically improved, and it was possible to promptly solve these problems. The actions taken by the JBIC were extremely appropriate regarding this point.

3. Evaluation on Project Impact

3.1 Socio-economic Impact on End-users

3.1.1 Summary of Interview Survey to End-users

3.1.1.1 Survey Method

A local research organization (Unisearch PNG, a research organization jointly established with the PNG University) was used in order to investigate the concrete impacts of this projects. This research organization conducted an interview-based survey on a sample of 68 users. Here, we analyze the socioeconomic impacts of this project based mainly on the results of this interview-based survey.

The sample of 68 users, while trying to reflect as well as possible the actual balance of results by project and products, was selected so as to cover the greatest possible number of sub-loan types, also taking into consideration the balance between the 4 branch offices, so that the sample selection was not entirely random. Therefore, the survey results do not necessarily reflect the whole in statistical and quantitative terms.

First, a sample totaling 80 persons was selected at the RDB's head office, consisting of 20 persons per branch office. Next, each branch office was visited, contact taken with each person in the sample, and an interview of each person was conducted at that person's branch office, home, or workplace. Some persons in the sample could not be contacted, and as a result, the sample size declined to 68 persons. The contents of the interviews consisted in the outline of the economic activities conducted by the person, the outline of the sub-loan and the repayment status, views and opinions regarding the RDB's services, and the economic situation of the person before and after the loan.

The end users who were thus interviewed were all males except for one. All were married, and the average number of family members was 5. Age-wise, they ranged from 30 to 60, with those in their 40s representing 70%. Thirty-two were employed in the private sector or the public sector, and were running a business on the side. The other end-users in the sample group were self-employed business operators.

3.1.1.2 Uses and Current Status of Sub-loans

The usage of the funds lent to the 68 sample group end-users spans 15 industries, as shown in Table 13.

3.1.1.3 Views from End-users

All the end-users were highly satisfied about the low-interest-rate funding offered by the RDB according to the interview-based survey. However, they strongly wished for long-term, low-interest funding. By industry, the extension of the repayment period was a strong request

particularly coffee and cocoa producers.

The majority of end-users responded that, as long as one has some collateral, it is not difficult to get RDB funding. The majority of respondents said that they obtained information about RDB funding from friends or neighbors.

The person in charge on the RDB side visits end-users about once every semester, but a very small number of cases were recorded where such visits almost never occur. The majority of end-users hoped to obtain constructive advice from the person in charge on the RDB side.

Table 13 Uses and Current Status of Sub-Loans for Surveyed Sample Group

Industry description	Major uses and repayment status of loans	No. of loans	Loan total (1,000 Kina)	Amount range (Kina)
Coffee	Planting of new coffee and facility construction of existing coffee plantation. Purchase of vehicles, fertilizers, pesticides, etc. One irrecoverable loan.	9	373.6	2,561 – 129,274
Cocoa	Includes two loans for cocoa plantation maintenance, 4 loans for cocoa processing, and 3 loans for cocoa plantation expansion. Both loans for cocoa processing are under 8,000 kina. Two loans whose recoverability is doubtful.	9	287.7	1,447 – 119,120
Transport (passengers)	All loans used for the purchase of busses (public motor vehicles). One irrecoverable loan.	7	116.4	7,710 – 29,950
Fishing	All loans used to purchase small fishing boats. One irrecoverable loan.	6	137.0	1,430 – 120,000
Poultry	All 6 loans for poultry farming. Loans used to build chicken houses, etc. The recoverability of two loans is in jeopardy, but this is because the contracted buyer of the end-users' products went out of business due to a fire.	6	286.1	3,863 – 183,000
Cattle farming	Purchase of cows and establishment of grazing land. The loans are relatively high, but since cows are highly profitable, repayment performance is good.	5	138.1	20,000 – 40,610
Gardening	Loans used to purchase fertilizer, seedlings, cultivators, etc., for the production of vegetables such as cucumbers, tomatoes, onions, pumpkins, cabbage etc., and other agricultural products such as corn and bananas. Out of the 5 loans, 4 are under 8,000 kina. One loan is irrecoverable.	5	75.9	2,000 – 56,783
Lumbering	Purchase of lumbering equipment and vehicles. The expansion of the lumbering industry is contributing to the creation of jobs. One of the lumber mills employs 15 persons.	4	76.9	1,544 – 42,000
Transport (goods)	Used for the purchase of vehicles for carrying foodstuffs, clothing, etc., to retailers	4	109.3	15,000 – 50,000
Transport of produce	Used for the purchase of vehicles for collecting and selling agricultural products	4	490.4	9,850 – 19,815
Copra processing	Extraction of copra from coconut and drying. One loan is irrecoverable.	3	2.3	928 – 1,365
Piggery	Purchase of pig sheds and piglets. Both loans are for family-operated business, but one of these businesses folded following repayment of the loan due to poor management amidst unstable market conditions.	2	10.8	3,483 – 5,017
Housing	These loans were used for housing construction. These loans were classified under agriculture by the RDB.	2	10.0	5,000
Honey	Bee culture is an unusual category in PNG, and an industry to requires specific technology. This project is not necessarily successful, and loan repayment is doubtful, but it has attracted the community's attention.	1	3.2	3,182
Heavy machine	This loan was used to purchase Toyota dump trucks through an installment payment contract.	1	34.3	34,255

3.1.2 Impact on End-Users

3.1.2.1 Expansion of production activities

The financing assistance provided by this project greatly contributed to the enthusiasm for launching projects for entrepreneurs whose investment expenditures for grains, fertilizers, tools and machinery come first.

An end-user engaged in the coffee growing business in the Hagen area, with a loan of 129,274 kina, purchased 18,000 coffee trees, and hiring additional workers, expanded his business. As a result, the production amount increased by 1,230 bags, and his income rose by 123,000 kina. Another end-user similarly engaged in the coffee growing business in the Hagen area purchased 10,000 coffee trees with a loan of 115,585 kina, and achieved a production increase of 1,000 bags.

An end-user engaged in coffee growing in the Rabaul area, with a loan of 20,529 kina, replanted 430.1 ha. As a result, he achieved a production increase of 400 bags. However, profit for each planting period is just 12,000 kina and no increase in profitability has resulted.

A pig farmer in the Boroko area built a pig shed with a loan of 5,017 kina, which enabled him to raise an additional 5 piglets.

Table 13 Increase of Production Volume

<i>Branch</i>	<i>No.</i>	<i>Name</i>	<i>Project</i>	<i>Before</i>	<i>After</i>	<i>Others</i>
Rabaul	9	Usewit	Cocoa planting	1200 bags	1600 bags	Doubtful loan
Lae	6	Kissip	Fishing	35 tones	40 tones	Loan repaid
Hagen	11	Mania	Coffee planting	5000 bags	7000 bags	Active loan
Boroko	7	Koupa	Sawmill	Uncertain	Increased	Active loan

3.1.2.2 Increase in income and assets

The majority of the 68 persons who were interviewed as part of the survey saw their income and assets increase following their receiving the loan. These end-users have achieved productivity increases by becoming able to procure production materials and hire extra workers using these low-interest loans. Consequently, their sub-project contents have improved and their income has increased. However, on the other hand, there are also cases where business contents have worsened, with the end-user becoming unable to support the burden of loan repayments, and having to change the repayment schedule or even winding up going bankrupt. The following are examples of cases of end-users achieving higher income after receiving their loans.

Table 14 Income Increase

<i>Branch</i>	<i>No.</i>	<i>Name</i>	<i>Project</i>	<i>Funded items</i>	<i>Prior income</i>	<i>Latest income</i>	<i>Others</i>
Rabaul	13	Lee L	Sawmill	2 vehicles Sawmill-equipment	35,000	50,000	Operating well and a current loan
Lae	13	Tim L	Cattle	2 calves Iron posts	3,000	5,000	Operating well and a current loan
Lae	14	Mai D	Cattle	4 calves Iron posts Fencing wire		5,000	Operating well and a current loan
Lae	7	Suria T	Cattle	4 calves Iron posts Fencing wire	1,500	4,500	Operating well & loan repaid.
Hagen	3	Kawagl N	Coffee	One truck Pesticides Fertilizer Coffee seedling	14,000	20,000	Loan was written off
Hagen	17	Jeff Y	Coffee	One Ttruck Pesticide Coffee Seedling	2,000	7,000	Operating well and active loan
Hagen	16	Gising M	Coffee	One truck Fencing	6,000	12,000	Operating well and a active loan
Hagen	4	Kewa P	Coffee	Fencing wire Iron posts Coffee seedling	7,000	9,000	Operating well and repaid the loan
Boroko	12	Valo	Vegetable	Fencing wire Iron post Fertilizer	3,000	8,000	Operating well and a active loan

It would be rational to raise part of the project funds from outside capital from the viewpoint of project management, and by using this, it would be possible to efficiently expand the business according to management capabilities, but on the other side, this would multiply risks. It is important to pick out end-users with superior management skills and educate end-users from the viewpoint of economic development and whether or not a sub-project succeeds. Loans for end-users who do not have a certain level of management skill contribute only to increasing the risk burden, and cannot necessarily be said to be appropriate. Needless to say, it was important to be able to evaluate the management capability of end-users as part of the RDB's loan appraisal procedure in the case of this project.

Of the 68 end-users who were interviewed as part of this survey, more than 70% answered that their cash reserves increased, and more than 80% answered that their savings increased. Moreover, almost all the interviewed end-users said that goods and produce in stock increased. The financing they received increased their amount of income by 4 times on average, and almost doubled the value of their net assets.

Table 16 Business Income and Expenditure Status Before and After Loan and Change in Assets Owned

	<i>Before loan (Kina)</i>	<i>After loan (Kina)</i>
A. Monthly Income and Expenditure		
Income	2,968	3,788
Expenditure	2,791	3,084
Income and expenditure	176	704
B. Assets and Liabilities		
Assets		
Cash	18	51
Deposit balance	510	1,847
Stock	85	213
Crop, livestock	9,379	12,322
Vehicle, boat	501	887
Facility, equipment	131	1,318
Land, house	1,451	1,466
Others	7	12
Sub-total	11,990	18,115
Debt		
Borrowing	4,868	16,722
Others	32	37
Sub-total	4,900	16,759
Net assets	707	1,356

Note: The figures listed in the above table are averages calculated based on the responses of the 68 interviewed end-users.

As a result of the increase in income and assets, almost all end-users were able to increase expenditures for insurance, education, and other desirable products and services, and the loans they received are believed to have contributed to the greater satisfaction of basic end-user needs. Moreover, expenditures vis-à-vis the community also increased by approximately 10% in the form for entertainment expenses and social contributions, in addition to expenditures for basic needs and thus the loans are also considered to have contributed to raising family life and social life.

3.1.2.3 Creation of job opportunities

The high jobless rate is a major social problem of PNG since it gained its independence. PNG has a population of approximately 4 million, including 1.7 jobless, or 49% of the population. The active opening ratio is 0.13X, and wage earners number between 220,000 and 240,000 persons.

The sub-projects covered by this project consist mainly of agriculture, fishing, and other labor-intensive projects, and in many cases continued to depend on human labor even after the introduction of materials and equipment, so that business expansion as a result of the loans

directly resulted in an increase in the number of employed persons.

The 68 cases that received a loan through this project resulted in the creation of a total of 299 employment opportunities. Based on the total number of loans was 4,756, it is estimated that this project created approximately 20,000 job opportunities. This represents about 1.8% of the current unemployed population of PNG.

Table 15 Examples of Increased Employment

<i>Branch</i>	<i>No.</i>	<i>Name</i>	<i>Project</i>	<i>No. of employed persons before loan</i>	<i>No. of employed persons after loan</i>	<i>Others</i>
Rabaul	14	CCRI	Cocoa nursery	45	52	Planting seedlings
Rabaul	5	Tolikot	Copra processing	3	5	Drying cocoa
Lae	5	Robin	Passenger transport	0	3	Drive, security
Hagen	13	Lee	Housing	3	5	Cleaning

3.1.2.4 Reduction of heavy labor and dangerous labor

In the case of labor-intensive business such as agriculture, the reduction, both quantitative and qualitative, of that labor and the work itself is extremely important. Even if the same level of income is secured, freeing up from heavy labor and dangerous labor is desirable.

In this project, the introduction of new types of agricultural machinery and the use of new types of agricultural chemicals have contributed to the automation or reduction of agricultural work, and a reduction of human labor and tasks has been observed in many cases.

In the case of vegetable growing operations, produce fetches high prices, but the purchase and spraying of agricultural chemicals is enabling the extermination of pests with much reduced effort, and the use of tractor for the cultivation of agricultural land is alleviating agricultural work in various cases. In the case of poultry farming operations, automated light, feed, and water supply systems have been introduced for work automation in a number of cases. In the case of coffee growing operations, normally agricultural chemicals are sprayed in order to remove pests, and trucks are used to carry crops, but some coffee plantations have introduced equipment that automates a series of operations including the peeling of the coffee plant fruit, washing the coffee beans, and then loading them on special dry transport trucks, which is contributing to a considerable reduction in labor. Major accidents resulting from the use of machinery etc. have not been reported.

3.1.2.5 Improvement of nutrition

Nutrition-related improvements have been achieved through purchases of foods enabled by rising incomes and household consumption of excess agricultural products. Farms in the Boroko area produce a variety of agricultural products, not only for selling, but also for home consumption, and poultry farmers consume part of their production. Fishermen who have purchased fishing boats using funding provided through this project distribute part of their catch to neighbors.

Poultry farmers in the Lae area distribute part of their production to local residents for free. Moreover, although this has a weak causal relationship with this project, a large variety of agricultural produce is showing up at markets, and one can observe not only an abundance in terms of quantity, but also in terms of quality.

On the other hand, observable is also a tendency to abandon traditional commercial crops such as taro, bananas, beans, and potatoes, which have a high nutritional value but fetch low prices at markets, in favor of more profitable products. In the Hagen area, rich farmland that has traditionally been used for the cultivation of vegetables is not being used to grow coffee, tea, and other cash crops. Moreover, in the Rabaul area, land that was used for growing bananas, sweet potatoes, and beans, is not being used to grow cocoa.

3.1.2.6 Impact on Environment

The majority of sub-projects of this project are small-scale projects by small farmers distributed across all areas. In the case of vegetable cultivation projects, despite the fact that they consist of newly created land plots for cultivation, the scale is 2 to 3 ha in the case of individual farmers, and about 10 ha in the case of groups. In the case of coffee and cocoa, which account for the majority of sub-projects, the majority of projects consist in replanting of existing plantations. Therefore, no particular harmful environmental impacts have been observed with regard to soil loss etc.

3.2 Strengthening and Rationalization of RDB's Management and Organization System

3.2.1 Management Information System (MIS)

In 1996, a management information system was established using the consulting services arranged for this project. As a result, the work of the RDB underwent a large shift from manual tasks to computer processing, and although both the number and aggregate monetary value of the loans handled by the RDB as part of this ODA loan did increase, the RDB was able to effect personnel reductions.

Table 17 Transition in the Number of Employees

	1987	1990	1995	1998
No. of Employees	387	470	250	233

Source: Annual Report

The establishment of this management information system had a considerable impact on the entire management operations of the RDB. The RDB had made the profit center concept the core of its management strategy and aimed to strengthen its control system, improve its financial contents, and raise the level of services for end-users, but the introduction of a new management information system (MIS) was made possible by decisive support for technical aspects. This

management information system, which operates based on a computerized network, enables access from branch offices and online real-time processing of daily transactions from each branch office. It has become possible to monitor the information pertaining to all end-users more accurately and more promptly with regard to loans, which has greatly improved lending control operations, while at the same time an environment that permits suitable business management based on the information collected for each loan has been achieved.

This new MIS is being managed with some of the hardware leased from the Papua New Guinea Business Bank (PNGBC), which is the result of achieving the greatest possible effect at the least possible cost for the RDB. This joint use of hardware is promoting cooperation between the Papua New Guinea Business Bank (PNGBC), which is a state-owned bank of PNG, and the RDB, and it is also favorably evaluated from the viewpoint of strengthening the financial system base.

3.2.2 Procurement of Vehicles

The end-users of the RDB are distributed across various areas, and they cannot be accessed without traveling difficult roads due to the local topography. For this reason, vehicles with a four-wheel drive are indispensable, and the funds to procure such vehicles were raised as part of this project. These vehicles purchases had the result of strengthening sub-loan project formation and monitoring at the branch office level, and led to an increase in the number of loans, the aggregate monetary value of these loans, and the monitoring frequency.

Table 16 Vehicle Procurement Status

As of March, 1999, Unit: Kina		
	Quantity	Amount
Head Office	15	578,783
Boroko	7	236,738
Momase	7	239,416
Highland	10	387,350
Total	50	1,805,045

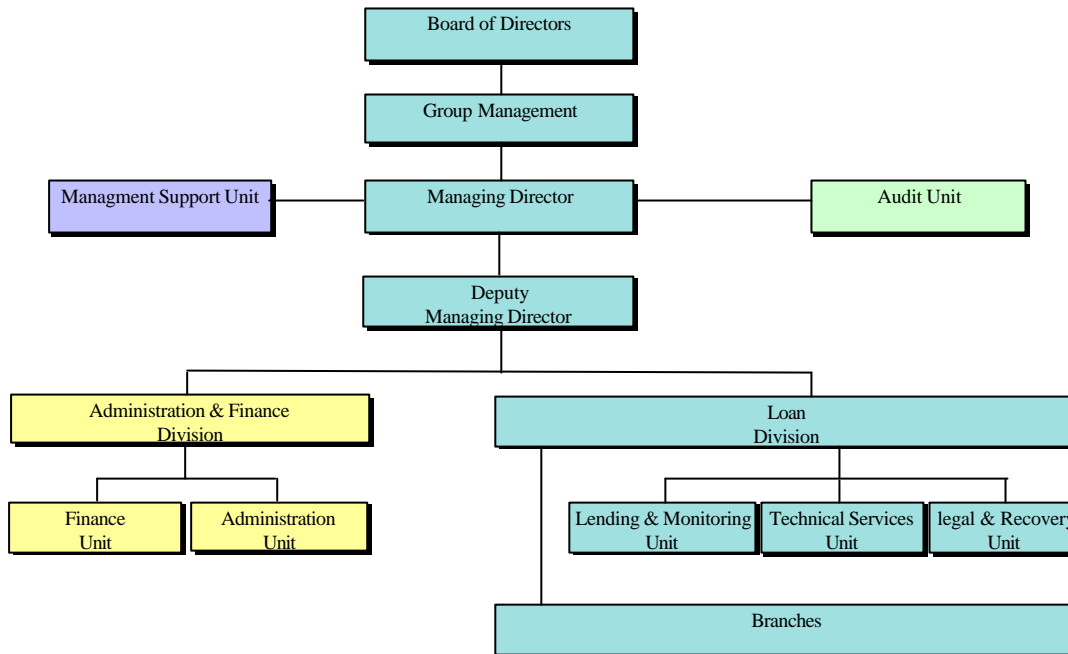
(Source: RDB)

Table 18 shows the number of vehicles currently owned by the RDB, and the RDB has reported that this number of vehicle is sufficient for its operations. However, they have a short average service life of about 3 years owing to the fact that these vehicles are used on mountain roads, and continuous replacement of these vehicles will be necessary in the future. The RDB's vehicles have already been used on average 2 years following purchase.

3.2.3 Renovation of Organization

Simplification of Organization

Figure 11 Current Organization Chart



The management organization consists of the strict minimum management and staff sections, finance and administration units, and loan units, and has been streamlined with regard to personnel composition. The management organization at the time of appraisal (organization chart shown in operation and maintenance scheme) was too finely divided into an excessive number of units in relation to its size, which was considered to be ineffective.

This organizational minimization is the result of seeking to achieve more efficient administrative operations through the establishment of an information processing system. Personnel reductions have been achieved as a result.

Strengthening of staff functions

The strategic management planning unit was established and foreign specialists were posted in order to strengthen staff functions for management with the aim of attaining more strategic management and more rational management operations. These initiatives have led to cost reductions, the improvement of loan portfolios, the introduction of incentive plans, and concrete management improvements such as MIS utilization.

Establishment of Loan Appraisal Committee

There were cases where lending was the result of connections, and the objectivity and fairness of the appraising process was a problem. The Loan Appraisal Committee was established to eliminate external pressure and arbitrariness. This contributed to making the loan portfolio sounder and enabling the fair distribution of available funds.

Incentive plans

Along with the consolidation of branch offices and local offices, an incentive plan was introduced in order to improve performance per loan officer. This system consists in allocating loan budgets for given loan officers and their branch office or local office for sub-projects for which high performance has been demonstrated, according to that performance, in order to enable additional and continuous funding on a repeated and preferential basis. This system also has the advantage that it enables the systematic evaluation of the performance of individual loan officers and branch offices.

The introduction of this incentive plan has resulted in the collection of information about sub-project failure or success by the RDB head office and the achievement of centralized processing.

Consolidation of branch offices and local offices

As shown in Table 18, branch offices and local offices have been consolidated in order to achieve more rational management, but this has not resulted in important management cost reduction.

This is due to the fact that, in spite of personnel reductions resulting from this consolidation, the consolidation has almost no impact on cost reduction.

Salaries are set based on an AUS\$ base at the RDB head office, which is located in an urban district. Due to the devaluation of the kina, this has resulted in a salaries per employee on a kina-denominated basis, and this is cancelled cost savings resulting from personnel reductions.

Table 17 Comparison of Head Office, Branch Offices, and Local Offices at the Time of Appraisal and Now

<i>Regions</i>	<u>At the time of appraisal (1988)</u>		<u>Now (1997)</u>	
	<i>Branch</i>	<i>Local office</i>	<i>Branch</i>	<i>Local office</i>
Southern	Boroko			
	Popondetta		Upgraded to branch office	
		Alotau		
		Daru		
		Kerema		
	Kiunga	Closed		
	Moreguina	Closed		
				Daru Kerema
Highlands	Lae			
	Madang			
	Wewak			
		Finschhafen	Closed	
		Maprik	Closed	
	Vanimo	Closed		
				Lae Madang Wewak
Momase	Mt Hagen			
	Goroka		Upgraded to branch office	
		Kainantu		
		Wabag		
		Kundiawa		
		Mendi		
		Banz/Minj	Closed	
	Tari	Closed		
				Mt Hagen Goroka Kainantu Wabag Kundiawa Mendi
Islands	Rabaul			
	Kimbe			
	Arawa		Eliminated	
		Bialla	Upgraded to branch office	
		Kavieng		
		Namatanai		
		Buka		
		Buin	Closed	
		Kandrian	Closed	
	Lorengau	Closed		
				Rabaul Kimbe Bialla Kavieng Namatanai Buka
Total	10 branch offices	21 local offices	12 branch offices	8 local offices

4. Lessons Learned

- (i) **It is important to increase the implementation capabilities of the executing agency through the strengthening of human resources to enable the rapid and smooth implementation of financial intermediary loans.**

As part of this project, consultants were hired using loan funds in order to improve lending operations, management operations, and make project progress reports. As a result, the implementation capability of the executing agency was raised, and it became possible to implement sub-loans in a smooth manner. On the other hand, reports on the project's progress were systematically made to the JBIC, and efficient monitoring of ODA lending operations was made possible. It is important to seek to raise implementation capabilities and reporting capabilities by strengthening human resources, including hiring outside specialists when the executing agency does not have suitable personnel for specific tasks.

- (ii) **Since the implementation and monitoring of financial intermediary loans depend heavily on the information processing capabilities of the executing agency, aid for strengthening the executing agency's information processing system is important.**

Since this project involved a large number of small sub-loans, the provision of information processing system to manage lending operations was indispensable. Through the introduction of an information processing system, it became possible to collect obligation receivable management information and management information, enabling accurate obligation receivable management and management analysis by the executing agency. This information processing system of the executing agency for implementation and monitoring of this project can be said to be indispensable, and pressing ahead to establish it within the shortest delay possible was a sensible decision.