

Indonesia

AJDF Category B/ Small Scale Industry and Pollution Abatement

Report Date: March 2001

Field Survey: September 2000

1. Project Profile and Japan's ODA Loan



Left: View of Water Treatment Facilities Right: Sewing Machines for Children's Clothes

(1) Background

Since the mid-1980s the Indonesian government had aimed to promote labor-intensive oriented export industries in the manufacturing sector as an element of its promotion of non-petroleum-exporting industries. The industries concerned, which include wood products, processed foodstuffs, textiles and clothes, leather goods and rubber goods, make use of local resources. Accordingly, the government had emphasized the fostering of small-scale industry in those fields¹. The main problems faced by small-scale industries at that time were the lack of marketing-related knowledge and experience, organizational structure, and the lack of funds for long-term capital investment that would raise productivity. At the time it was anticipated that small businesses would require 3.7 trillion Rupiah over the next five years (1992~1996). Financial support measures were sought to meet this booming demand for equipment investment.

At that time, rapid industrialization was accompanied by increasingly severe pollution. In particular, the major cities of Jakarta and Surabaya demanded increasing volumes of water supply, but the rivers used as these cities' water supplies were contaminated with organic material and harmful substances. That contamination was a major obstacle to the acquisition of adequate water supplies for the cities. The situation led the Environmental Impact Management Agency (BAPEDAL), the agency responsible for the administration of pollution prevention, to strengthen the implementation of the Rivers Care Program (PROKASIH) in order to reinforce the regulation of water quality. Stronger regulation of pollution increased motivation to install pollution prevention equipment in Indonesia, but the only related preferential measure to assist private sector companies was a tax exemption on the import of anti-pollution equipment. There was a strong need for other assistance, particularly in finance. At the time of the appraisal for this project, in 1990, it was estimated that investment in this kind of anti-pollution equipment would amount to approximately \$450 million over the next five years (1992 ~ 1996).

¹ The Indonesian Ministry of Industry classifies businesses with total assets of up to 600 million Rupiah as small businesses, and it provides them with various types of assistance and guidance. In 1992, small businesses accounted for 98% of the number of businesses in Indonesia's industrial sector, employed 80% of its workforce, generated 21% of its production value and 10% of its exports. They were the core of the country's labor-intensive industry.

Meanwhile, as an element of its financial recycling measures, Japan decided to set up the ASEAN-Japan Development Fund (AJDF) and provide it with financial support to further economic cooperation within the ASEAN region and support the development of the private sector economy.

(2) Objectives

This project had two objectives. One was to provide small businesses in Indonesia with long-term, low interest funds for capital investment, in order to further their growth. The other was to use finance for long-term capital investment to fund the installation of equipment to prevent river pollution, mainly in Indonesia’s private sector businesses, in order to improve the environment in that country.

(3) Project Scope

This project was a Two-Step Loan (TSL) which provided finance from the Indonesian Ministry of Finance and Central Bank to private companies through multiple handling banks. The ODA loan was to be applied to the following:

- [1] Finance (SSI loans) to small businesses according to the existing small business finance system (KUK²)(SSI loans).
- [2] Finance (SSI loans) for pollution abatement equipment (PAE loans).
- [3] Funding for consulting services for capacity building of BAPEDAL.

The finance scope of the two sub-loan types is as below.

	SSI loans	PAE loans
Eligible companies	Private companies with total assets not exceeding 600 million Rupiah	No restrictions
Value of finance	Up to 100 million Rupiah	No restrictions
Eligible business types	No restrictions	No restrictions.

(4) Borrower/Executing Agency

Republic of Indonesia / Ministry of Finance

Handling banks

1. Bank Negara Indonesia (BNI)
2. Bank Bumi Daya (BBD)
3. Bank Dagang Negara (BDN)
4. Bank Rakyat Indonesia (BRI)
5. Bank Expor Impor Indonesia (BEII)
6. Bank Pembangunan Indonesia (BAPINDO)
7. Bank Central Asia (BCA)
8. Bank Danamon
9. Bank International Indonesia (BII)
10. Lippo Bank
11. Bank Umum Nasional (BUN)
12. RDB Nusa Tenggara Barat (NTB)

² KUK made it mandatory for commercial banks to direct 20% of their total lending to small businesses.

13. RDB Irian Jaya*

14. RDB Maluka

* At the time of the appraisal there were 14 handling banks, but the Indonesian side requested the exclusion of the RDB Irian Jaya on the grounds that there were some points concerning its handling of operations under this project which could not be confirmed. That bank was excluded in order to ensure the smooth implementation of the project, leaving 13 handling banks.

(5) Outline of Loan Agreement

Loan Amount/Loan Disbursed Amount	¥16,244 million / ¥15,891 million
Exchange of Notes/Loan Agreement	September 1992 / November 1992
Terms and Conditions	Interest rate: 2.5%, Repayment period: 30 years (10 years for grace period), General Untied
Final Disbursement Date	March 1998

2. Results and Evaluation

(1) Relevance

(i) SSI loans

When this project was planned, small businesses occupied a dominant position, in terms of numbers of companies and of workers, as the core of Indonesia's labor-intensive industries. Nurturing them was an important task, and therefore this project was relevant. As Table 1 shows, small businesses still retain their position, and there is still an important need to nurture and promote them, which indicates that this project remains relevant.

Table 1 The Position of Small Businesses within Indonesia's Manufacturing Industry

Time	Share of No. of businesses (%)	Share of workforce (%)	Share of production volume (%)	Share of export value (%)
1992	98	80	21	10
1998	99	75	16	6

Source: Ministry of Industry

(ii) PAE loans

When this project was planned, the pollution problem in Indonesian cities was severe, creating a strong need for this project. According to concerned parties in the Waterworks Offices of Jakarta and Surabaya, contamination of river water is worse than before, despite the effects of this project, making it more difficult to secure supplies of water for the cities. At the time of the evaluation there was an even greater need for water quality improvement, particularly in the cities, than there was at the time of the appraisal.

(2) Efficiency

(i) Disbursement Period

The start of disbursement from the ODA loan was delayed for around two years beyond the planned start due to procedural delays. Disbursement proceeded smoothly and was completed in October 1997, only four months behind the planned date of June 1997.

(ii) Record of disbursement

The record of disbursement is shown in Table 2. SSI loans worth ¥3,172 million were made to 973 end-users. PAE loans worth ¥12,376 million were made to 69 end-users. The disbursed amounts were around 98% of the planned values for both loan types. Consulting service expenditure was ¥352 million, 92% of the planned ¥371 million. Table 2 shows a comparison of planned and actual disbursements. Loans made in a little over two years between 1994 and 1996 accounted for 87% of the total disbursement value (in the plan it was anticipated that 46% would be disbursed in that period).

Table 2 Comparison of Planned and Actual Disbursements

Unit: ¥ million

Year	1992	1993	1994	1995	1996	1997/98	Total	
For SSI loan	Plan	150	259	549	726	846	719	3,249
	Actual			495	802	1,133	742	3,172
For PAE loan	Plan	600	3,000	2,725	2,475	2,360	1,464	12,624
	Actual			7,710	2,188	1,227	1,251	12,376
Consulting service	Plan	43	71	75	65	60	57	371
	Actual			177	105	61		342
Total	Plan	793	3,330	3,349	3,266	3,266	2,240	16,244
	Actual			8,382	3,095	2,421	1,993	15,891

Source: JBIC and executing agency's materials

a) Characteristics of SSI sub-loans

Nine banks participated in the SSI loans (BNI, BAPINDO, BBD, BCA, BII, BUN, Lippo, Danamon and NTB). The breakdown of disbursements between banks shows that the top three banks had a 55% share of disbursements. The BNI alone was far in the lead with a 28% share by value, as well as a 37% share of the number of end-users. On the basis of loan value, BCA were second with a 14%, followed by Lippo with a 13% share.

The numbers of sub-loans disbursed to each region show that 61% went to Java, 18% to Sumatra, 11% to Nussa Tenggara, 7% to Sulawesi and 2% to Kalimantan.

The size-based breakdown of end-users shows that there was no bias to any particular size bracket. There was an even distribution between size brackets, in terms of both value and number.

Sub-loans with repayment periods of 3~5 years had by far the highest share, accounting for 84~85% of all sub-loans in terms of both value and number.

b) Characteristics of PAE sub-loans

Nine banks participated in the PAE loans (BNI, BAPINDO, BBD, BEII, BCA, BII, BUN, Lippo and Danamon). Their ranking, based on disbursed value, is BCA first with 29%, followed by BEII with 14%, BPINDO with 12% and Lippo with 11%.

The value of sub-loans to each region shows that 64 of the 69 loans (93%) went to Java, which is a notable characteristic of this loan type.

Shares of sub-loan numbers for each business type show that textiles and garments was the top category, with 25%, followed by food processing with 17%, industrial estate development with 16%, paper and pulp with 11%, and metal processing and plating with 8%. The distribution illustrates the level of need for waste water processing in these fields.

The number of sub-loans to each size bracket of end-user (based on total asset value) shows that the highest proportion, 44%, went to those with asset value of 600 million Rupiah or less. The second and subsequent shares step down regularly, from 19% to 10%, 9% and down, in a balanced distribution. In terms of disbursed value, 83% went to borrowers with asset value of 600 million Rupiah or less.

Sub-loans with repayment periods of 3~5 years had the highest share, at 57%, followed by 19% for loans of 5~7 years, and 17% for loans of 7~10 years. Based on disbursed value, 42% was disbursed in loans of 3~5 years, 22% in loans of 5~7 years, 19% in loans of 7~10 years and 16% in loans of 10~15 years. The weighted average repayment period was 5.7 years.

The pollution abatement equipment was for waste water treatment in 64 of the 69 sub-loans, a share of over 90%, with the others being two against air pollution, two for pollution prevention and one for garbage treatment.

(iii) Loan interest

Table 3 shows the average interest charged by commercial banks, compared to the interest rates charged for the two schemes (SSI and PAE) funded by the ODA loan.

Table 3 Movements in Interest Rates

Unit: %

		1993	1994	1995	1996	1997	1998	1999	2000
Commercial banks	Capital investment interest	16.4	15.0	15.7	16.4	17.7	23.0	27.0	16.5
	Working capital interest	19.8	17.8	18.9	19.2	21.8	32.2	27.7	24.0
For SSI loans (to all banks)			12.5	15.7	16.9	15.6	22.1	27.3	15.3
For PAE loans (to all banks)			10.0	13.2	14.4	13.1	19.6	24.8	12.8
SBI rate (90 days)		10.8	9.8	13.3	13.0	11.8	19.2	22.7	12.4
GDP growth rate		7.3	7.5	8.2	7.8	1.1	13.0	0.0	4.7
Manufacturing industry growth rate		11.4	12.4	10.9	11.6	3.7	11.4	2.6	5.5

Source: Indonesian Central Bank.

Note) Interest rates for SSI and PAE loans, and SBI rates, are averages of the rates for the first and second halves of the year.

Performance of the implementation scheme was as follows: Of the 13 handling banks, only 10 actually participated, and of those 8 participated in both loan types. The loans for SSI used an existing system for providing finance to small businesses, and all the handling banks had experience and ability in using it, which enabled smooth progress in lending. The lending for PAE used a new scheme, and it included the loan disbursement and monitoring systems shown in Figure 2 to ensure financial and technical efficacy. During the disbursement period, BAPEDAL conducted a monitoring survey of 41 of the 69 end-users. As a result, the seven companies which encountered problems in the installation of equipment or facilities using their sub-loans were provided with guidance, in cooperation with their handling bank, to take appropriate remedial measures. Specifically, three companies which did not install the equipment, and four which were

late in doing so, were given procurement assistance and advice on proceeding with construction works. Those which did not follow the advice were subjected to punitive measures such as interest rate increases.

(3) Effectiveness

1) SSI loans

At the time of the appraisal, the SSI loans were expected to yield various effects, developing Indonesia's labor-intensive industries, expanding exports and creating more employment opportunities.

In this study, a questionnaire survey was conducted on the nine handling banks, and data was sought on aspects such as the value of capital investment inducted by the sub-loans, and the increases in added value, exports and employment. The number one lender, the BNI (which handled 37% of the number of loans and 28% of their value), was able to furnish the data. The BNI figures showed that it had disbursed a total of \$2.22 million (1,948,560,000 Rupiah) to 356 small businesses, and those sub-loans generated \$2.77 million of capital investment, \$800,000 of increased added value, 1,800 jobs and \$1.2 million of additional exports. The inductive effect of this loan as a whole was calculated from the BNI figures, using that bank's value-based share, assuming the loans from the other banks generated similar effects. From the results we can infer that the project induced approximately \$10 million of capital investment by small businesses, \$2.9 million of increased added value, 6,500 jobs and \$4.3 million of added exports.

2) PAE loans

<Impact in improving river environments>

As mentioned above, 64 of the 69 end-users for this project installed wastewater treatment equipment. As such, the main effect of this project was in improving river environments.

BAPEDAL's monitoring report on installed equipment confirmed that 53 of the 64 wastewater treatment facilities were in operation by February 1999. The facilities were running well at 46 of the 53 companies. At the other seven companies (one textile/ garment factory, four housing developments, one industrial site and one food factory), the equipment was not fully operational. In those cases, the impact of the economic crisis had suppressed production and sales activity, and the operating rates of the treatment plants had been reduced accordingly. The reduction in operation does not appear to have been due to declining processing capacity.

Table 4 shows the latent reductions in latent BOD/ COD yielded by the installation of the equipment in each plant, when the plant is operating at full capacity³. With the plants operating at full capacity, total BOD is expected to be 206,642kg/day (overall average reduction rate 89%) and total COD to be 480,088kg/day (overall average reduction rate 88%). BAPEDAL does not have detailed data for the operational status of each end-user's plant, and therefore the actual waste water treatment volume and BOD/ COD reduction quantities are unclear. However, as mentioned above, the installed equipment is

³ These are both representative indices for water pollution.

BOD = Biochemical Oxygen Demand: The amount of oxygen which must be consumed in the process of biological oxidation of organic contamination in water by aerobic bacteria living in the water. It is mainly used as an indicator of water quality in rivers.

COD = Chemical Oxygen Demand: The amount of oxygen which must be consumed in the process of breakdown of organic contaminants in water, mainly by oxidants. It is mainly used as an indicator of water quality in lakes and oceans.

running well and can be assumed to be producing a considerable reduction.

**Table 4 Effect of PAE Loans for Wastewater Treatment in Improving River Environments
(processing capacity)**

Business type	No. of end-users	Waste water treatment capacity (m ³ /day)	Before equipment installation		After equipment installation		BOD reduction volume (kg/day)	COD reduction volume (kg/day)	BOD reduction volume (%)	COD reduction volume (%)
			BOD load	COD load	BOD load	COD load				
			(kg/day)	(kg/day)	(kg/day)	(kg/day)				
Textiles/ garments	18	40,210	25,711	59,648	3,607	8,238	22,104	51,410	73	78
Housing and residential development	10	35,653	7,215	12,545	1,351	2,669	5,864	9,876	81	80
Industrial estates	3	22,100	9,960	17,760	1,786	3,572	8,174	14,188	82	80
Paper and pulp	9	186,865	129,211	299,263	24,510	49,165	104,701	250,098	80	79
Metals processing	4	155	93	188	6	11	88	179	70	78
Food processing	7	4,248	16,551	33,496	195	416	16,356	33,080	98	97
Chemicals	3	2,620	48,879	120,168	191	381	48,688	119,787	95	95
Pharmaceuticals	4	125	71	135	4	6	67	129	79	87
Hospitals	3	1,400	185	432	28	56	157	376	82	87
Cement	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other	2	1,360	525	1,081	82	114	442	966	87	90
Total	64	294,736	238,401	544,716	31,760	64,629	206,642	480,088	89	88

Source: BAPEDAL materials.

<Technology transfer effects>

The technology transfer effects of the project consisted of the Technical Assistance Unit (TAU), which was set up as part of the consulting service. The TAU strengthened BAPEDAL's organizational ability and its environmental monitoring and management skills. Specific results include the establishment of the PAE program office, the acquisition of technical expertise through overseas training, the preparation of a technical inspection manual and a monitoring manual, and the building of a database.

(4) Impact

(i) Contribution to the medium and long-term development of the finance market

It is difficult to quantify the impact on the medium and long-term development of Indonesia's finance market, but the PAE loans were mainly directed to sub-projects intended to improve water quality. Some of the banks which gained expertise and market share in a new lending field are working to expand their operations into fields other than water quality, such as air pollution prevention.

(ii) Environmental impact

According to Indonesia's environmental regulations⁴, the loans for small businesses are monitored by the agencies which have jurisdiction over them. Before investments are made, the Investment Coordination Agency (BKPM) cooperates with BAPEDAL in appraising the environmental aspects of the new equipment. The equipment for this project was not deemed to cause any major environmental problems.

The PAE loans are strong incentives, as they provide low-interest system finance for pollution abatement systems. Besides gaining access to finance, end-users can also make use of environmental conservation consulting services and technical guidance from BAPEDAL. Industries which are criticized as sources of pollution gain a stronger awareness of sustainable economic development through their use of the PAE loan program. The most prominent polluting industries, such as textiles and garments, paper and pulp, chemicals, and food processing are starting to take the position that they should respond appropriately to consumer and citizens' groups that call for businesses to take responsibility for environmental conservation by complying with environmental standards.

(5) Sustainability

i) Revolving fund

Indonesian banks are under restructuring in the aftermath of the currency crisis, and in that situation no data was recorded which can give an adequate grasp of the state of the revolving fund for this loan. As will be described below, a majority of non-performing loans appear to have been transferred to Indonesia Bank Restructuring Agency, but the exact relationship will have to be checked in future.

When JBIC inquired as to the state of arrears in repayments of the funds lend on to the handling banks under this project, the response was that most of the banks are not in arrears at all. However, it was not possible to check this response from supporting data.

ii) Sustainability of the handling banks

Indonesia's banking sector suffered severely from the impact of the currency crisis. The reconstruction of the sector began in earnest with the liquidation of 16 private banks, under IMF direction, in November 1997. The Indonesia Bank Restructuring Agency (IBRA) was established as a specialist restructuring agency for the financial sector. It is making progress in the disposal of non-performing loans and the restructuring of banks. IBRA classifies banks according to their capital ratios and either closes them or gives them capital infusions to remain in operation, as shown in the table below.

⁴ The environment-related system is that environmental standards are set by government ordinances, based on the Basic Law for Environmental Conservation, which was enacted in 1982. Environmental assessments (AMDAL) are conducted according to the Environmental Impact Assessment Law, which was enacted in 1987. The system for administration of environmental conservation is that the Ministry of Population and the Environment coordinates the environmental policies carried out by various agencies. In June 1990 the Environmental Impact Management Agency was established to respond appropriately to the severity of the situation.

Table 5 Bank Classifications Used by IBRA

Classification	Standard	Treatment	No. of banks covered
Category A	Capital ratio at least 4%	Sound, not covered by the reconstruction program.	74
Category B	Capital ratio -25% ~ 4%	Capital infusion for continued operation	49
Category C	Capital ratio below -25%	Closure	43
Category C*	State-owned banks	Capital infusion for continued operation	7

* Banks which fall into category C, but are so large that their closure would have an excessive impact, are provided with capital infusions.

IBRA takes on the unrecoverable loans of closed banks and banks that receive capital infusions, in order to dispose of and reconstruct debts. The status of the handling banks for this project is as follows:

Table 6 Status of the Handling Banks for this Project

Participant handling bank	Status before reconstruction	After reconstruction	Classification
BNI	State-owned bank	Capital infusion for continued operation. Scheduled for privatization	Category C*
BAPINDO	State-owned bank	Capital infusion for continued operation, after merging into Bank Mandiri	Category C*
BBD	State-owned bank	Capital infusion for continued operation, after merging into Bank Mandiri	Category C*
BEII	State-owned bank	Capital infusion for continued operation, after merging into Bank Mandiri	Category C*
BCA	State-owned bank	Capital infusion for continued operation, after temporary nationalization. Scheduled for privatization	Category B
BII	Private-sector bank	Capital infusion for continued operation	Category B
LIPPO	Private-sector bank	Capital infusion for continued operation	Category B
Danamon	Private-sector bank	Temporarily nationalized, then merged with another private sector bank into Danamon. Scheduled for privatization	Category B
BUN	Private-sector bank	Bankrupt in 1998	Category C
NTB	Private-sector bank	Capital infusion for continued operation	Category B

Banks' non-performing loan ratios have been falling in recent years, reaching 32% for commercial banks as a whole as of December 1999, half of the peak value of 75~85%. While the urgent tasks facing the banking sector have been dealt with, the disposal of the huge balance of non-performing loans held by the IBRA is a major task for the future, and the situation must still be monitored carefully.

iii) Environmental monitoring by BAPEDAL

Monitoring after the installation of pollution abatement equipment is carried out by the Environment Monitoring, Instruments and Engineering Technology Department of BAPEDAL, which has a staff of six. Environment monitoring consists of visits to end-users by department staff or consultants to check whether the installed equipment is operating as originally planned, and provision of technical advice where required. Monitoring was pursued vigorously until February 1999, with one or two visits made per month. Since then, monitoring activity has dropped due to understaffing and budget shortages. The operating budget, other than personnel costs, that is allocated to the department is only 100 million Rupiah (¥1.25 million) per year,

and the shortage of funds for travel and transport costs to visit the sites makes on-site auditing impossible. The department's staff and operating budget should be increased to ensure the sustainability of environment monitoring.

4. Recommendations (not for publication)

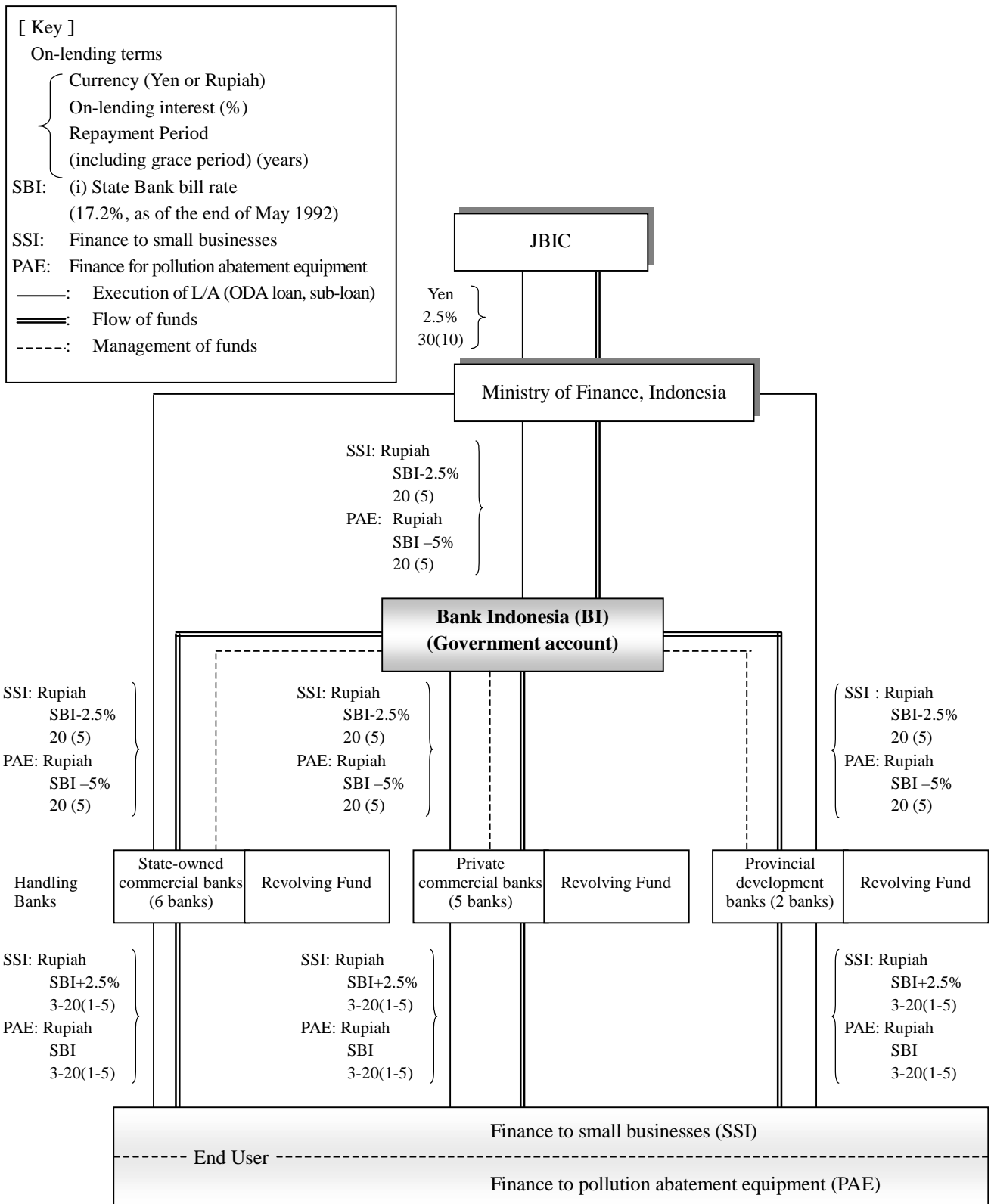
Recommendations to JBIC

The loan agreement states that "funds recovered from end-users must be re-disbursed for the same purposes stipulated in this loan contract", and the borrower is obliged to submit regular statements on the special account to JBIC. However, the bank restructuring process which followed the currency crisis makes it impossible to confirm the status of the sub-loan fund for this loan. The majority of non-performing loans have been transferred to the IBRA, but the Indonesian government must be made to examine the status of the lending fund, observe the related rules and establish a system for regular monitoring of the fund (This suggestion was made by the Board of Audit in 1997).

Comparison of Original and Actual Scope

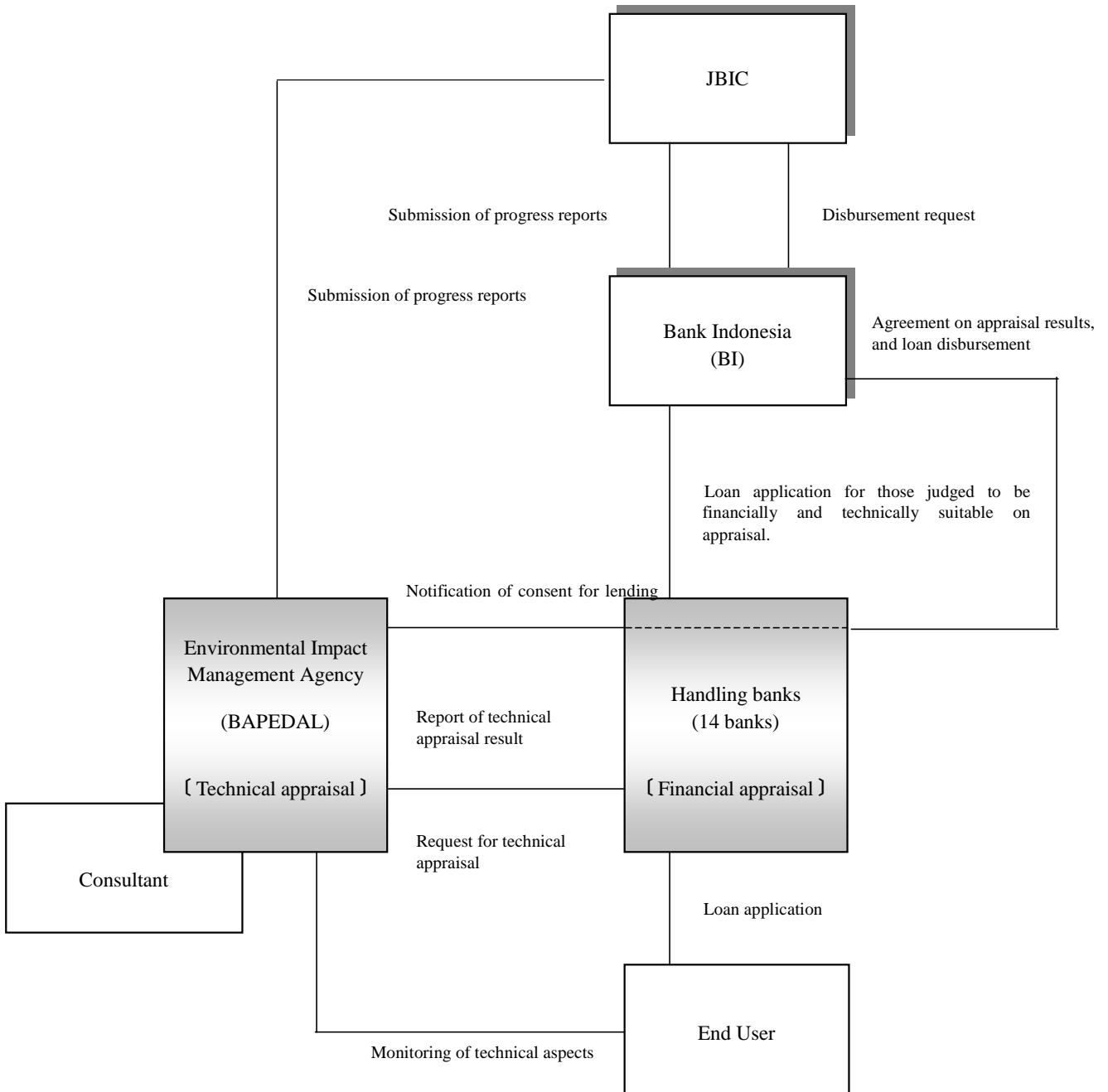
Item	Plan	Actual
Project Scope	<p>Finance for small businesses (SSI) Eligible businesses: Private-sector businesses with total assets not exceeding 600 million Rupiah Loan value: Up to 100 million Rupiah Eligible business types: No restriction On-lending interest: Ministry of Finance/ Central Bank to Handling banks SBI rate -2.5% Handling banks to end-users SBI rate +2.5% Note SBI rate: SBI (certificate of Bank Indonesia) Three month bill rate.</p> <p>Finance for pollution abatement equipment (PAE) Eligible businesses: Private sector (no restrictions) Loan value: No restriction. Eligible business types: No restriction. On-lending interest: Ministry of Finance/ Central Bank to Handling banks SBI rate -5% Handling banks to end-users SBI rate</p> <p>Consulting services concerning PAE</p>	<p>Same as left</p> <p>Same as left</p> <p>Same as left</p>
Implementation Schedule	Nov. 1992 ~ Nov. 1997	Nov. 1992 ~ Mar. 1998
Project Cost		
Foreign currency	¥16,244 million	¥15,744 million
Local currency	-	¥147 million
Total	¥16,244 million	¥15,891 million
ODA loan portion	¥16,244 million	¥15,891 million
Exchange rate	¥1 = Rp.15.4	¥1 = Rp.20

Figure 1 Project Scheme



(Source) JBIC materials

Figure 2 Loan Procedures and Flow of Funds for Pollution Abatement Equipment (PAE)



(Source) JBIC materials